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# Analysis Modes Constraints Reference

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# Contents

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Preface	33
About This Reference Manual	34
The Purpose of this Reference Manual	34
The Target Audience of this Reference Manual	34
How to Use This Reference Manual	35
Typographic and Syntax Conventions	36
1	39
Constraint Architecture	39
Constraint Domains	40
Design Constraints	40
Electrical Constraints	40
Physical Constraints	40
Spacing Constraints	40
Manufacturing Constraints	40
Constraint Objects and Hierarchy	42
Constraint Object Hierarchy	43
Designs, Design Instances, and Systems	44
Net Class	44
Net Class-Class	44
Differential Pairs	45
Match Groups	45
Buses	46
Nets and Xnets	46
Pin Pairs	47
Region	47
Region Class	48
Region Class-Class	48
Constraint Operations	49
Online DRC	49
DRC Modes	49
DRC Status	49
DRC Error Marker Visibility	50

DRC Error Data	50
DRC Error Codes	50
Waiving DRCs	50
Show Constraints	50
Constraint Overrides	52
Constraint Resolution	53
Precedence	53
Domain Impact	53
Regions, Region Classes, and Region Class-Classes	53
Examples:	54
Figure 1-1 Overlapping Regions	54
Figure 1-2 Nested Regions	55
Constraints	56
Constraint Sets	57
Electrical CSets	57
Physical and Spacing CSets	57
Intra-DP Spacing CSet	57
2	59
Dictionary of DRC Error Marker Codes	59
DRC Error Marker Code Definitions	60
Understanding DRC Error Marker Codes	65
3	67
3D	67
Clearance type for component spacing	68
Component to Board 3 dimensional spacing	69
Component to Board Edge 3 dimensional spacing	70
Component to Component 3 Dimensional Spacing	71
Component to Rigid Flex 3 dimensional spacing	72
4	73
Assembly	73
Bondwire To bondwire	74
Finger to Component Edge	75
Maximum Bond Length	76
Maximum Wire Angle to Die Edge	77
Minimum Bond Length	78

Minimum Wire Diameter	79
Wire End to Wire End	80
Wire To Die Pin Spacing	81
Wire To Finger Spacing	82
5	83
Design Modes	83
6	84
Dfa	84
Adjacent layer copper to component fiducial edge	85
Component body to component body by height	86
Component body to Fiducial	87
Component body to Mechanical hole	88
Component body to Mounting hole	89
Component body to Slot hole	90
Component body to SMD pin	91
Component body to Thru pin	92
Component body to Tooling hole	93
Direction of conveyed edge	94
Distance between SMD pastemask pad and lead	95
High pin count component to design outline	96
Large via under component	97
Maximum distance between component body and leads on external SMD pins	98
Maximum distance between component body and leads on internal SMD pins	99
Maximum distance between non-plated thru pin hole to it's lead	100
Maximum distance between plated thru pin hole to it's lead	101
Maximum distance between SMD pin pad and it's ball lead	102
Maximum heel size	103
Maximum side	104
Maximum toe size	105
Minimum distance between component body and leads on external SMD pins	106
Minimum distance between component body to it's leads on internal SMD pins	107
Minimum distance between non-plated thru pin hole to it's lead	108
Minimum distance between plated thru pin hole to lead	109
Minimum distance between SMD pin pad and ball lead	110
Minimum heel size	111
Minimum height of a package to be treated as tall component	112

Minimum number of component fiducials	113
Minimum number of pins in a high pin count component	114
Minimum side	115
Minimum toe size	116
Minimum width of a large via	117
Tall component to conveyed edge	118
Tombstone Discrete	119
Trace under component	120
Under component(Embedded)	121
Under component(Opposite Side)	122
Via under component	123
<b>7</b>	<b>124</b>
<b>Dft</b>	<b>124</b>
Minimum width of a pin or via hole to be treated as large hole	125
Missing probe type	126
Test point on large pin hole	127
Test point to backdrill pin hole	128
Test point to backdrill via hole	129
Test point to blind/buried via pad	130
Test point to component body by height	131
Test point to fiducial pad	132
Test point to large non-plated hole	133
Test point to large pin hole	134
Test point to mechanical hole pad	135
Test point to micro via pad	136
Test point to mounting hole pad	137
Test point to non-plated mechanical hole	138
Test point to non-plated mounting hole	139
Test point to non-plated slot hole	140
Test point to non-plated tooling hole	141
Test point to slot pad	142
Test point to SMD pin pad	143
Test point to tall component	144
Test point to through pin hole	145
Test point to through pin pad	146
Test point to through via pad	147

Test point to tooling hole pad	148
<b>8</b>	<b>149</b>
<b>Electrical</b>	<b>149</b>
Maximum Peak Xtalk	150
Maximum Stub Length	151
Maximum Via Count	152
Maximum Xtalk	153
Propagation Delay Minimum	154
Relative Propagation Delay	155
Return Path	156
Total Etch	157
<b>9</b>	<b>158</b>
<b>Physical</b>	<b>158</b>
Allow Etch on Subclass	159
Allow Pad&#45;to&#45;Pad Direct Connection	160
Allow T&#45;junctions on Subclass	161
Maximum Blind/Buried Via Stagger	162
Maximum Line Width	163
Minimum Blind/Buried Via Stagger	164
Minimum Line Width	165
Pad exit turn gap distance	166
Via List	167
<b>10</b>	<b>168</b>
<b>Pin</b>	<b>168</b>
<b>11</b>	<b>169</b>
<b>Same Net Spacing</b>	<b>169</b>
Blind/Buried Via to Blind/Buried Via	170
Blind/Buried Via to Test Via	171
Bond Pad to Blind/Buried Via	172
Bond Pad to Bond Pad	173
Bond Pad to Line	174
Bondpad to Microvia Spacing	175
Bond Pad to Shape	176
Bond Pad to SMD Pin	177
Bond Pad to Test Pin	178

Bond Pad to Test Via	179
Bond Pad to Through Pin	180
Bond Pad to Through Via	181
Hole to Hole	182
Hole to Line	183
Hole to Shape	184
Hole to Via	185
Line to Blind/Buried Via	186
Line to Line	187
Line to SMD Pin	188
Line to Test Pin	189
Line to Test Via	190
Line to Through Pin	191
Line to Through Via	192
Microvia to Blind/Buried Via	193
Microvia to Line	194
Microvia to Shape	195
Microvia to SMD Pin	196
Microvia to Test Pin	197
Microvia to Test Via	198
Microvia to Through Pin	199
Microvia to Through Via	200
Minimum Metal Spacing	201
Pin to Hole:	202
Shape to Blind/Buried Via	203
Shape to Line	204
Shape to Shape	205
Shape to SMD Pin	206
Shape to Test Pin	207
Shape to Test Via	208
Shape to Through Pin	209
Shape to Through Via	210
SMD Pin to Blind/Buried Via	211
SMD Pin to SMD Pin	212
SMD Pin to Test Pin	213
SMD Pin to Test Via	214
SMD Pin to Through Via	215

Test Pin to Blind/Buried Via	216
Test Pin to Test Pin	217
Test Pin to Test Via	218
Test Pin to Through Via	219
Test Via to Test Via	220
Through Pin to Blind/Buried Via	221
Through Pin to SMD Pin	222
Through Pin to Test Pin	223
Through Pin to Test Via	224
Through Pin to Through Pin	225
Through Pin to Through Via	226
Through Via to Blind/Buried Via	227
Through Via to Test Via	228
Through Via to Through Via	229
<b>12</b>	<b>230</b>
<b>Spacing</b>	<b>230</b>
Hole to Pin	231
Microvia to Microvia Spacing	232
Minimum Blind/buried Via Gap	233
<b>13</b>	<b>234</b>
<b>Design</b>	<b>234</b>
Blind/Buried Via Separation	235
Clearance distance	236
Clearance Pollution Degree (Groove Length)	237
Creepage distance	239
Duplicate Drill Hole	240
Enable Line based check for fillets	241
Etch Turn in SMD Pins	242
Hole in Pad	243
On-line Interlayer DRC	244
Package Height to Layer	245
Package to Keepin Spacing	246
Package to Keepout Spacing	247
Package to Package Spacing	248
Package to Room Spacing	249
Pin to Route Keepout	250

SMD Pad Zone Adherence Check	251
Suppress DRC on exploded pins(NODRC_SYM_SAME_PIN)	252
Testpoint Allowed Under Component	253
Through Via in SMD Pins	254
ThruPin Zone Adherence Check	255
Via at SMD Fit	256
Via in SMD Pins	257
<b>14</b>	<b>258</b>
<b>Design for Fabrication</b>	<b>258</b>
Annular Ring	259
Blind/Buried Via Hole to Antipad	260
Blind/Buried Via Hole to Mask	261
Blind/Buried Via Hole to Pad	262
Blind/Buried Via Hole to Thermal	263
Blind/Buried Via Pad Missing Mask	264
Blind/Buried Via Pad to Mask	265
Blind/Buried Via Pad to Thermal	266
Fiducial Pad Missing Mask	267
Fiducial to Antipad	268
Fiducial to Mask	269
Masked defined Pin Pad to Mask	270
Micro Via Hole to Antipad	271
Micro Via Hole to Mask	272
Micro Via Hole to Pad	273
Micro Via Hole to Thermal	274
Micro Via Pad Missing Mask	275
Micro Via Pad to Mask	276
Micro Via Pad to Thermal	277
Missing Mask in Through Pin	278
Non-plated hole to anti pad	279
Non plated hole to mask	280
Non-plated hole to pad	281
Non-plated hole to thermal	282
Non-plated Mechanical Hole to Anti Pad	283
Non-plated Mechanical Hole to Mask	284
Non-plated Mechanical Hole to Pad	285

Non-plated Mechanical Hole to Thermal	286
Non-plated Mechanical Pad Missing Mask	287
Non-plated Mechanical Pad to Mask	288
Non plated missing mask	289
Non-plated Mounting Hole to Antipad	290
Non-plated Mounting Hole to Mask	291
Non-plated Mounting Hole to Pad	292
Non-plated Mounting Hole to Thermal	293
Non-plated Mounting Pad Missing Mask	294
Non-plated Mounting Pad to Mask	295
Non plated pad to mask	296
Non-plated Slot Hole to Antipad	297
Non-plated Slot Hole to Mask	298
Non-plated Slot Hole to Pad	299
Non-plated Slot Hole to Thermal	300
Non-plated Slot Pad Missing Mask	301
Non-plated Slot Pad to Mask	302
Non-plated Tooling Hole to Antipad	303
Non-plated Tooling Hole to Mask	304
Non-plated Tooling Hole to Pad	305
Non-plated Tooling Hole to Thermal	306
Non-plated Tooling Pad Missing Mask	307
Non-plated Tooling Pad to Mask	308
Partially Covered Via	309
Pin Hole to Antipad	310
Pin Hole to Mask	311
Pin Hole to Pad	312
Pin Hole to Thermal	313
Pin Pad to Mask	314
Pin Pad to Missing Mask	315
Pin pad to thermal	316
Plated Mechanical Hole to Antipad	317
Plated Mechanical Hole to Mask	318
Plated Mechanical Hole to Pad	319
Plated Mechanical Hole to Thermal	320
Plated Mechanical Pad Missing Mask	321
Plated Mechanical Pad to Mask	322

Plated Mechanical Pad to Thermal	323
Plated Mounting Hole to Antipad	324
Plated Mounting Hole to Mask	325
Plated Mounting Hole to Pad	326
Plated Mounting Hole to Thermal	327
Plated Mounting Pad Missing Mask	328
Plated Mounting Pad to Mask	329
Plated Mounting Pad to Thermal	330
Plated Pin Hole to Mask	331
Plated Slot Hole to Antipad	332
Plated Slot Hole to Mask	333
Plated Slot Hole to Pad	334
Plated Slot Hole to Thermal	335
Plated Slot Pad Missing Mask	336
Plated Slot Pad to Mask	337
Plated Slot Pad to Thermal	338
Plated Tooling Hole to Antipad	339
Plated Tooling Hole to Mask	340
Plated Tooling Hole to Pad	341
Plated Tooling Hole to Thermal	342
Plated Tooling Pad Missing Mask	343
Plated Tooling Pad to Mask	344
Plated Tooling Pad to Thermal	345
SMD Pin Missing Mask	346
SMD Pin to Antipad	347
SMD Pin to Mask	348
SMD Pin to Thermal	349
Through Pin Backdrill to Antipad	350
Through Pin Backdrill to Mask	351
Through Pin Backdrill to Pad	352
Through Pin Backdrill to Via	353
Through Pin Hole to Antipad	354
Through Pin Hole to Pad	355
Through Pin Hole to Thermal	356
Through Pin Pad to Mask	357
Through Pin Pad to Thermal	358
Through Via Backdrill to Mask	359

Through Via Hole to Antipad	360
Through Via Hole to Mask	361
Through Via hole to Pad	362
Through Via hole to Thermal	363
Through Via Pad to Mask	364
Through Via Pad to Missing Mask	365
Through Via Pad to Thermal	366
Via Hole to Antipad	367
Via Hole to Mask	368
Via Hole to Pad	369
Via Hole to Thermal	370
Via Pad to Mask	371
Via Pad to Missing Mask	372
Via pad to thermal	373
Copper Features	374
Acid Traps Angle	375
Acid Traps Area	376
Antenna Traces	377
Antenna Via	378
Flex Maximum Solid Fill Shapes	379
Flex Minimum Radius on All Trace Corners	380
Flex missing pad fillets	381
Flex Missing T Fillets	382
Flex Missing Trace Tapers	383
Isolated thermal on negative layer	384
Isolated thermal on positive layer	385
Max dielectric layer span for a via	386
Maximum Line into pad ratio(SMD)	387
Maximum Line into pad ratio(Thru Hole)	388
Maximum Shape into pad ratio	389
Maximum spoke width of thermal on negative layer	390
Maximum spoke width of thermal on positive layer	391
Minimum Acute Angle	392
Minimum air gap of thermal on negative layer	393
Minimum air gap of thermal on positive layer	394
Minimum Line Width Ratio	395
Minimum Shape Width	396

Minimum spoke count of thermal on negative layer	397
Minimum spoke count of thermal on positive layer	398
Minimum spoke width of thermal on negative layer	399
Minimum spoke width of thermal on positive layer	400
Minimum Text Line Width	401
Minimum Text Line Width Ratio	402
Minimum Void Opening	403
Plating in pin	404
Plating in via	405
Shape Island Oversize	406
Void Slivers	407
Copper Spacing	408
Backdrilled pin hole to backdrilled pin spacing	409
Backdrilled pin hole to backdrilled via spacing	410
Backdrilled pin hole to blind/buried via hole spacing	411
Backdrilled pin hole to blind/buried via spacing	412
Backdrilled pin hole to fiducial spacing	413
Backdrilled pin hole to mechanical hole spacing	414
Backdrilled pin hole to mechanical pin spacing	415
Backdrilled pin hole to micro via hole spacing	416
Backdrilled pin hole to micro via spacing	417
Backdrilled pin hole to mounting hole pad spacing	418
Backdrilled pin hole to mounting hole spacing	419
Backdrilled pin hole to non plated mechanical hole spacing	420
Backdrilled pin hole to non plated mounting hole spacing	421
Backdrilled pin hole to non plated slot hole spacing	422
Backdrilled pin hole to non plated tooling hole spacing	423
Backdrilled pin hole to non signal line spacing	424
Backdrilled pin hole to non signal shape spacing	425
Backdrilled pin hole to shape spacing	426
Backdrilled pin hole to slot hole spacing	427
Backdrilled pin hole to slot pad spacing	428
Backdrilled pin hole to smd pin spacing	429
Backdrilled pin hole to text spacing	430
Backdrilled pin hole to thru pin hole spacing	431
Backdrilled pin hole to thru pin spacing	432
Backdrilled pin hole to thru via hole spacing	433

Backdrilled pin hole to thru via spacing	434
Backdrilled pin hole to tooling hole pad spacing	435
Backdrilled pin hole to tooling hole spacing	436
Backdrilled pin hole to trace spacing	437
Backdrilled via hole to backdrilled via spacing	438
Backdrilled via hole to blind/buried via hole spacing	439
Backdrilled via hole to blind/buried via spacing	440
Backdrilled via hole to fiducial spacing	441
Backdrilled via hole to mechanical hole spacing	442
Backdrilled via hole to mechanical via spacing	443
Backdrilled via hole to micro via hole spacing	444
Backdrilled via hole to micro via spacing	445
Backdrilled via hole to mounting hole pad spacing	446
Backdrilled via hole to mounting hole spacing	447
Backdrilled via hole to non plated mechanical hole spacing	448
Backdrilled via hole to non plated mounting hole spacing	449
Backdrilled via hole to non plated slot hole spacing	450
Backdrilled via hole to non plated tooling hole spacing	451
Backdrilled via hole to non signal shape spacing	452
Backdrilled via hole to shape spacing	453
Backdrilled via hole to slot hole spacing	454
Backdrilled via hole to slot pad spacing	455
Backdrilled via hole to smd via spacing	456
Backdrilled via hole to text spacing	457
Backdrilled via hole to thru via hole spacing	458
Backdrilled via hole to thru via spacing	459
Backdrilled via hole to tooling hole pad spacing	460
Backdrilled via hole to tooling hole spacing	461
Backdrilled via hole to trace spacing	462
Backdrilled via to non signal line spacing	463
BB via hole to staggered BB via hole	464
Blind/Buried Via Hole to Blind/Buried Via Hole	465
Blind/Buried Via Hole to Line	466
Blind/Buried Via Hole to Micro Via Hole	467
Blind/Buried Via Hole to Non-plated Mechanical Hole	468
Blind/Buried Via Hole to Non-plated Mounting Hole	469
Blind/Buried Via Hole to Non-plated Slot Hole	470

Blind/Buried Via Hole to Non-plated Tooling Hole	471
Blind/Buried Via Hole to Non-signal Geometry	472
Blind/Buried Via Hole to Non-signal shape	473
Blind/Buried Via Hole to Plated Mechanical Hole	474
Blind/Buried Via Hole to Plated Mounting Hole	475
Blind/Buried Via Hole to Plated Slot Hole	476
Blind/Buried Via Hole to Plated Tooling Hole	477
Blind/Buried Via Hole to Text	478
Blind/Buried Via Pad to Blind/Buried Via Hole	479
Blind/Buried Via Pad to Blind/Buried Via Pad	480
Blind/Buried Via Pad to Fiducial Pad	481
Blind/Buried Via Pad to Line	482
Blind/Buried Via Pad to Mechanical Hole Pad	483
Blind/Buried Via Pad to Micro Via Hole	484
Blind/Buried Via Pad to Micro Via Pad	485
Blind/Buried Via Pad to Mounting Hole Pad	486
Blind/Buried Via Pad to Non-plated Mechanical Hole	487
Blind/Buried Via Pad to Non-plated Mounting Hole	488
Blind/Buried Via Pad to Non-plated Slot Hole	489
Blind/Buried Via Pad to Non-plated Tooling Hole	490
Blind/Buried Via Pad to Non-signal shape	491
Blind/Buried Via Pad to Plated Mechanical Hole	492
Blind/Buried Via Pad to Plated Mounting Hole	493
Blind/Buried Via Pad to Plated Slot Hole	494
Blind/Buried Via Pad to Plated Tooling Hole	495
Blind/Buried Via Pad to Slot Pad	496
Blind/Buried Via Pad to Text	497
Blind/Buried Via Pad to Throughpin Hole	498
Blind/Buried Via Pad to Tooling Hole Pad	499
Blind/Buried Via Pad to Via Hole	500
Fiducial Pad to Blind/Buried Via Hole	501
Fiducial Pad to Fiducial Pad	502
Fiducial Pad to line	503
Fiducial Pad to Micro Via Hole	504
Fiducial Pad to Non-plated Mechanical Hole	505
Fiducial Pad to Non-plated Mounting Hole	506
Fiducial Pad to Non-plated Slot Hole	507

Fiducial Pad to Non-plated Tooling Hole	508
Fiducial Pad to Non -signal Geometry	509
Fiducial Pad to non signal shape	510
Fiducial Pad to Plated Mechanical Hole	511
Fiducial Pad to Plated Mounting Hole	512
Fiducial Pad to Plated Slot Hole	513
Fiducial Pad to Plated Tooling Hole	514
Fiducial Pad to text	515
Fiducial Pad to Throughpin Hole	516
Fiducial Pad to Via Hole	517
Line to Non-signal Shape	518
Line to Text	519
Mechanical Hole Pad to Blind/Buried Via Hole	520
Mechanical Hole Pad to Fiducial Pad	521
Mechanical Hole Pad to Line	522
Mechanical Hole Pad to Mechanical Hole Pad	523
Mechanical Hole Pad to Micro Via Hole	524
Mechanical Hole Pad to Mounting Hole Pad	525
Mechanical Hole Pad to Non-plated Mechanical Hole	526
Mechanical Hole Pad to Non-plated mounting Hole	527
Mechanical Hole Pad to Non-plated Slot Hole	528
Mechanical Hole Pad to Non-plated Tooling Hole	529
Mechanical Hole Pad to Non signal shape	530
Mechanical Hole Pad to Plated Mechanical Hole	531
Mechanical Hole Pad to Plated mounting Hole	532
Mechanical Hole Pad to Plated Slot Hole	533
Mechanical Hole Pad to Plated Tooling Hole	534
Mechanical Hole Pad to Text	535
Mechanical Hole Pad to Through Pin Hole	536
Mechanical Hole Pad to Tooling Hole Pad	537
Mechanical Hole Pad to Via Hole	538
Micro Via Hole to Line	539
Micro Via Hole to Micro Via Hole	540
Micro Via Hole to Non-plated Mechanical Hole	541
Micro Via Hole to Non-plated Mounting Hole	542
Micro Via Hole to Non-plated Slot Hole	543
Micro Via Hole to Non-plated Tooling Hole	544

Micro Via Hole to Non-signal Geometry	545
Micro Via Hole to Non-signal shape	546
Micro Via Hole to Plated Mechanical Hole	547
Micro Via Hole to Plated Mounting Hole	548
Micro Via Hole to Plated Slot Hole	549
Micro Via Hole to Plated Tooling Hole	550
Micro via hole to staggered Micro via hole	551
Micro Via Hole to Text	552
Micro Via Pad to Blind/Buried Via Hole	553
Micro Via Pad to Fiducial Pad	554
Micro Via Pad to Line	555
Micro Via Pad to Mechanical Hole Pad	556
Micro Via Pad to Micro Via Hole	557
Micro Via Pad to Micro Via Pad	558
Micro Via Pad to Mounting Hole Pad	559
Micro Via Pad to Non-plated Mechanical Hole	560
Micro Via Pad to Non-plated Mounting Hole	561
Micro Via Pad to Non-plated Slot Hole	562
Micro Via Pad to Non-plated Tooling Hole	563
Micro Via Pad to Non-signal shape	564
Micro Via Pad to Plated Mechanical Hole	565
Micro Via Pad to Plated Mounting Hole	566
Micro Via Pad to Plated Slot Hole	567
Micro Via Pad to Plated Tooling Hole	568
Micro Via Pad to Slot Pad	569
Micro Via Pad to Text	570
Micro Via Pad to Through Pin Hole	571
Micro Via Pad to Tooling Hole Pad	572
Micro Via Pad to Via Hole	573
Mounting Hole Pad to Blind/Buried Via Hole	574
Mounting Hole Pad to Fiducial Pad	575
Mounting Hole Pad to Line	576
Mounting Hole Pad to Micro Via Hole	577
Mounting Hole Pad to Mounting Hole Pad	578
Mounting Hole Pad to Non-plated Mechanical Hole	579
Mounting Hole Pad to Non-plated Mounting Hole	580
Mounting Hole Pad to Non-plated Slot Hole	581

Mounting Hole Pad to Non-plated Tooling Hole	582
Mounting Hole Pad to Non-signal shape	583
Mounting Hole Pad to Plated Mechanical Hole	584
Mounting Hole Pad to Plated Mounting Hole	585
Mounting Hole Pad to Plated Slot Hole	586
Mounting Hole Pad to Plated Tooling Hole	587
Mounting Hole Pad to Text	588
Mounting Hole Pad to Through Pin Hole	589
Mounting Hole Pad to Via Hole	590
Non-plated Hole to Non-plated Hole	591
Non-plated Hole to Via Pad	592
Non Plated Mechanical Hole to Line	593
Non-plated Mechanical Hole to Non-plated Mechanical Hole	594
Non-plated Mechanical Hole to Non-plated Mounting Hole	595
Non-plated Mechanical Hole to Non-plated Tooling Hole	596
Non-plated Mechanical Hole to Non-signal shape	597
Non-plated Mechanical Hole to Plated Mounting Hole	598
Non-plated Mechanical Hole to Plated Tooling Hole	599
Non-plated Mechanical Hole to Text	600
Non-plated Mounting Hole to Line	601
Non-plated Mounting Hole to Non-plated Mounting Hole	602
Non-plated Mounting Hole to Non-signal shape	603
Non-plated Mounting Hole to Text	604
Non-plated Slot Hole to Line	605
Non-plated Slot Hole to Non-plated Mechanical Hole	606
Non-plated Slot Hole to Non-plated Mounting Hole	607
Non-plated Slot Hole to Non-plated Slot Hole	608
Non-plated Slot Hole to Non-plated Tooling Hole	609
Non-plated Slot Hole to Non-signal shape	610
Non-plated Slot Hole to Plated Mechanical Hole	611
Non-plated Slot Hole to Plated Mounting Hole	612
Non-plated Slot Hole to Plated Tooling Hole	613
Non-plated Slot Hole to Text	614
Non-plated Tooling Hole to Line	615
Non-plated Tooling Hole to Non-plated Mounting Hole	616
Non-plated Tooling Hole to Non-plated Tooling Hole	617
Non-plated Tooling Hole to Non-signal shape	618

Non-plated Tooling Hole to Plated Mounting Hole	619
Non-plated Tooling Hole to Text	620
Non-signal Geometry to Non-plated Hole	621
Non-signal Geometry to Non-signal Geometry	622
Non-signal Geometry to Pin Pad	623
Non-signal Geometry to Via Pad	624
Non-signal shape to non-signal shape	625
Overlap between Anti pad of one pin or via to thermal pad of another pin or via	626
Pin Pad to Non-plated hole	627
Pin Pad to Pin Pad	628
Pin Pad to Via Pad	629
Plated Mechanical Hole to Line	630
Plated Mechanical Hole to Non-plated Mechanical Hole	631
Plated Mechanical Hole to Non-plated Mounting Hole	632
Plated Mechanical Hole to Non-plated Tooling Hole	633
Plated Mechanical Hole to Non-signal Geometry	634
Plated Mechanical Hole to Plated Mechanical Hole	635
Plated Mechanical Hole to Plated Mounting Hole	636
Plated Mechanical Hole to Plated Tooling Hole	637
Plated Mechanical Hole to Text	638
Plated Mounting Hole to Line	639
Plated Mounting Hole to Non-plated Mounting Hole	640
Plated Mounting Hole to Non-signal Geometry	641
Plated Mounting Hole to Non-signal shape	642
Plated Mounting Hole to Plated Mounting Hole	643
Plated Mounting Hole to Text	644
Plated Slot Hole to Line	645
Plated Slot Hole to Non-plated Mechanical Hole	646
Plated Slot Hole to Non-plated Mounting Hole	647
Plated Slot Hole to Non-plated Slot Hole	648
Plated Slot Hole to Non plated Tooling Hole	649
Plated Slot Hole to Non-signal Geometry	650
Plated Slot Hole to Non-signal shape	651
Plated Slot Hole to Plated Mechanical Hole	652
Plated Slot Hole to Plated Mounting Hole	653
Plated Slot Hole to Plated Slot Hole	654
Plated Slot Hole to Plated Tooling Hole	655

Plated Slot Hole to Text	656
Plated Tooling Hole to Line	657
Plated Tooling Hole to Non-plated Mounting Hole	658
Plated Tooling Hole to Non-plated Tooling Hole	659
Plated Tooling Hole to Non-signal Geometry	660
Plated Tooling Hole to Non-signal shape	661
Plated Tooling Hole to Plated Mounting Hole	662
Plated Tooling Hole to Plated Tooling Hole	663
Plated Tooling Hole to Text	664
Same net BB via hole to micro via hole	665
Same net BB via pad to BB via pad	666
Same net micro via hole to micro via hole	667
Same net micro via pad to micro via pad	668
Same net through via hole to through via hole	669
Same net through via pad to through via pad	670
Shape to Blind/Buried Via Hole	671
Shape to Blind/Buried Via Pad	672
Shape to Fiducial Pad	673
Shape to Mechanical Hole Pad	674
Shape to Micro Via Hole	675
Shape to Micro Via Pad	676
Shape to Mounting Hole Pad	677
Shape to Non-plated Hole	678
Shape to Non-plated Mechanical Hole	679
Shape to Non-plated Mounting Hole	680
Shape to Non Plated Slot Hole	681
Shape to Non-plated Tooling Hole	682
Shape to Non-signal Geometry	683
Shape to Non-signal shape	684
Shape to Pin Pad	685
Shape to Plated Mechanical Hole	686
Shape to Plated Mounting Hole	687
Shape to Plated Slot Hole	688
Shape to Plated Tooling Hole	689
Shape to Slot Pad	690
Shape to SMD Pin Pad	691
Shape to Text	692

Shape to Through Pin Hole	693
Shape to Through Pin Pad	694
Shape to Through Via Hole	695
Shape to Tooling hole Pad	696
Shape to Via Pad	697
Silicon Microvia hole to Microvia hole below dielectric layer spacing	698
Silicon Microvia hole to Microvia hole staggered layer spacing	699
Silicon wide metal to standard metal spacing	700
Silicon wide metal to wide metal spacing	701
Slot Pad to Blind/Buried Via Hole	702
Slot Pad to Fiducial Pad	703
Slot Pad to Line	704
Slot Pad to Mechanical Hole Pad	705
Slot Pad to Micro Via Hole	706
Slot Pad to Mounting Hole Pad	707
Slot Pad to Non-plated Mechanical Hole	708
Slot Pad to Non-plated Mounting Hole	709
Slot Pad to Non-plated Slot Hole	710
Slot Pad to Non-plated Tooling Hole	711
Slot Pad to Non-signal Shape	712
Slot Pad to Plated Mechanical Hole	713
Slot Pad to Plated Mounting Hole	714
Slot Pad to Plated Slot Hole	715
Slot Pad to Plated Tooling Hole	716
Slot Pad to Slot Pad	717
Slot Pad to Text	718
Slot Pad to Through Pin Hole	719
Slot Pad to Tooling Hole Pad	720
Slot Pad to Via Hole	721
SMD Pin Pad to Blind/Buried Via Hole	722
SMD Pin Pad to Blind/Buried Via Pad	723
SMD Pin Pad to Fiducial Pad	724
SMD Pin Pad to Line	725
SMD Pin Pad to Micro Via Hole	726
SMDpin Pad to Micro Via Pad	727
SMD Pin Pad to Mounting Hole Pad	728
SMD Pin Pad to Non-plated Mechanical Hole	729

SMD Pin Pad to Non-plated Mounting Hole	730
SMD Pin Pad to Non-plated Slot Hole	731
SMD Pin Pad to Non-plated Tooling Hole	732
SMD Pin Pad to Non-signal shape	733
SMD Pin Pad to Plated Mechanical Hole	734
SMD Pin Pad to Plated Mounting Hole	735
SMD Pin Pad to Plated Slot Hole	736
SMD Pin Pad to Plated Tooling Hole	737
SMDpin Pad to Slot Pad	738
SMD Pin Pad to SMD Pin Pad	739
SMD Pin Pad to Text	740
SMD Pin Pad to Through Pin Hole	741
SMD Pin Pad to Tooling Hole Pad	742
SMD Pin Pad to Via Hole	743
SMD Pin Pad to Via Pad	744
SMDPpin Pad to Mechanical Hole Pad	745
Text to non signal shape	746
Text to Text	747
Through Pin Hole to Blind/Buried Via Hole	748
Through Pin Hole to Line	749
Through Pin Hole to Micro Via Hole	750
Through Pin Hole to Non-plated Mechanical Hole	751
Throughpin Hole to Non-plated Mounting Hole	752
Through Pin Hole to Non-plated Slot Hole	753
Through Pin Hole to Non-plated Tooling Hole	754
Through Pin Hole to Non-signal Geometry	755
Through Pin Hole to Non-signal shape	756
Through Pin Hole to Plated Mechanical Hole	757
Through Pin Hole to Plated Mounting Hole	758
Through Pin Hole to Plated Slot Hole	759
Through Pin Hole to Plated Tooling Hole	760
Through Pin Hole to Text	761
Through Pin Hole to Through Pin Hole	762
Through Pin Hole to Via Hole	763
Through Pin Pad to Blind/Buried Via Hole	764
Through Pin Pad to Blind/Buried Via Pad	765
Through Pin Pad to Line	766

Through Pin Pad to Mechanical Hole Pad	767
Through Pin Pad to Micro Via Hole	768
Through Pin Pad to Micro Via Pad	769
Through Pin Pad to Mounting Hole Pad	770
Through Pin Pad to Non-plated Mechanical Hole	771
Through Pin Pad to Non-plated Mounting Hole	772
Through Pin Pad to Non-plated Slot Hole	773
Through Pin Pad to Non-plated Tooling Hole	774
Through Pin Pad to Non-signal shape	775
Through Pin Pad to Plated Mechanical Hole	776
Through Pin Pad to Plated Mounting Hole	777
Through Pin Pad to Plated Slot Hole	778
Through Pin Pad to Plated Tooling Hole	779
Through Pin Pad to Slot Pad	780
Through Pin Pad to SMD Pin Pad	781
Through Pin Pad to Text	782
Through Pin Pad to Through Pin Hole	783
Through Pin Pad to Through Pin Pad	784
Through Pin Pad to Tooling Hole Pad	785
Through Pin Pad to Via Hole	786
Through Pin Pad to Via Pad	787
Tooling Hole Pad to Blind/Buried Via Hole	788
Tooling Hole Pad to Fiducial Pad	789
Tooling Hole Pad to Line	790
Tooling Hole Pad to Micro Via Hole	791
Tooling Hole Pad to Mounting Hole Pad	792
Tooling Hole Pad to Non-plated Mechanical Hole	793
Tooling Hole Pad to Non-plated Mounting Hole	794
Tooling Hole Pad to Non-plated Slot Hole	795
Tooling Hole Pad to Non-plated Tooling Hole	796
Tooling Hole Pad to Non-signal shape	797
Tooling Hole Pad to Plated Mechanical Hole	798
Tooling Hole Pad to Plated Mounting Hole	799
Tooling Hole Pad to Plated Slot Hole	800
Tooling Hole Pad to Plated Tooling Hole	801
Tooling Hole Pad to Text	802
Tooling Hole Pad to Through Pin Hole	803

Tooling Hole Pad to Tooling Hole Pad	804
Tooling Hole Pad to Via Hole	805
Trace to Blind/Buried Via Hole	806
Trace to Blind/Buried Via Pad	807
Trace to Fiducial Pad	808
Trace to Line Spacing	809
Trace to Mechanical Hole Pad	810
Trace to Micro Via Hole	811
Trace to Micro Via Pad	812
Trace to Mounting Hole Pad	813
Trace to Non-plated Hole	814
Trace to Non-plated Mechanical Hole	815
Trace to Non-plated Mounting Hole	816
Trace to Non-plated Slot Hole	817
Trace to Non-plated Tooling Hole	818
Trace to Non-signal Geometry	819
Trace to Non-signal shape	820
Trace to Pin Pad	821
Trace to Plated Mechanical Hole	822
Trace to Plated Mounting Hole	823
Trace to Plated Slot Hole	824
Trace to Plated Tooling Hole	825
Trace to Shape	826
Trace to Slot Pad	827
Trace to SMD Pin Pad	828
Trace to Text	829
Trace to Through Pin Hole	830
Trace to Through Pin Pad	831
Trace to Tooling Hole Pad	832
Trace to Trace	833
Trace to Via Hole	834
Trace to Via Pad	835
Via Hole to Blind/Buried Via Hole	836
Via Hole to Line	837
Via Hole to Micro Via Hole	838
Via Hole to Non-plated Mechanical Hole	839
Via Hole to Non-plated Mounting Hole	840

Via Hole to Non-plated Slot Hole	841
Via Hole to Non-plated Tooling Hole	842
Via Hole to Non-signal Geometry	843
Via Hole to Non-signal shape	844
Via Hole to Plated Mechanical Hole	845
Via Hole to Plated Mounting Hole	846
Via Hole to Plated Slot Hole	847
Via Hole to Plated Tooling Hole	848
Via Hole to Text	849
Via Hole to Via Hole	850
Via Pad to Blind/Buried Via Hole	851
Via Pad to Blind/Buried Via Pad	852
Via Pad to Fiducial Pad	853
Via Pad to Line	854
Via Pad to Mechanical Hole Pad	855
Via Pad to Micro Via Hole	856
Via Pad to Micro Via Pad	857
Via Pad to Mounting Hole Pad	858
Via Pad to Non-plated Mechanical Hole	859
Via Pad to Non-plated Mounting Hole	860
Via Pad to Non-plated Slot Hole	861
Via Pad to Non-plated Tooling Hole	862
Via Pad to Non-signal shape	863
Via Pad to Plated Mechanical Hole	864
Via Pad to Plated Slot Hole	865
Via Pad to Plated Tooling Hole	866
Via Pad to Slot Pad	867
Via Pad to Text	868
Via Pad to Through Pin Hole	869
Via Pad to Tooling Hole Pad	870
Via Pad to Via Hole	871
Via Pad to Via Pad	872
Cutout	873
CutOut to backdrilled pin hole	874
CutOut to backdrilled via hole	875
Cutout to Blind/Buried via Hole Spacing	876
Cutout to Blind/Buried Via Pad Spacing	877

Cutout to Fiducial Spacing	878
Cutout to line Spacing	879
Cutout to Mechanical Hole Pad Spacing	880
Cutout to micro via Hole Spacing	881
Cutout to Micro Via Pad Spacing	882
Cutout to Mounting Hole Pad Spacing	883
Cutout to Non-plated Mechanical Hole Spacing	884
Cutout to Non-plated Mounting Hole Spacing	885
Cutout to Non-plated Slot Hole Spacing	886
Cutout to Non-plated Tooling Hole Spacing	887
Cutout to Non-signal Shape Spacing	888
Cutout to plated mechanical hole Spacing	889
Cutout to plated mounting hole Spacing	890
Cutout to plated slot hole Spacing	891
Cutout to plated tooling hole Spacing	892
Cutout to Slot Pad Spacing	893
Cutout to SMD Pin Spacing	894
Cutout to Text Spacing	895
Cutout to Through Pin Pad Spacing	896
Cutout to Thru pin Hole Spacing	897
Cutout to Thru via Hole Spacing	898
Cutout to Thruvia Pad Spacing	899
Cutout to Tooling Hole Pad Spacing	900
General	901
Allow overlapping pad/shape on the same net	902
Bottom Tented via list	903
Manufacturing Tolerance Allowance	904
Maximum Micro Via Alignment Tolerance	906
Minimum shape area for mask opening check	907
Tented via list	908
Top Tented via list	909
Zero line width	910
Holes	911
Checks Alignment of Micro Via On Core Via	912
Checks Alignment of Micro Vias	913
Hole Micro Via Aspect Ratio	914
Hole Plated Through Hole Aspect Ratio	915

Hole Skip Via	916
Hole Via Aspect Ratio	917
Max Micro Via Stack Count	918
Max Micro Via Stacked on Core Via	919
Max Via Stack Count	920
Mask	921
Mask Exposed Etch	922
Mask Exposed Etch Area	923
Mask Islands	924
Mask Opening on Shapes	925
Mask Slivers	926
Mask Slivers Angle	927
Same Net Via and SMD Pin Mask Overlap	928
Shape to Mask Opening	929
Trace to Mask Opening	930
Via in Pad Mask Overlap	931
Outline	932
Outline to backdrilled pin hole	933
Outline to backdrilled via hole	934
Outline to Blind/Buried Via Hole Spacing	935
Outline to Blind/Buried Via Pad Spacing	936
Outline to Cutout Spacing	937
Outline to Fiducial Spacing	938
Outline to Line Spacing	939
Outline to Mechanical Hole Pad Spacing	940
Outline to Micro Via Hole Spacing	941
Outline to Micro Via Pad Spacing	942
Outline to Mounting Hole Pad Spacing	943
Outline to Non-plated Hole Spacing	944
Outline to Non-plated Mechanical Hole Spacing	945
Outline to Non-plated Mounting Hole Spacing	946
Outline to Non-plated Slot Hole Spacing	947
Outline to Non-plated Tooling Hole Spacing	948
Outline to Non Sig Geometry Spacing	949
Outline to Non-signal Shape Spacing	950
Outline to Pin Pad Spacing	951
Outline to Plated Mechanical Hole Spacing	952

Outline to Plated Mounting Hole Spacing	953
Outline to Plated Slot Hole Spacing	954
Outline to Plated Tooling Hole Spacing	955
Outline to Shape Spacing	956
Outline to Slot Pad Spacing	957
Outline to SMD Pin Spacing	958
Outline to Text Spacing	959
Outline to Through Pin Pad Spacing	960
Outline to Thru pin Hole Spacing	961
Outline to Thru via Hole Spacing	962
Outline to Thruvia Pad Spacing	963
Outline to Tool Hole Pad Spacing	964
Outline to Trace Spacing	965
Outline to Via Pad Spacing	966
Silkscreen	967
Silkscreen Blind/Buried Via Hole	968
Silkscreen Blind/Buried Via Pad	969
Silkscreen Character Width	970
Silkscreen Fiducial Pad	971
Silkscreen Line, Arc, Shape Width	972
Silkscreen Line, Arc Length	973
Silkscreen Mask	974
Silkscreen Mechanical Hole	975
Silkscreen Mechanical Hole Pad	976
Silkscreen Micro Via Hole	977
Silkscreen Micro Via Pad	978
Silkscreen Mounting Hole	979
Silkscreen Mounting Hole Pad	980
Silkscreen Non Plated Hole	981
Silkscreen Pin Pad	982
Silkscreen Slot Hole	983
Silkscreen Slot Pad	984
Silkscreen SMD Pin Pad	985
Silkscreen Text Overlap	986
Silkscreen Text to Silkscreen Line	987
Silkscreen Text to Silkscreen Shape	988
Silkscreen Text to Silkscreen Text	989

Silkscreen Text Under Component	990
Silkscreen Through Pin Hole	991
Silkscreen Through Pin Pad	992
Silkscreen Thru Via Pad	993
Silkscreen Tooling Hole	994
Silkscreen Tooling Hole Pad	995
Silkscreen Via Hole	996
Silkscreen Via Pad	997
<b>15</b>	<b>998</b>
<b>Silkscreen Line</b>	<b>998</b>

# Preface

This preface discusses the following:

# About This Reference Manual

## The Purpose of this Reference Manual

This reference manual provides a complete description of all of the Allegro constraints. It also provides general information about how the constraint system is organized, about the hierarchy structure, and about how to work with constraints. You can find detailed procedures for defining and setting up constraints in the specific user guides for the tools you are using.

## The Target Audience of this Reference Manual

This manual is intended to assist both beginning and advanced users who need a reference that explains the details of the Allegro constraint system.

# How to Use This Reference Manual

You can use this reference manual to:

- learn how Allegro constraints are organized and structured
- learn general principles for working with constraints
- lookup detailed descriptions of every constraint

# Typographic and Syntax Conventions

This list describes the syntax conventions used in this reference manual.

literal (LITERAL)	Nonitalic or (UPPERCASE) words indicate key words that you must enter literally. These keywords represent command (function, routine) or option names.
<i>argument</i>	Words in italics indicate user-defined arguments for which you must substitute a value.
	Vertical bars (OR-bars) separate possible choices for a single argument. They take precedence over any other character.  For example, <code>command argument   argument</code>
[]	Brackets denote optional arguments. When used with OR-bars, they enclose a list of choices. You can choose one argument from the list.
{ }	Braces are used with OR-bars and enclose a list of choices. You must choose one argument from the list.

...	<p>Three dots (...) indicate that you can repeat the previous argument. If they are used with brackets, you can specify zero or more arguments. If they are used without brackets, you must specify at least one argument, but you can specify more.</p> <p>argument...: specify at least one argument, but more are possible[argument]...: you can specify zero or more arguments</p>
,...	A comma and three dots together indicate that if you specify more than one argument, you must separate those arguments by commas.
Courier font	Indicates command-line examples.



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# Constraint Architecture

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# Constraint Domains

The Allegro platform organizes constraints by the domain (*Design, Electrical, Physical, Spacing, and Same Net Spacing*), depending on the nature of the constraint. For detailed information on constraints in each domain, see the datasheets in the following chapters of this reference:

## Design Constraints

A design constraint is a rule that applies to the entire physical design. These constraints are independent of the electrical circuit. Soldermask alignment and testpoint spacing are examples of design constraints.

## Electrical Constraints

An electrical constraint is a rule that characterizes and constrains the electrical behavior of a net. Electrical constraints apply exclusively to the Xnet. You cannot set Electrical constraints at the Net level. Impedance and propagation delay are examples of electrical constraints.

## Physical Constraints

A physical constraint is a rule that characterizes and constrains the physical instantiation of a net. Physical constraints apply to both the Xnet and Net level. Minimum line width and minimum neck width are examples of physical constraints that apply to a net.

## Spacing Constraints

A spacing constraint is a rule that specifies the spacing between two physical objects. These objects may be the physical instantiation of the same net or different nets. Spacing constraints apply to both the Xnet and Net level. Line-to-line spacing is an example of a spacing constraint that applies between two nets. Same Net Spacing constraints apply to the spacing between elements on the same net.

## Manufacturing Constraints

A manufacturing constraint is a rule that specifies the design for fabrication (DFF) rules for conductor and mask layers. The design for fabrication rules can be assigned to layers of a single stackup design, or in the case of rigid-flex, multiple stackup definitions. For layers that are not

defined in the stack-up, such as silkscreen, subclasses may be grouped together by film record selection or individual Class/Subclasses selections to which DFF rule checks are applied.

Spacing between two physical objects. These objects may be the physical instantiation of the same net or different nets. Spacing constraints apply to both the Xnet and Net level. Line-to- line spacing is an example of a spacing constraint that applies between two nets. Same Net Spacing constraints apply to the spacing between elements on the same net.

# Constraint Objects and Hierarchy

The Allegro platform supports a powerful constraint hierarchy, which allows you to manage constraints on the appropriate objects and at the appropriate level in your design. The figure [Constraint Objects Hierarchy](#) details the hierarchical constraint system. This table represents all system objects. Not all objects apply to all domains. However, the rules of precedence are consistent throughout the system.

Constraint information specified on an object is inherited by all subordinate objects in the hierarchy. For example, a constraint defined on the design will be inherited by all objects in the design. If an object needs to differ from its inherited constraint, you can set an override on that object and the override value will take precedence. This ordering of objects lets you define constraints at the highest level possible, only setting overrides on lower-level objects where necessary.

With hierarchical constraint management, you have the ability to define constraint sets (CSets) and reference those CSets to nets. The advantage of this method is that there is one central place (the CSet) to manage your changes more easily. Changes will propagate to all elements that reference the CSet. If you manage constraints entirely by properties, then updating the correct set of properties, or varying settings of properties can be cumbersome.

## Constraint Object Hierarchy

	<b>Electrical</b>	<b>Physical</b>	<b>Spacing (net-to-net / same-net)</b>
	-----	Design	Design
I	Net Class	Net Class	Net Class
N	Net Group	Net Group	Net Group
H	Bus	Bus	Bus
E	Differential Pair	Differential Pair	Differential Pair
R	Match/Relative Group	-----	-----
I	Xnet	Xnet	Xnet
T	Net	Net	Net
A	Pin Pair	Pin Pair	Pin Pair
N	-----	-----	Net Class-Class *
C	-----	Region	Region
E	-----	Region Class	Region Class
	-----	-----	Region Class-Class *

 Not available in the Same Net Spacing domain

For Constraint Manager, the hierarchical management is extended. The assignment of a CSet can happen at the Net or Bus level. Assignments at the Bus level are inherited by the members of the Net or Bus. You can use Constraint Manager to add constraints or create these object groupings. Refer to Constraint Object Hierarchy in the *Allegro Constraint Manager User Guide* for more information. Refer to the *Allegro® Constraint Manager Reference* for detailed, step-by-step procedures. You can manage certain objects outside of Constraint Manager. See the individual object types for details.

## Designs, Design Instances, and Systems

A design represents a stand-alone board or a board in a system. A design instance represents a design in a hierarchical schematic. In a multi-board configuration, each board becomes a separate design in the system.

A system represents a configuration of designs (boards), including Xnets that traverse these designs. You can only constrain a system with an electrical constraint. A system is a special case where you either want to simulate or constrain nets that span several designs.

## Net Class

A Net Class lets you group net-based objects that share common characteristics and require a similar constraint requirement. Allowable members of a Net Class are: buses, differential pairs, Xnets, and nets. A Net Class can be referenced by [Net Class-Class](#), [Region Class](#), and [Region Class-Class](#). Net Classes apply to the Electrical, Physical, Spacing, and Same Net Spacing domains. You constrain a Net Class by either:

- referencing a CSet
- or
- setting overrides directly on the Net Class object

 The same Net Class can span both the Physical, Spacing and Same Net Spacing domains; the Electrical domain requires a unique Net Class. A Net Class created in the Same Net Spacing domain carries over to the Spacing domain. The converse is also true.

For more information, see [Net Classes](#) in the [Constraint Manager User Guide](#).

## Net Class-Class

A Net Class-Class lets you define an intra-class spacing relationship among members within a Net Class or an inter-class spacing relationship among objects in different Net Classes.

A Net Class-Class applies to the Spacing domain. You constrain a Net Class-Class by either:

- referencing a CSet
- or
- setting overrides directly on the Net Class-Class object

For more information, see "Net Class-Classes" in the [Constraint Manager User Guide](#).

## Differential Pairs

A Differential Pair is a pair of Xnets or Nets that are routed to a pre-defined set of electrical, physical, and spacing rules. In the Electrical domain, you can define the line width and gap required to maintain a certain differential impedance. (If you want these values to be layer-specific, you set these in the Physical domain instead.) In the Spacing and Same Net Spacing domains, you can define rules to maintain clearance from the Differential Pair to other Net elements.

A Differential Pair applies to the Electrical, Physical, Spacing, and Same Net Spacing domains. You constrain a Differential Pair by either:

- referencing a CSet
- or
- setting overrides directly on the Differential Pair object

The Allegro Platform supports the following types of Differential Pairs:

- Model-defined (Electrical) Differential Pairs

You specify Model-defined Differential Pairs in a device signal model by designating inverting and non-inverting signals of the Differential Pair. You can uniquely characterize the Differential Pair by specifying pin parasitics, launch delays, logic thresholds, and buffer delays.

You assign device signal models to components using the PCB Editor, APD, or PCB SI. Constraint Manager then recognizes the Model-defined Differential Pair through its view of the board database.

- User-defined Differential Pairs

You can create User-defined Differential Pairs in several ways. The recommended method is to create them directly in Constraint Manager on a net-level object. This affords you more flexibility in renaming Differential Pair objects and changing Differential Pair membership.

 Model-defined (Electrical) Differential Pairs take precedence over User-defined Differential Pairs and are more persistent because they can only be changed by modifying the model.

## Match Groups

A Match Group is a collection of nets, Xnets, or pin pairs that must all match (in delay or length) or be relative to a specific target within the group. Match Groups are resolved down to specific pin pairs. A Match Group applies to the Electrical domain. You constrain a Match Group by either:

- referencing a CSet

or

- setting overrides directly on the Match Group object

For more information, see *Match Groups* in the [Constraint Manager User Guide](#).

## Buses

A Bus is a named collection of Xnets or Nets. (Particularly in the Electrical domain, a Bus is a specific collection of objects that share a common topology, whereas a Net Class is a more generic grouping.) You can use a Bus to group functionally similar nets, Xnets, and Differential Pairs. Constraints applied to a Bus are inherited by all members of the Bus. A Bus applies to the Electrical, Physical, and Spacing domains. You constrain a Bus by either:

- referencing a CSet

or

- setting overrides directly on the Bus object

For more information, see *Buses* in the [Constraint Manager User Guide](#).

## Nets and Xnets

A Net is an electrical connection from one pin to another pin (or pins) on the same device or on a different device.

If the path of a net traverses a passive, discrete device (resistor, inductor, or capacitor), then each net segment is represented by an individual net entity in the board database. The constraint system interprets these net segments as a contiguous extended net or Xnet. An Xnet can also traverse connectors and cables in a multi-board configuration. XNet creation and deletion are controlled solely by the presence of an ESpice Signal Model on the discrete component.

Nets and Xnets apply to the Electrical, Physical, Spacing, and Same Net Spacing domains. You constrain a Net or Xnet by either:

- referencing a CSet

or

- setting overrides directly on the Net or Xnet object (if there is something higher up in the hierarchy)

For more information, see *Nets and Xnets* in the [Constraint Manager User Guide](#).

## Pin Pairs

A Pin Pair is a pair of logically connected pins, often a driver-receiver connection. Pin Pairs may not be directly connected but they must exist on the same Net or Xnet. Pin Pairs capture specific pin-to-pin constraints for a Net or an Xnet. They can also capture generic pin-to-pin constraints for CSets. Generic Pin Pairs automatically define Net- or Xnet-specific Pin Pairs when the CSet is referenced. Pin Pairs apply to the Electrical, Physical, Spacing domains. You constrain Pin Pairs by either:

- referencing a CSet
- or
- setting overrides directly on the Pin Pair object (if there is something higher up in the hierarchy)

In the Physical and Spacing domains, you must explicitly create Physical Pin Pairs (for example, U1.8 U3.8).

In the Electrical domain, Logical Pin Pairs may be one of the following:

- explicit (as in the Physical and Spacing domains)
- implied by the Xnet's (or Net's) electrical constraints, pin use, and placement
- derived based on the following criteria:
  - longest or longest/shortest pin pair
  - longest or longest/shortest driver-receiver pair
  - all driver-receiver pairs

For more information, see *Pin Pairs* in the [Constraint Manager User Guide](#).

## Region

A Region is a bounded area of the design that applies constraints to all Nets that cross the boundary. You define a Region by drawing a geometric shape, or a group of shapes, on a subclass layer in PCB Editor.

Regions apply to the Physical, Spacing, and Same Net Spacing domains. You constrain a Region by either:

- referencing a CSet
- or
- setting overrides directly on the Region object

For more information, see *Regions* in the [Constraint Manager User Guide](#).

## Region Class

A Region Class lets you constrain the nets of a Net Class within a Region differently than the original constraints on that Region. The constraints on the nets of a Region Class are exceptions to the constraints originally applied to the Region. A Region is more generic; a Region Class allows more specific exceptions to be defined. The constraints in a Region Class are not required and are not auto-generated. You must create them and define them explicitly.

Region Classes apply to the Physical and Spacing domains. You constrain a Region Class by either:

- referencing a CSet
- or
- setting overrides directly on the Region Class object

For more information, see "Region Classes" in the [Constraint Manager User Guide](#).

## Region Class-Class

A Region Class-Class lets you specify the minimum spacing between nets of Net Classes within a Region. You can specify the same Net Class twice as part of a Region Class-Class, to restrict the spacing between nets of that one Net Class.

The constraints on nets of a Region Class-Class are exceptions to the constraints originally applied to the Region. A Region is more generic; a Region Class-Class allows more specific exceptions to be defined. The constraints in a Region Class-Class are not required and are not auto-generated. You must create them and define them explicitly.

Region Class-Classes apply to the Spacing domain. You constrain a Region Class-Class by either:

- referencing a CSet
- or
- setting overrides directly on the Region Class-Class object

For more information, see "Region Classes" in the [Constraint Manager User Guide](#).

# Constraint Operations

You can perform many operations to control the constraint system and analyze the results of the DRCs. This section serves as a guide to locating procedural information about each operation.

## *Important Definitions*

- DRC (Design Rule Check)

The algorithm that assesses compliance with a constraint.

- DRC Error

The database object generated by a Design Rule Check when a violation occurs.

- DRC Error Marker

The visible representation of a DRC Error (bow tie graphic with DRC error code).

## Online DRC

Online DRC lets you enable (*On*) or disable (*Off*) the Online DRC function or set up a batch (*Batch*) DRC process. When enabled, Online DRC checks for design rule violations in real-time as you perform design tasks such as placement or routing. Refer to the:

- [Analyze – Analysis Modes](#) command in the *Constraint Manager Reference*.
- or
- [Display – Status](#) command in the *Allegro PCB Editor User Guide: Creating Design Rules*.

## DRC Modes

DRC Modes lets you turn off individual DRCs. Refer to the:

- [Analyze – Analysis Modes](#) command in the *Constraint Manager Reference*.
- or
- [DRC Modes](#) in the *Allegro PCB Editor User Guide: Creating Design Rules*.

## DRC Status

DRC Status informs you when DRCs are stale. Refer to the:

- Tools – Update DRC command in the *Constraint Manager Reference*.
- or
- Display – Status command in the *Allegro PCB Editor User Guide: Creating Design Rules*.

## DRC Error Marker Visibility

DRC Error Marker Visibility lets you control the display of DRC error markers. Refer to Making DRCs Visible and Controlling the Display of DRC Markers in the *Allegro PCB Editor User Guide: Creating Design Rules*.

## DRC Error Data

DRC Error Data reveals the Design Rule Check error data stored in a DRC marker. Refer to Display – Element Information command in the *Allegro PCB Editor User Guide: Creating Design Rules*.

## DRC Error Codes

DRC Error Codes include a two-character identifier within the DRC error marker (bow tie). Refer to Dictionary of DRC Error Marker Codes.

## Waiving DRCs

Waiving DRCs lets you accept (not flag) a Design Rule Check violation. Refer to the:

- Objects – Waive command in the *Constraint Manager Reference*.
- or
- Waiving Design Rule Check Errors section in the *Allegro X PCB Editor User Guide: Creating Design Rules*.

## Show Constraints

Show Constraints reports the resolved Physical constraint on a selected database object or the resolved Spacing constraint between two selected objects. Show Constraints can help you see

how the tool resolved to specific DRC values.

# Constraint Overrides

A constraint override is a distinct constraint value that is applied to a design object and that overrides the inherited constraint value for that object (see [Constraint Objects and Hierarchy](#)). A constraint override has higher precedence than a CSet. Constraint overrides are not permitted on a design object in the Physical, Spacing, and Same Net Spacing domains.

 The Net Properties worksheet in Constraint Manager contains all of the properties (overrides) which apply exclusively to Nets with no Xnet support.

# Constraint Resolution

The Allegro platform constraint system adheres to object precedence when resolving constraints. (See [Table 1-1](#) on page 18 for details of the hierarchical constraint system.)

## Precedence

In the Physical, Spacing, and Same Net Spacing domains, all constraints must be resolved at the Design constraint object. In a new design, the *DEFAULT* Physical, Spacing, and Same Net Spacing CSets are referenced by the Design constraint object. The Design constraint object must always reference one Physical CSet, one Spacing Cset, and one Same Net Spacing CSet, although it does not have to be the *DEFAULT* CSet.

In the Physical, Spacing, and Same Net Spacing domains, a physical database object (cline, shape, pin, or via) is part of a Net or Xnet. The constraint system uses the constraint (and its value) that is set on this Net. If the Net is not constrained directly, a constraint may be inherited from a higher level in the constraint hierarchy (Match Group, Differential Pair, Bus, or Net Class) that includes the Net as a member.

Thus, the constraint system moves up one level to look for a constraint setting. It continues this process until it finds a constraint specified on a level that includes the Net, and uses that constraint value. If a constraint value is not specified on the Net, or on a hierarchy level to which the Net belongs, the Net inherits the constraint from the Design.

In the Electrical domain, it is acceptable for constraints to be unspecified throughout the entire hierarchy. There is no default value for any Electrical constraint.

## Domain Impact

In the Electrical and Physical domains, database objects are checked individually.

In the Spacing domain, two database objects are required by each check. The constraints for each database object are compared at each level of the constraint hierarchy. The constraints on higher precedence objects are chosen over the constraints on the lower precedence objects.

## Regions, Region Classes, and Region Class-Classes

In the Physical, Spacing, and Same Net Spacing domains, constraint resolution first considers a database object's location to determine whether the object is within the boundaries of a:

1. Region Class-Class (if defined and constrained in the Physical or Spacing domain)

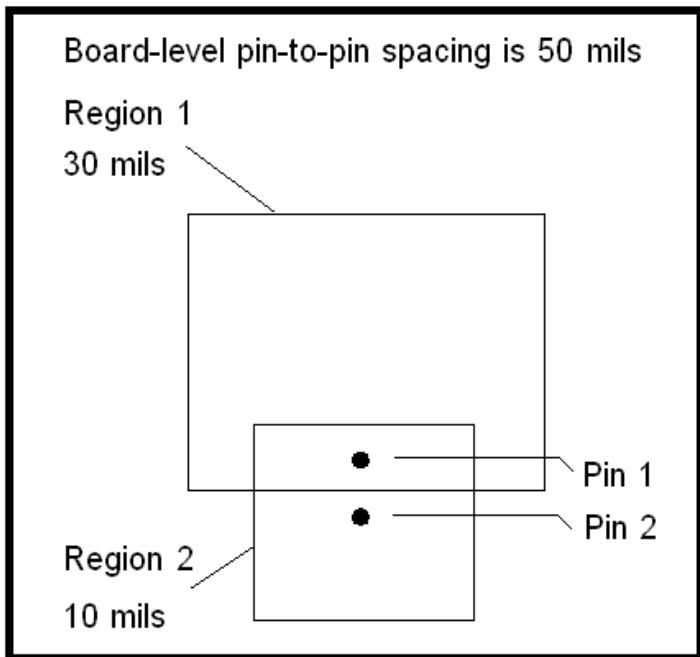
2. Region-Class (if defined and constrained in the Physical or Spacing domain)
3. Region (if defined and constrained in the Physical, Spacing, or Same Net Spacing domain)

If so, constraints resolve to those on the innermost Region, when nested, and on the most conservative Region, when overlapping. If not, constraint resolution is as described in the [Precedence](#) section.

## Examples:

In [Figure 1-1](#) on page 27, the pin-to-pin spacing is 30 mils for Region 1, 10 mils for Region 2, and 50 mils throughout the board. (In this example, these values apply across all layers.) Two overlapping Regions are exceptions to the board-level, pin-to-pin constraint. Pin 2 inherits the 10 mil constraint that is set on Region 2. Pin 1 is in an overlapping region (Region 1 and Region 2), which results in a conflict. Region 1 (30 mils) is more conservative than Region 2 (10 mils). Therefore, the spacing resolves to 30 mils between both pins.

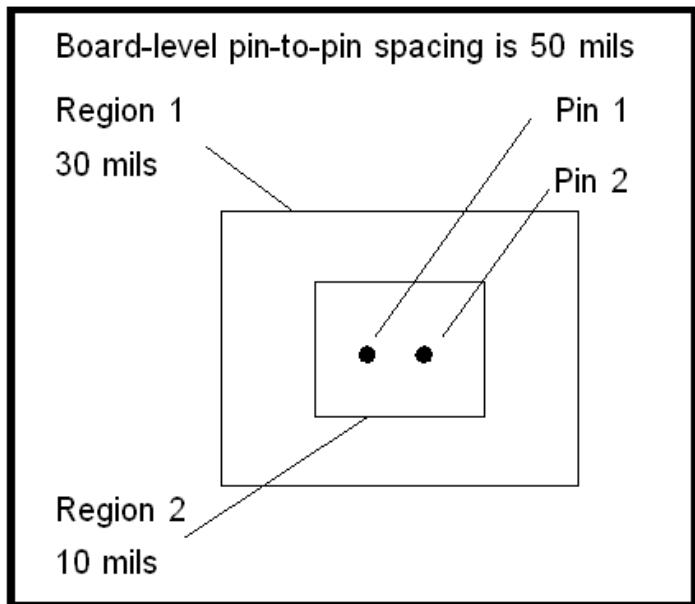
## Figure 1-1 Overlapping Regions



In [Figure 1-2](#) on page 28, the pin-to-pin spacing is 30 mils for Region 1, 10 mils for Region 2, and 50 mils throughout the board. Two nested Regions are exceptions to the board-level, pin-to-pin constraint. The innermost nested region always presides, regardless of constraint values in outer

Regions, or outside of Regions. Therefore, the spacing resolves to 10 mils between both pins.

## Figure 1-2 Nested Regions



# Constraints

The Allegro platform supports a collection of constraints that you can use to control all aspects of the design, including electrical, physical, spacing, same net spacing, and manufacturing parameters. You usually define electrical constraints during the circuit design process, which are then passed to the physical design. You define physical, spacing, same net spacing, and manufacturing constraints during the physical design process.

A constraint is a design requirement that is validated using the Design Rule Check (DRC) function. You set the value of a constraint and apply it to design objects based on the hierarchical system illustrated in [Table 1-1](#) on page 18. A constraint belongs to one of five domains: Design, Electrical, Physical, Spacing, and Same Net Spacing. You apply constraints in the Electrical, Physical, and Spacing domains using the hierarchical constraint system. Constraints in the Design domain are global; one requirement (value) applies to the entire design.

The Electrical, Physical, Spacing, and Same Net Spacing domains support constraint sets. Either constraint sets or individual constraint values may be applied to design objects. (See [Table 1-1](#) on page 18 for a complete list of constrainable design objects.)

Each physical, spacing, and design constraint has an associated DRC function with a specific DRC error marker. You can enable or disable DRCs individually, or globally (see [Constraint Operations](#) on page 29). Some electrical constraints have associated DRC functions, some require simulation for DRC, and others require simulation but have no DRC.

 The constraints described in this book are pre-defined and are built into the tool. Consult the *ConstraintManagerUserGuide* for information on user-defined constraints.

# Constraint Sets

A constraint set (CSet) is a named, reusable collection of constraint values. The Electrical, Physical, Spacing and Same Net Spacing domains support CSets. The Design domain does not support CSets.

The hierarchical constraint system requires that you set explicit values to define specific constraint situations. Cadence recommends that you use CSets to take advantage of the hierarchical constraint system.

## Electrical CSets

An Electrical CSet consists of values that you must define for the constraints. There is no pre-defined default Electrical CSet.

## Physical and Spacing CSets

A Physical CSet consists of one value per layer for each physical constraint. A Spacing CSet and a Same Net Spacing CSet consists of one value per layer for each spacing constraint. In all designs, the Allegro X PCB Editor provides one Physical CSet, one Spacing, and one Same Net Spacing CSet (each named *DEFAULT*) which you cannot delete or rename. The values of the *DEFAULT* CSets are predefined, but you can modify them to suit your design requirements. You cannot remove or add constraints to the *DEFAULT* CSets, and you cannot delete them. The *DEFAULT* CSet values are the values that will take effect if you do not explicitly define other CSet values.

In the Physical, Spacing, and Same Net Spacing domains, all constraints must be resolved at the Design constraint object (see [Constraint Objects Hierarchy](#)). In a new design, the *DEFAULT* Physical and Spacing CSets are referenced by the Design constraint object.

## Intra-DP Spacing CSet

The *Intra-DP Spacing CSet* can assign a specific SCset to drive the minimum clearance between the via members of a differential pair. This SCset does not affect the spacing between the clines of the differential pair. You can apply this SCset to Net Class, Differential Pair, Net, and XNet objects from the *Intra-DP Spacing CSet* column in the *Net* and *Region* worksheets of the *Physical* domain.

Any Spacing CSet available in the Spacing domain can be set as the Referenced Intra-DP Spacing CSet. Use of the *Display – Constraint* command is a quick way to view the resolved spacing constraint.



# Dictionary of DRC Error Marker Codes

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# DRC Error Marker Code Definitions

The following table lists each DRC error marker code combination and its associated constraint violation. The list is arranged alphabetically according to the letters in the DRC error markers.

<b>Code</b>	<b>Constraint Violation</b>
A – A	Acute angle to cavity edge
B – B	Bond Pad to Bond Pad
B – L	Bond Pad to Line
B – S	Bond Pad to Shape
C – C	Component to cavity edge Package to package Soldermask to soldermask
D – C	DFA Package to package
D – D	Mechanical Drill Hole to Mechanical Drill Hole Mechanical Drill Hole to Drill Hole Drill Hole to Drill Hole
D – I	Negative plane islands
D – L	Mechanical Drill Hole to Cline Drill Hole to Cline
D – P	Phase Tolerance - Tolerance Mechanical Drill Hole to Pin Drill Hole to Pin
D – S	Mechanical Drill Hole to Shape Drill Hole to Shape
D – V	Mechanical Drill Hole to Via Drill Hole to Via

E – D	Max Final Settle Max Min First Switch Min Noise Margin Min Overshoot Max Propagation Delay Max Propagation Delay Min Propagation Delay Path Type Relative Propagation Delay Delta Relative Propagation Delay Path Type Relative Propagation Delay Scope
E – L	Layer Sets Max Exposed Length Total Etch Length Max Total Etch Length Min
E – P	Parallelism
E – S	Max Stub Length
E – T	Verify Schedule
E – V	Max Via Count
E – X	Active Window Max Xtalk Max Peak Xtalk Sensitive Window Maximum Inter Crosstalk Maximum Intra Crosstalk

F – C	Bond finger to component  Bond Pad to Component Edge  Bond Finger to cavity edge
F – F	Bond Pad to Bond Pad (same net)  Bond Pad to Bond Pad (different net)
I – M	Single-line Impedance Target and Tolerance
J – N	Allow - Ts
K – B	Bond Pad to Route Keepin  Bond Pad to Route Keepout  Bond Pad to Via Keepout
K – C	Package to place keepin  Package to place keepout
K – L	Line to Route Keepin  Line to Route Keepout
K – P	Thru Pin to Route Keepin  Thru Pin to Route Keepout  SMD to Route Keepin  SMD to Route Keepout  Test Pin to Route Keepin  Test Pin to Route Keepout  Test Pin to No Probe
K – S	Shape to Route Keepin  Shape to Route Keepout

K – V	Via to Route Keepin Via to Route Keepout Via to Via Keepout BB Via to Route Keepin BB Via to Route Keepout BB Via to Via Keepout Test Via to Route Keepin Test Via to Route Keepout Test Via to Via Keepout Test Via to No Probe
L – L	Line to Line
L – S	Shape to Line
L – W	Line Width - Max Line Width - Min Neck - Max Length Neck - Min Width
M – A	Soldermask alignment Pad Soldermask Alignment Symbol Soldermask Alignment
M – C	Symbol Soldermask to Pad Soldermask Minimum Cavity Size
M – L	Soldermask to pad and cline
M – M	Pad Soldermask to Pad Soldermask Any Metal to Any Metal Spacing
M – P	Soldermask to Pin
M – S	Soldermask to shape

M – V	Soldermask to Via  Matched Via count violation
N – S	Negative Plane to Sliver
O – C	Object exposure to cavity
P – B	Bond Pad to SMD Pin  Bond Pad to Test Pin  Bond Pad to Thru Pin
P – D	Mechanical Pin Antipad to Drill Hole
P – L	Line to SMD Pin  Line to Test Pin  Line to Thru Pin  Mechanical Pin Antipad to Cline
P – M	Pastemask pad to pastemask pad  Pastemask to package pastemask
P – P	SMD Pin to SMD Pin  SMD Pin to Test Pin  Test Pin to Test Pin  Thru Pin to SMD Pin  Thru Pin to Test Pin  Thru Pin to Thru Pin  Mechanical Pin Antipad to Pin
P – S	Shape to SMD Pin  Shape to Test Pin  Shape to Thru Pin

# Understanding DRC Error Marker Codes

A DRC error marker consists of a “bow tie” symbol with two letters. The letter codes indicate what type of constraint is violated.

-  Net-to-Net Spacing DRC error marker codes are uppercase; in contrast, the Same Net Spacing codes are lowercase.

For example, the DRC error marker shown below indicates a violation of a pin-to-via constraint.



In this example, the “P” indicates that a pin is involved in the violation; the “V” indicates that a via is also involved.

-  You can also hover the cursor over a particular DRC error marker (“bow tie”) to display a data tip that gives a full description of the constraint violation.



# 3D

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# Clearance type for component spacing

This setting specifies the clearance envelope to be used for 3D Clearance rules that have horizontal and vertical constraint values. Note that the clearance type is not applicable for 3D rules that do not have both horizontal and vertical constraints. The valid values for this setting are as follows:

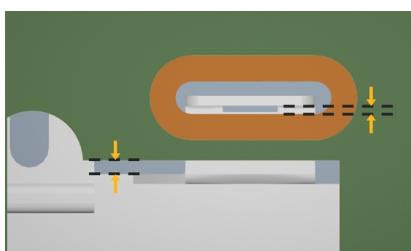
- *Round\_Clearance*: The clearance envelope will be a spheroid with horizontal and vertical diameters equal to the given constraint values.
- *Bevel\_Clearance*: The clearance envelope will be a vertical axis bicone having a diameter equal to the horizontal constraint value and total height equal to the vertical constraint value.  
If a value is not specified, *Round\_Clearance* will be used by the 3D DRC engine for evaluating 3D Clearance rules having horizontal and vertical constraint values.

# Component to Board 3 dimensional spacing

The ‘Component to Board’ rule ensures required horizontal clearance anywhere the component body extends below the mating plane within its mating region. The rule ensures required clearance between the component body and the physical board boundary edges, including clearance to pin drill/slot inner walls, and ensures no physical interference between the component body and the physical surfaces of the board. The check is not limited to directly associated pins of a component. For example, the case of an independent mounting-hole symbol that provides a drill or slot for an imported mechanical enclosure will be supported.

**DRC Code:** td

**Attribute Name:** PKGBRD\_3D



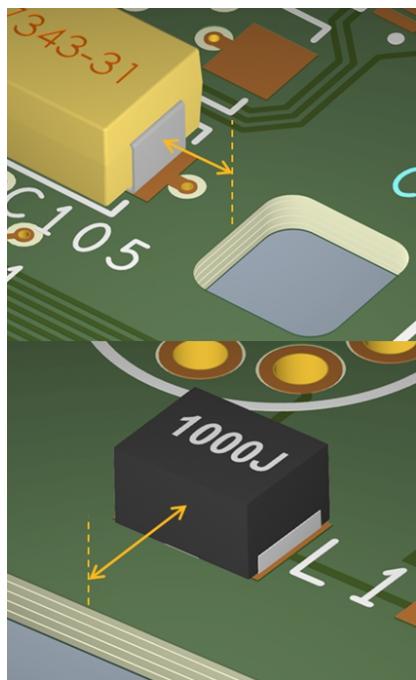
**Applicable Objects:** ComponentToBoard3DCSet

# Component to Board Edge 3 dimensional spacing

The ‘Component to Board Edge’ rule ensures a component body has sufficient horizontal clearance to the physical edge of the board. The edge of the board includes both the exterior design boundary as well as any interior boundaries that may be formed by cutouts, NC Route paths, etc.

**DRC Code:** td

**Attribute Name:** PKGBRDEdge\_3D



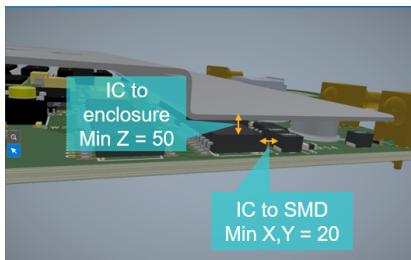
**Applicable Objects:** ComponentToBoardEdge3DCSet

# Component to Component 3 Dimensional Spacing

The 3D component to component spacing rule ensures that all specified pairs of components are separated by a volume equal to the clearance envelope defined by the horizontal and vertical constraint values and the chosen clearance type. The 3D extent of each component used in the check will be the union of the shape representations specified in the constraint including the mapped 3D model and the 2.5D extrusions of the Place\_Bound and/or Dfa\_Bound shapes.

**Legal Values:** Design Units

**Applicable Objects:** PkgToPkg3DCset, ComponentToBoard3DCSet, ComponentToRigidFlex3DCSet, ComponentToBoardEdge3DCSet



**DRC Code:** td

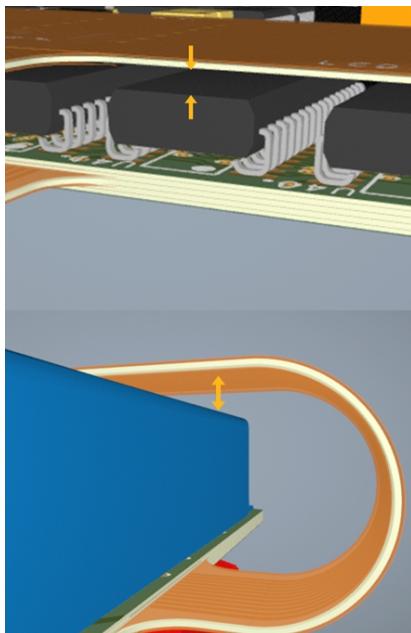
**Attribute Name:** PKGPKG\_3D\_SPACING

# Component to Rigid Flex 3 dimensional spacing

The ‘Component to Rigid-Flex’ rule ensures horizontal and vertical clearance requirements are satisfied between a component body and rigid or flex regions that may transform separately from the component’s mating region.

**DRC Code:** td

**Attribute Name:** PKGRIGIDFLX\_3D



**Applicable Objects:** ComponentToRigidFlex3DCSet

# Assembly

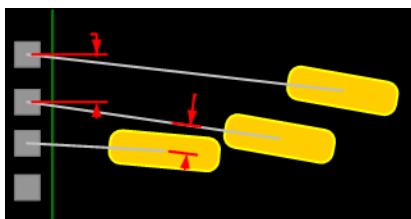
---

# Bondwire To bondwire

This rule applies to the space between two bond wires that are on the same side of the package substrate. Wires which share an end point object, such as a die-to-die bond wire connecting to the same pin as a die-to-substrate bond wire, are not checked. The distance is measured as the minimum 2D separation between the two wires. To run this online rule, choose *Setup - Constraints - Modes* and set *Wire to Wire* to On.

**Legal Values:** Design Units

**Applicable Objects:** System, Design, ClassClass, RegionClass, RegionClassClass, WireProfile, AssemblyCSet



**DRC Code:** WW

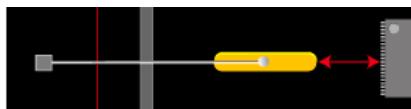
**Attribute Name:** BONDWIRE\_BONDWIRE\_SPC

# Finger to Component Edge

Bond finger component edge spacing is the minimum separation required between a bond finger and the edge of a component, a die or discrete, on the same edge of the package substrate. This is the clearance required to ensure the capillary clears the component edge when adding wires. To run this online rule, choose *Setup — Constraints — Modes* and set *Bond finger to Component*.

**Legal Values:** Design Units

**Applicable Objects:** System, Design, WireProfile, AssemblyCSet



**DRC Code:** FC

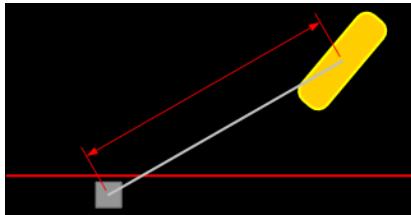
**Attribute Name:** BONDPAD\_COMP\_EDGE

# Maximum Bond Length

This property, attached to a net or connect line, specifies the maximum length of bonding wire for a net. A bonding wire is any connect line on an Etch subclass of type bonding wire. The MAX\_BOND\_LENGTH property is only supported at board level. To run this online rule, choose *Setup - Constraints - Modes* and set *Max Bonding wire length* to On.

**Legal Values:** Design Units

**Applicable Objects:** System, Design, WireProfile, AssemblyCSet



**DRC Code:** WI

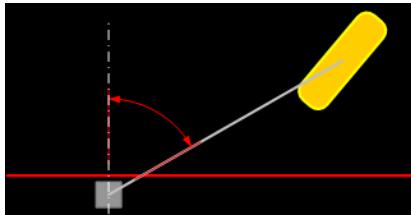
**Attribute Name:** MAX\_BOND\_LENGTH

# Maximum Wire Angle to Die Edge

This rule applies to the angle of every bond wire in the design, regardless of the start and end connection types. Wire maximum angle refers to the maximum angle at which a wire may be placed. The tool measures this angle relative to the side of the die that the wire crosses. To run this online rule, choose *Setup - Constraints - Modes* and set *Wire to Die Edge Angle* to On.

**Legal Values:** Angle Units

**Applicable Objects:** System, Design, WireProfile, AssemblyCSet



**DRC Code:** WA

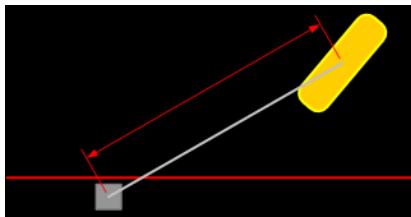
**Attribute Name:** MAX\_LINE\_EXIT\_ANGLE

# Minimum Bond Length

This property, attached to a net or connect line, specifies the minimum length of bonding wire for a net. A bonding wire is any connect line on an Etch subclass of type bonding wire. The MIN\_BOND\_LENGTH property is only supported at the board level. To run this online rule, choose *Setup - Constraints - Modes* and set *Min Bonding wire length* to On.

**Legal Values:** Design Units

**Applicable Objects:** System, Design, WireProfile, AssemblyCSet



**DRC Code:** WA

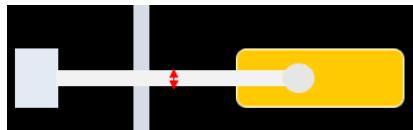
**Attribute Name:** MIN\_BOND\_LENGTH

# Minimum Wire Diameter

Specifies the required diameter to use when bonding the die into the package. Use this value when calculating clearance values for bond finger-to-wire and bond wire-to-wire spacing checks.

**Legal Values:** Design Units

**Applicable Objects:** System, Design, WireProfile, AssemblyCSet



**DRC Code:** WD

**Attribute Name:** BONDWIRE\_DIAMETER

# Wire End to Wire End

Bond wire end-to-end is the minimum separation between the connection points of two different bond wires. This applies to both ends of the wires. This value is based on the size of the bonding machine as the machine must clear the first wire's end when placing the second wire. To run this online rule, choose *Setup - Constraints - Modes* and set *Wire end to Wire end* to On.

**Legal Values:** Design Units

**Applicable Objects:** System, Design, ClassClass, RegionClass, RegionClassClass, WireProfile, AssemblyCSet



**DRC Code:** WE

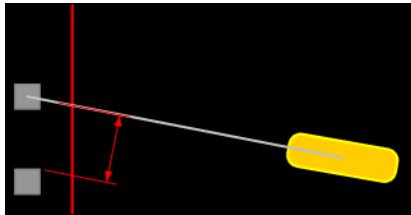
**Attribute Name:** BONDWIRE\_BONDWIRE\_CONNECT\_SPC

# Wire To Die Pin Spacing

This rule applies only to the space between a bond wire and die pad. The die pad to which the wire connects is excluded from the check. The distance is measured as the minimum 2D separation between the wire and die pad edge, ignoring any possible height difference between the wire and pad. To run this online rule, choose *Setup - Constraints - Modes* and set *Wire to Pin* to On.

**Legal Values:** Design Units

**Applicable Objects:** System, Design, WireProfile, AssemblyCSet



**DRC Code:** WP

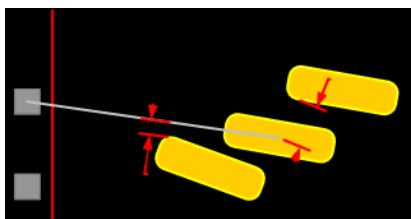
**Attribute Name:** BONDWIRE\_PIN\_SPC

# Wire To Finger Spacing

This rule applies only to the space between a bond wire and finger, and does not apply to die-to-die bond wires. The distance is measured as the minimum 2D separation between the wire and finger's conductor pad edge, ignoring any finger pads on BONDING WIRE, DIELECTRIC, or SOLDERMASK layers. To run this online rule, choose *Setup - Constraints - Modes* and set *Wire to Bond Finger to On*.

**Legal Values:** Design Units

**Applicable Objects:** System, Design, WireProfile, AssemblyCSet



**DRC Code:** WF

**Attribute Name:** BONDWIRE\_BONDPAD\_SPC

# Design Modes

---

# Dfa

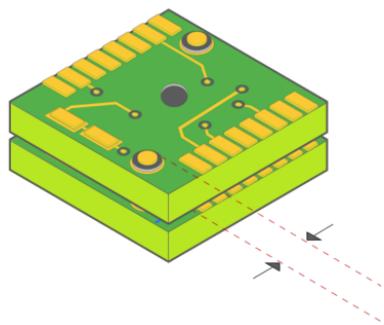
---

# Adjacent layer copper to component fiducial edge

This constraint defines the rule for minimum clearance on adjacent layer copper to component fiducial edge.

**Legal Values:** Design Units

**Applicable Objects:** DFASpacingCSet



**DRC Code:** co

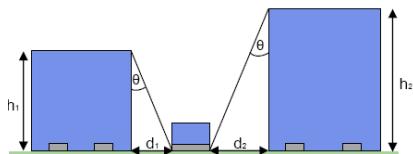
**Attribute Name:** DFA\_MIN\_COMPFID\_TO\_COPPER

# Component body to component body by height

This constraint defines the minimum allowable angle formed by a ray with the vertical edge of a package body. This angle defines the region defined by the shadow of the package. The check assumes that ray is coming out of the light source used for Automatic Optical Inspection(AOI) machine. Any package whose top edge is inside the shadow will not be visible to the camera doing optical inspection in the assembly process. Larger the angle larger is the shadow area and hence more spacing required between the packages.

**Legal Values:** Angle Units

**Applicable Objects:** DFAPkgToPkgSpacingCSet



**DRC Code:** co

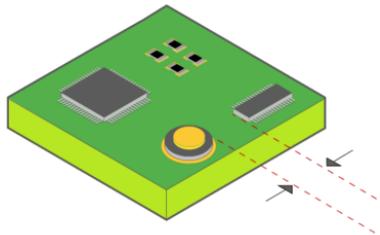
**Attribute Name:** DFA\_COMP\_TO\_COMP\_HGT

# Component body to Fiducial

This constraint defines the rule for minimum allowable distance between edge of a component instance to a fiducial.

**Legal Values:** Design Units

**Applicable Objects:** DFASpacingCSet



**DRC Code:** co

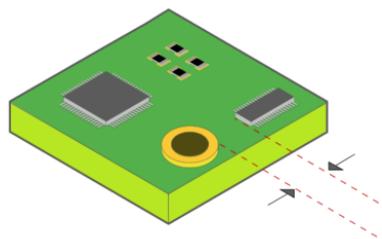
**Attribute Name:** DFA\_MIN\_COMPFID\_TO\_COMP

# Component body to Mechanical hole

This constraint defines the rule for minimum allowable distance between edge of a component instance to a mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFASpacingCSet



**DRC Code:** co

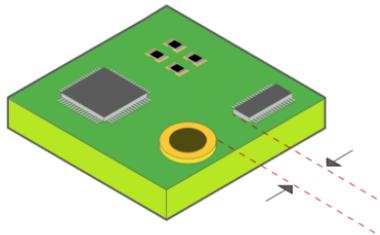
**Attribute Name:** DFA\_COMP\_TO\_MECHOLE

# Component body to Mounting hole

This constraint defines the rule for minimum allowable distance between edge of a component instance to a mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFASpacingCSet



**DRC Code:** co

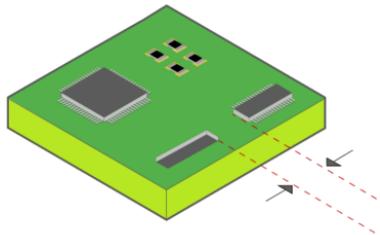
**Attribute Name:** DFA\_COMP\_TO\_MNTHOLE

# Component body to Slot hole

This constraint defines the rule for minimum allowable distance between edge of a component instance to a slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFASpacingCSet



**DRC Code:** co

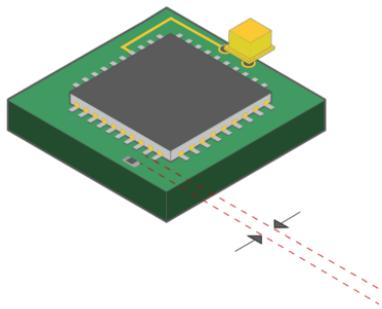
**Attribute Name:** DFA\_COMP\_TO\_SLT\_HOLE

# Component body to SMD pin

This constraint defines the rule for minimum allowable distance between edge of a component instance to a SMD pin.

**Legal Values:** Design Units

**Applicable Objects:** DFASpacingCSet



**DRC Code:** co

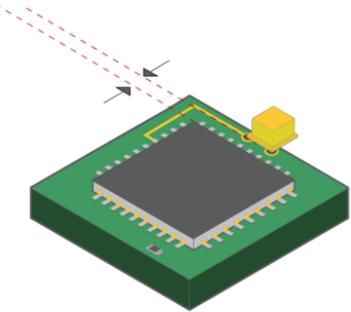
**Attribute Name:** DFA\_COMP\_SMDPIN\_COMPBODY

# Component body to Thru pin

This constraint defines the rule for minimum allowable distance between edge of a component instance to a thru pin.

**Legal Values:** Design Units

**Applicable Objects:** DFASpacingCSet



**DRC Code:** co

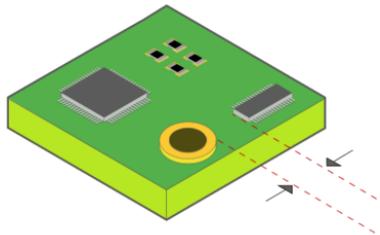
**Attribute Name:** DFA\_COMP\_THPIN\_COMPBODY

# Component body to Tooling hole

This constraint defines the rule for minimum allowable distance between edge of a component instance to a tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFASpacingCSet



**DRC Code:** co

**Attribute Name:** DFA\_COMP\_TO\_TOOLING\_HOLE

## Direction of conveyed edge

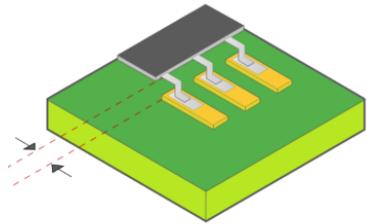
Conveyed edge defines the edge of the board which is used to hold the board in the conveyor belt for assembly purpose. The conveyor belt holds either North and south edge or East and west side of the edge of the extent of the board outline. So even if the design outline is circular, the rectangular extent will be considered for conveyed edges. The possible values of this attribute are "North-South", meaning that conveyed edges are towards north and south side of the board, or "East-West", indicating that conveyed edges are towards east and west side of the board.

# Distance between SMD pastemask pad and lead

Checks the spacing between a pastemask pad of an SMD pin and the contact figure of the lead.

**Legal Values:** Design Units

**Applicable Objects:** DFAPinCSet



**DRC Code:** co

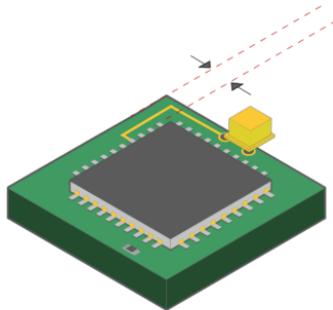
**Attribute Name:** DFA\_SMDPIN\_PASTEMASK\_TO\_PAD

# High pin count component to design outline

This constraint defines the rule for minimum allowable distance between edge of a high pin count component instance to the design outline. A high pin count component is defined as a symbol having pin count greater than the value specified in the attribute DFA\_MIN\_PINCOUNT\_HIGHPNCNT. This can be defined through "Design for Assembly" options page in Analysis Mode dialog. This rule is applicable if the high pin count component criteria is satisfied.

**Legal Values:** Design Units

**Applicable Objects:** DFAOutlineCSet



**DRC Code:** co

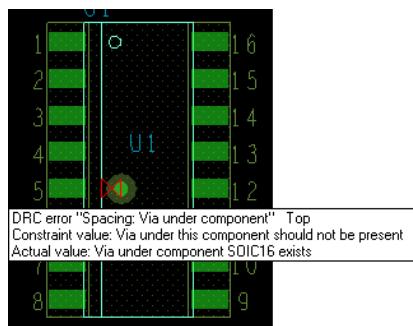
**Attribute Name:** DFA\_HIGHPNCOMP\_TO\_OLN

# Large via under component

Flag a DRC if a large via is present under the component.

**DRC Code:** co

**Attribute Name:** DFA\_LVIA\_UNDER\_COM



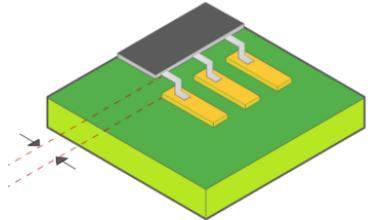
**Applicable Objects:** DFASpacingCSet

# Maximum distance between component body and leads on external SMD pins

Checks the spacing between a component body and the contact figure of leads on external SMD pins.

**Legal Values:** Design Units

**Applicable Objects:** DFAPinCSet



**DRC Code:** co

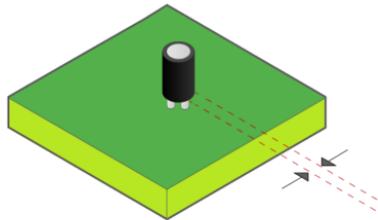
**Attribute Name:** DFA\_MAX\_SMDPINEXT\_SAME\_COMP

# Maximum distance between component body and leads on internal SMD pins

Checks the spacing between a component body and the contact figure of leads on internal SMD pins.

**Legal Values:** Design Units

**Applicable Objects:** DFAPinCSet



**DRC Code:** co

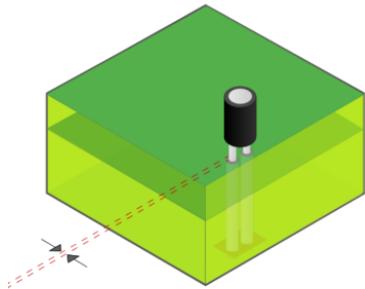
**Attribute Name:** DFA\_MAX\_SMDPININT\_SAME\_COMP

# Maximum distance between non-plated thru pin hole to it's lead

Checks the spacing between a non-plated thru pin hole to the contact figure of the lead.

**Legal Values:** Design Units

**Applicable Objects:** DFAPinCSet



**DRC Code:** co

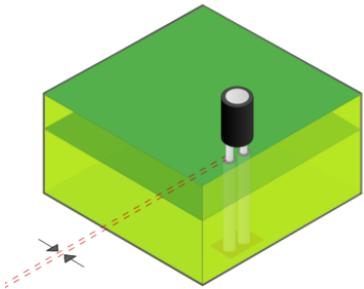
**Attribute Name:** DFA\_HOLE\_DIA\_TO\_MAX\_NPL\_THPIN

# Maximum distance between plated thru pin hole to it's lead

Checks the spacing between a plated thru pin hole to the contact figure of the lead.

**Legal Values:** Design Units

**Applicable Objects:** DFAPinCSet



**DRC Code:** co

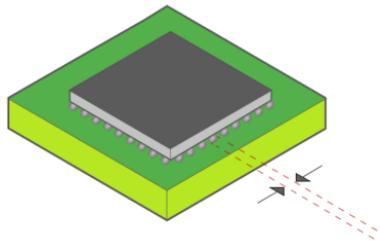
**Attribute Name:** DFA\_HOLE\_DIA\_TO\_MAX\_PL\_THPIN

# Maximum distance between SMD pin pad and it's ball lead

Checks the spacing between an SMD pin pad and the contact figure of the ball lead.

**Legal Values:** Design Units

**Applicable Objects:** DFAPinCSet



**DRC Code:** co

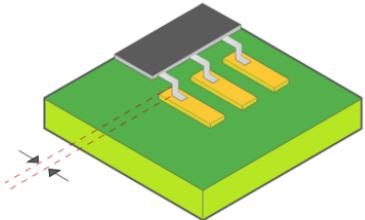
**Attribute Name:** DFA\_SMD\_BALLDIA\_TO\_MAX\_PAD\_DIA

# Maximum heel size

Checks the spacing between an SMD pin pad edge closest to the component body and the edge of the contact figure of the lead.

**Legal Values:** Design Units

**Applicable Objects:** DFAPinCSet



**DRC Code:** co

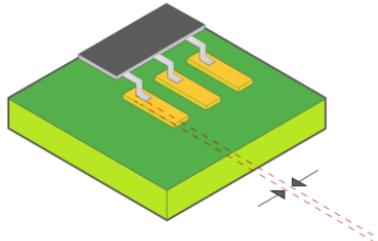
**Attribute Name:** DFA\_SMD\_MAX\_SIZE\_HEEL

## Maximum side

Checks the spacing between an SMD pin pad edge perpendicular to the toe or heel and the edge of the contact figure of the lead.

**Legal Values:** Design Units

**Applicable Objects:** DFAPinCSet



**DRC Code:** co

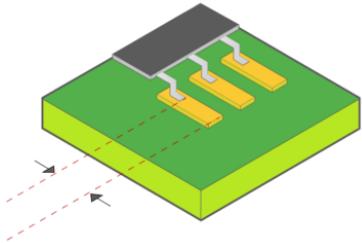
**Attribute Name:** DFA\_SMD\_MAX\_SIDE

## Maximum toe size

Checks the spacing between the SMD pin pad edge farthest from the component body and the edge of the contact figure of the lead.

**Legal Values:** Design Units

**Applicable Objects:** DFAPinCSet



**DRC Code:** co

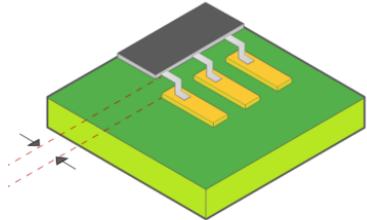
**Attribute Name:** DFA\_SMD\_MAX\_SIZE\_TOE

# Minimum distance between component body and leads on external SMD pins

Checks the spacing between a component body and the contact figure of leads on external SMD pins.

**Legal Values:** Design Units

**Applicable Objects:** DFAPinCSet



**DRC Code:** co

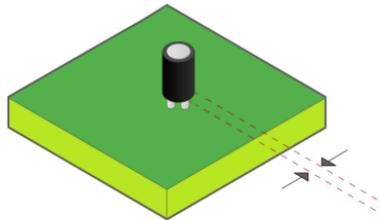
**Attribute Name:** DFA\_MIN\_SMDPINEXT\_SAME\_COMP

# Minimum distance between component body to it's leads on internal SMD pins

Checks the spacing between a component body and the contact figure of leads on internal SMD pins.

**Legal Values:** Design Units

**Applicable Objects:** DFAPinCSet



**DRC Code:** co

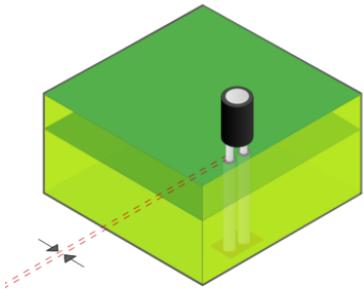
**Attribute Name:** DFA\_MIN\_SMDPININT\_SAME\_COMP

# Minimum distance between non-plated thru pin hole to it's lead

Checks the spacing between non-plated thru pin hole to contact figure of the lead.

**Legal Values:** Design Units

**Applicable Objects:** DFAPinCSet



**DRC Code:** co

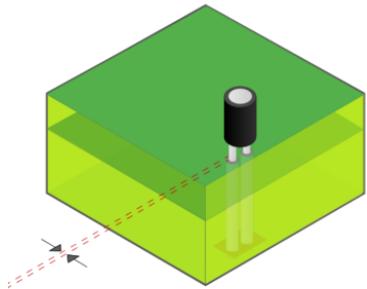
**Attribute Name:** DFA\_HOLE\_DIA\_TO\_MIN\_NPL\_THPIN

# Minimum distance between plated thru pin hole to lead

Checks the spacing between a plated thru pin hole to the contact figure of the lead.

**Legal Values:** Design Units

**Applicable Objects:** DFAPinCSet



**DRC Code:** co

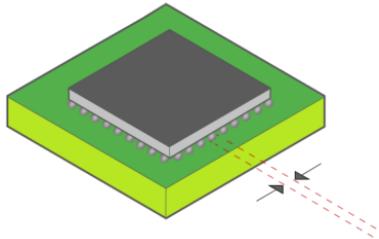
**Attribute Name:** DFA\_HOLE\_DIA\_TO\_MIN\_PL\_THPIN

# Minimum distance between SMD pin pad and ball lead

Checks the spacing between an SMD pin pad and the contact figure of the ball lead.

**Legal Values:** Design Units

**Applicable Objects:** DFAPinCSet



**DRC Code:** co

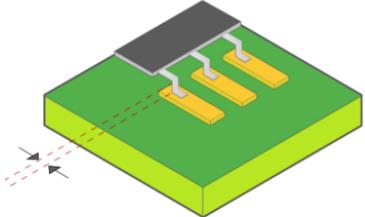
**Attribute Name:** DFA\_SMD\_BALLDIA\_TO\_MIN\_PADDIA

## Minimum heel size

Checks the spacing between the SMD pin pad edge closest to the component body and the edge of the contact figure of the lead.

**Legal Values:** Design Units

**Applicable Objects:** DFAPinCSet



**DRC Code:** co

**Attribute Name:** DFA\_SMD\_MIN\_SIZE\_HEEL

# Minimum height of a package to be treated as tall component

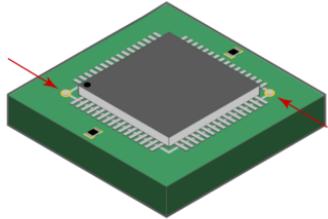
This attribute defines the minimum height of a package to be qualified to treat as tall component in DFA checks. The value assumes design unit.

# Minimum number of component fiducials

This constraint defines the minimum number of fiducials that should be present inside or outside a component body for a selected package. The syntax of the constraint value is Package Name:Total Minimum Fiducial Count: Inside count, Outside count. A GUI will be thrown to capture these values while editing the rule.

**DRC Code:** co

**Attribute Name:** DFA\_MIN\_COMPFID\_CNT



**Applicable Objects:** DFAFiducialCSet

# Minimum number of pins in a high pin count component

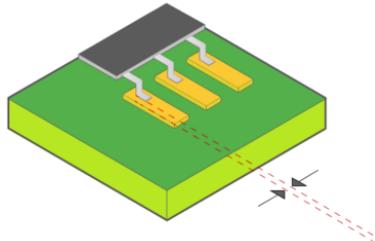
This attribute defines the minimum number of pins that package needs to have, in order to be treated as high pin count component for DFA checks.

## Minimum side

Checks the spacing between the SMD pin pad edge perpendicular to the toe/heel side and the edge of the contact figure of the lead.

**Legal Values:** Design Units

**Applicable Objects:** DFAPinCSet



**DRC Code:** co

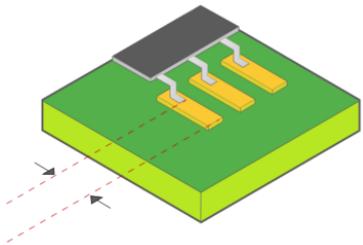
**Attribute Name:** DFA\_SMD\_MIN\_SIDE

## Minimum toe size

Checks space between an SMD pin pad edge which is farthest to the component body and to the edge of the contact figure of the lead.

**Legal Values:** Design Units

**Applicable Objects:** DFAPinCSet



**DRC Code:** co

**Attribute Name:** DFA\_SMD\_MIN\_SIZE\_TOE

## Minimum width of a large via

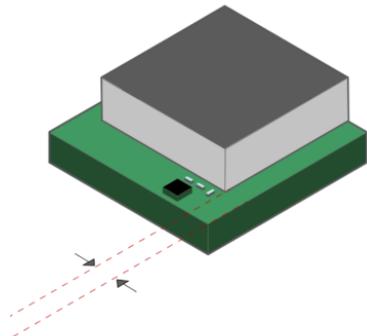
This attribute defines the minimum width a via needs to have, in order to be treated as large via for DFA checks.

## Tall component to conveyed edge

This constraint defines the rule for minimum allowable distance between edge of a tall component instance to the conveyed edge. A tall component is defined as a symbol having package height greater than the value specified in the attribute DFA\_MIN\_HEIGHT\_TALLCOMP. This can be defined through 'Design for Assembly' options page in Analysis Mode dialog. The direction of conveyed edge can be defined through the 'Design for Assembly' options page in Analysis Mode dialog. The possible values are 'North-South' or 'East-West'. If the conveyed edge direction is 'North-South', the distance will be computed against the north and south edge of the design outline extent. Similarly, if the direction is 'East-West', the distance between east or west side of the design outline extent will be checked.

**Legal Values:** Design Units

**Applicable Objects:** DFAOutlineCSet



**DRC Code:** co

**Attribute Name:** DFA\_TLLCOMP\_TO\_CON\_ONL

# Tombstone Discrete

This check detects if there is component with two SMD pins which are connected with traces of different widths. During wetting process trace with larger width completes its wetting process first since it generates more heat, this is likely to pull the pin from other end creating tombstone effect.

**Legal Values:** Percentage Units

**Applicable Objects:** DFASpacingCSet



**DRC Code:** Cb

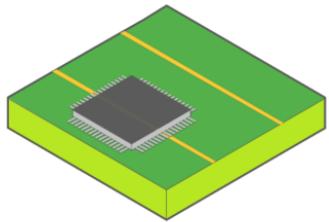
**Attribute Name:** DFA\_TOMBSTONE\_DISCRETE

# Trace under component

This constraint defines the rule for packages under which no trace should be present. Separate ui is launched to select those packages.

**DRC Code:** co

**Attribute Name:** DFA\_TRC\_UNDER\_COMP



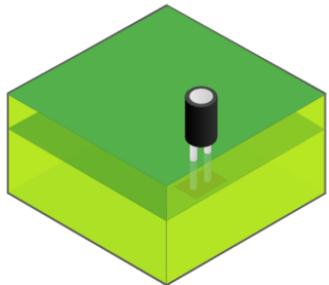
**Applicable Objects:** DFASpacingCSet

## Under component(Embedded)

Checks if a thru pin is laid exactly over or under an embedded component.

**DRC Code:** co

**Attribute Name:** DFA\_THPIN\_UNDERCMP\_EMB



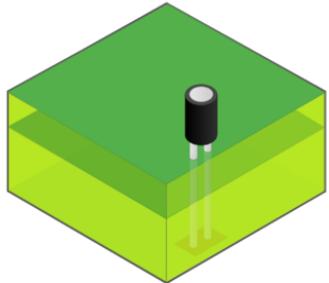
**Applicable Objects:** DFAPinCSet

## Under component(Opposite Side)

Checks if a thru pin is laid exactly beneath a component on the opposite side.

**DRC Code:** co

**Attribute Name:** DFA\_THPIN\_UNDERCMP\_OS



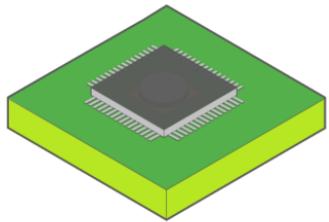
**Applicable Objects:** DFAPinCSet

# Via under component

This constraint defines the rule for packages under which no via should be present. Separate ui is launched to select those packages.

**DRC Code:** co

**Attribute Name:** DFA\_VIA\_UNDER\_COM



**Applicable Objects:** DFASpacingCSet

# Dft

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# Minimum width of a pin or via hole to be treated as large hole

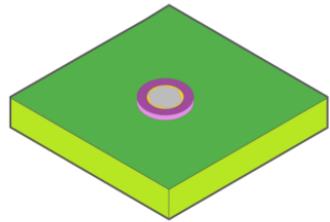
This attribute defines the minimum width of a pin or via to be qualified to treat as large hole in DFT checks. The value assumes design unit.

# Missing probe type

Flags a DRC if probe type is missing from a test point.

**DRC Code:** tp

**Attribute Name:** DFT\_PR\_CLASS



**Applicable Objects:** DFTProbeCSet

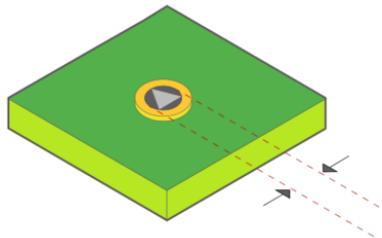
# Test point on large pin hole

Flags a DRC if a test point is present on a large pin hole.

A large pin hole is a hole with a width greater than the value of the attribute ATR\_DFT\_MIN\_WIDTH\_LARGEHOLE. Set ATR\_DFT\_MIN\_WIDTH\_LARGEHOLE in the 'Design for Test' options page of the Analysis Mode dialog.

**DRC Code:** tl

**Attribute Name:** DFT\_PR\_TP\_ON\_LPNHL



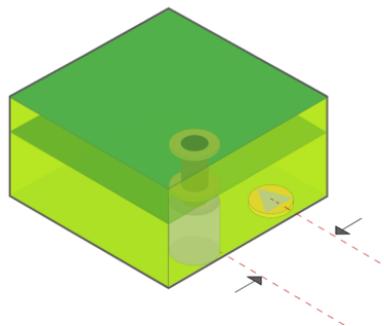
**Applicable Objects:** DFTProbeCSet

# Test point to backdrill pin hole

Defines the minimum distance allowed between the center of a test point and a backdrill pin hole.

**Legal Values:** Design Units

**Applicable Objects:** DFTSpacingCSet



**DRC Code:** tb

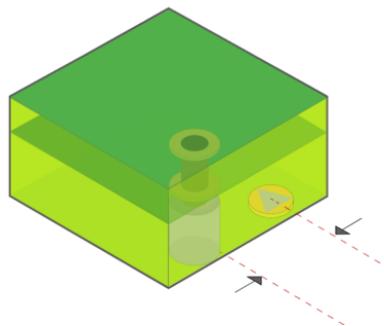
**Attribute Name:** DFT\_SPC\_TP\_BKDRLPNHL

# Test point to backdrill via hole

Defines the minimum distance allowed between the center of a test point and a backdrill via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFTSpacingCSet



**DRC Code:** tb

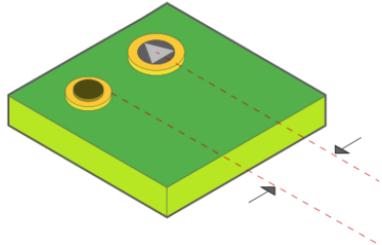
**Attribute Name:** DFT\_SPC\_TP\_BKDRVLVIAHL

# Test point to blind/buried via pad

Defines the minimum distance allowed between the centre of a test point and a blind or buried via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFTSpacingCSet



**DRC Code:** tb

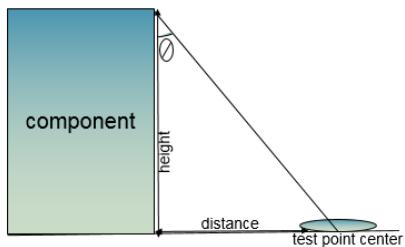
**Attribute Name:** DFT\_SPC\_TP\_BBVIAPD

# Test point to component body by height

Defines the minimum distance allowed between the center of a test point and a tall component. The constraint is specified in terms of an angle as shown in figure. DRC is flagged if the actual angle is more than the constraint angle.

**Legal Values:** Angle Units

**Applicable Objects:** DFTSpacingCSet



**DRC Code:** tc

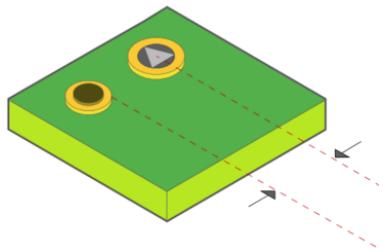
**Attribute Name:** DFT\_SPC\_TP\_PKGHT

# Test point to fiducial pad

Defines the minimum distance allowed between the center of a test point and a fiducial pad.

**Legal Values:** Design Units

**Applicable Objects:** DFTSpacingCSet



**DRC Code:** tp

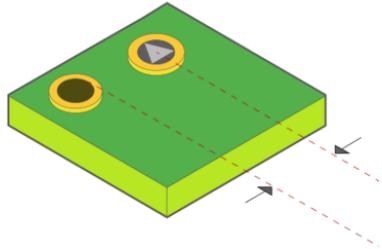
**Attribute Name:** DFT\_SPC\_TP\_FIDPNPD

# Test point to large non-plated hole

Defines the minimum distance allowed between the center of a test point and a large non-plated hole.

**Legal Values:** Design Units

**Applicable Objects:** DFTSpacingCSet



**DRC Code:** tt

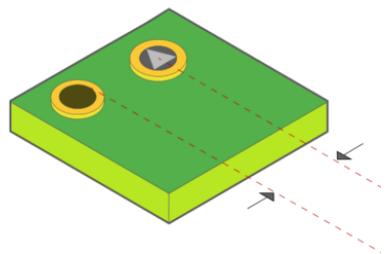
**Attribute Name:** DFT\_SPC\_TP\_LNPHL

# Test point to large pin hole

Defines the minimum distance allowed between the center of a test point and a large pin hole.

**Legal Values:** Design Units

**Applicable Objects:** DFTSpacingCSet



**DRC Code:** tl

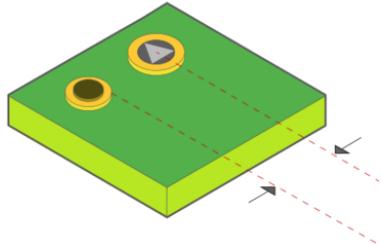
**Attribute Name:** DFT\_SPC\_TP\_LPNHL

# Test point to mechanical hole pad

Defines the minimum distance allowed between the center of a test point and a mechanical hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFTSpacingCSet



**DRC Code:** tp

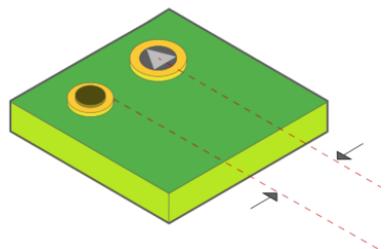
**Attribute Name:** DFT\_SPC\_TP\_MECHPNPD

# Test point to micro via pad

Defines the minimum distance allowed between the center of a test point and a micro via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFTSpacingCSet



**DRC Code:** tu

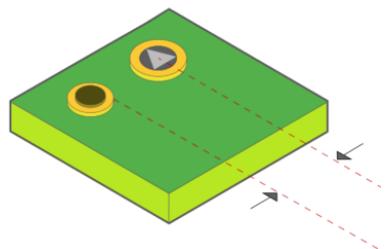
**Attribute Name:** DFT\_SPC\_TP\_UVIAPD

# Test point to mounting hole pad

Defines the minimum distance allowed between the center of a test point and a mounting hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFTSpacingCSet



**DRC Code:** tp

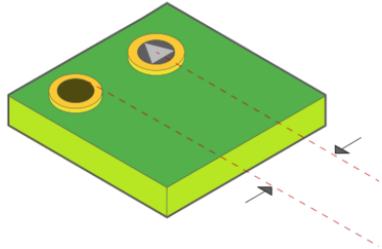
**Attribute Name:** DFT\_SPC\_TP\_MNTPNPD

# Test point to non-plated mechanical hole

Defines the minimum distance allowed between the center of a test point and a non-plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFTSpacingCSet



**DRC Code:** tm

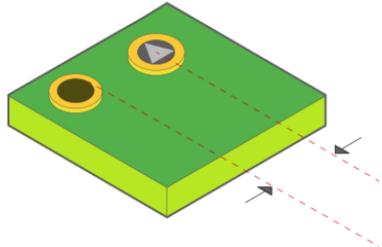
**Attribute Name:** DFT\_SPC\_TP\_NPMECHHL

# Test point to non-plated mounting hole

TDefines the minimum distance allowed between the center of a test point and a non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFTSpacingCSet



**DRC Code:** tm

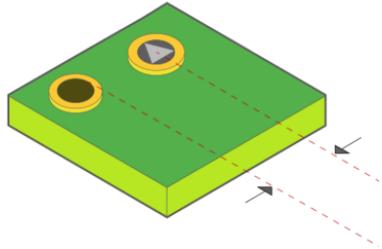
**Attribute Name:** DFT\_SPC\_TP\_NPMOUNTHL

# Test point to non-plated slot hole

Defines the minimum distance allowed between the center of a test point and a non-plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFTSpacingCSet



**DRC Code:** tm

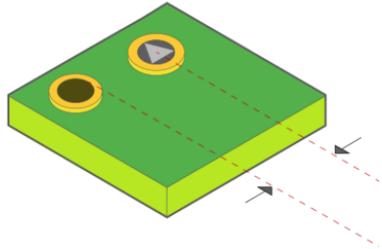
**Attribute Name:** DFT\_SPC\_TP\_NPSLTHL

# Test point to non-plated tooling hole

Defines the minimum distance allowed between the center of a test point and a non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFTSpacingCSet



**DRC Code:** tt

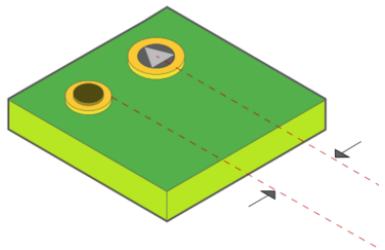
**Attribute Name:** DFT\_SPC\_TP\_NPTOOLHL

# Test point to slot pad

Defines the minimum distance allowed between the center of a test point and a slot pad.

**Legal Values:** Design Units

**Applicable Objects:** DFTSpacingCSet



**DRC Code:** tp

**Attribute Name:** DFT\_SPC\_TP\_SLTPNPD

# Test point to SMD pin pad

Defines the minimum distance allowed between the center of a test point and an SMD pin pad.

**Legal Values:** Design Units

**Applicable Objects:** DFTSpacingCSet

**DRC Code:** tp

**Attribute Name:** DFT\_SPC\_TP\_SMDPNPD

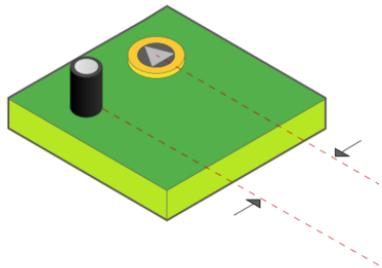
# Test point to tall component

Defines the distance allowed between the center of a test point and a tall component.

A tall component is a package with the height greater than the value of the attribute ATR\_DFA\_MIN\_HEIGHT\_TALLCOMP. Set ATR\_DFA\_MIN\_HEIGHT\_TALLCOMP in the 'Design for Test' options page of the Analysis Mode dialog.

**Legal Values:** Design Units

**Applicable Objects:** DFTSpacingCSet



**DRC Code:** tc

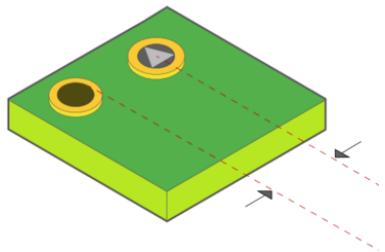
**Attribute Name:** DFT\_SPC\_TP\_PKGTL

# Test point to through pin hole

Defines the minimum distance allowed between the center of a test point and a through pin hole.

**Legal Values:** Design Units

**Applicable Objects:** DFTSpacingCSet



**DRC Code:** tl

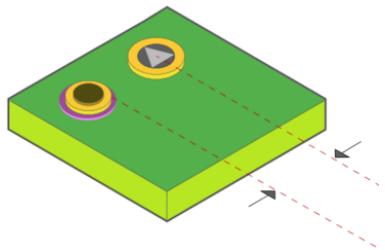
**Attribute Name:** DFT\_SPC\_TP\_THRUPNHL

# Test point to through pin pad

Defines the minimum distance allowed between the center of a test point and a through pin pad.

**Legal Values:** Design Units

**Applicable Objects:** DFTSpacingCSet



**DRC Code:** tp

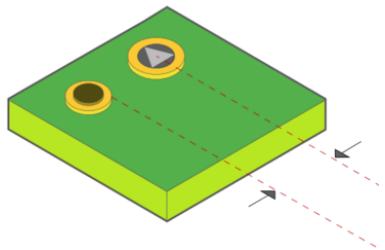
**Attribute Name:** DFT\_SPC\_TP\_THPNPD

# Test point to through via pad

Defines the minimum distance allowed between the center of a test point and a through via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFTSpacingCSet



**DRC Code:** tv

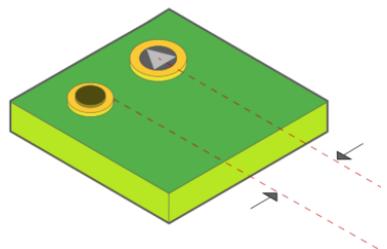
**Attribute Name:** DFT\_SPC\_TP\_THVIAPD

# Test point to tooling hole pad

Defines the minimum distance allowed between the center of a test point and a tooling hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFTSpacingCSet



**DRC Code:** tp

**Attribute Name:** DFT\_SPC\_TP\_TOOLPNPD

# Electrical

---

# Maximum Peak Xtalk

Checks the maximum allowable crosstalk on a victim held at steady state (high:low) from a single aggressor net.

**Legal Values:** Voltage Units

**Applicable Objects:** Xnet, Net, ElectricalCSet, NetClass, DiffPair, Bus, ResultPinPair, Result, NetGroup

**DRC Code:** EX

**Attribute Name:** MAX\_PEAK\_XTALK

# Maximum Stub Length

Checks the maximum stub length in design units for daisy chain routing.

**Note:** When a pin is routed to a connect line, the stub is the line of etch between the pin and the connect line.

The stub length constraint is validated only if NET\_SCHEDULE is enabled and RATSNEST\_SCHEDULE is set to either MIN\_DAISY\_CHAIN or MIN\_SOURCE\_LOAD\_DAISY.

>

This check ignores pins at the end of clines, dangling clines, and test points. The chosen net schedule impacts the rule check.

**Legal Values:** Design Units

**Applicable Objects:** Xnet, Net, ElectricalCSet, NetClass, DiffPair, Bus, NetGroup

**DRC Code:** ES

**Attribute Name:** STUB\_LENGTH

# Maximum Via Count

Checks the maximum number of vias on a net.

**DRC Code:** EV

**Attribute Name:** MAX\_VIA\_COUNT

**Applicable Objects:** Xnet, Net, ElectricalCSet, NetClass, DiffPair, Bus, NetGroup

# Maximum Xtalk

Checks the maximum crosstalk on a victim held at steady state high:low from all aggressor nets.

**Note:** You can simulate or estimate the actual Xtalk on a victim when an analysis is performed. Estimated Xtalk can be computed online as you add etch to the design. Only estimated Xtalk will generate the DRC error.

**Legal Values:** Voltage Units

**Applicable Objects:** Xnet, Net, ElectricalCSet, NetClass, DiffPair, Bus, ResultPinPair, Result, NetGroup

**DRC Code:** EX

**Attribute Name:** MAX\_XTALK

# Propagation Delay Minimum

Specifies the minimum allowable propagation delay, length or (%)length for the PinPairs. All min/max constraints must be greater than zero. Specify a delay value in time units (2 ns) and a length value in design units (2000 mils). A percentage value must contain the (%) sign (110 %).

**Legal Values:** Time length Units

**Applicable Objects:** Xnet, Net, ElectricalCSet, NetClass, DiffPair, Bus, PinPair, ElecCSetPinPair, NetGroup

**DRC Code:**

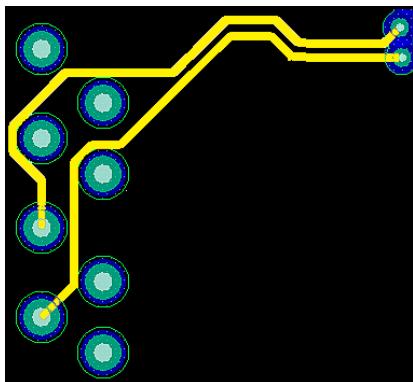
**Attribute Name:** PROPAGATION\_DELAY\_MIN

# Relative Propagation Delay

Use the Relative Propagation Delay constraint to specify the matching or relative delay requirements for a group of pin pairs. To match implies that the pin pairs have the same delay within a specified tolerance. To be relative implies that the pin pairs have a delay which has some relation to a target in the group.

**Legal Values:** Time length Units

**Applicable Objects:** Xnet, Net, PinPair, MatchGroup, ResultPinPair, Result, ElecCSetMatchGroup, ElecCSetPinPair



**DRC Code:**

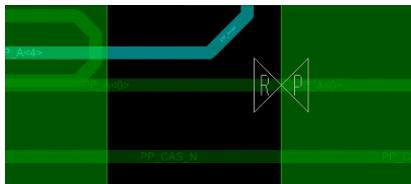
**Attribute Name:** RELATIVE\_PROPAGATION\_DELAY\_CNS

# Return Path

The Return Path Constraint allows for the quick identification of potential return path issues. Since return path current tends to mirror the trace as frequency increases in the nearest plane, any interruption in the plane with voids or splits could indicate a potential problem. Additional parameters allow for the definition of reference nets where to find reference planes. The Return Path Constraint will place a DRC where nets exceed the distance specified for these conditions at pad connections and all other routing.

**Legal Values:** Design Units

**Applicable Objects:** Xnet, Net, ElectricalCSet, NetClass, DiffPair, Bus, Result, NetGroup



**DRC Code:** RP

**Attribute Name:** MAX\_RTP\_IGNORE\_LENGTH

# Total Etch

The Total Etch constraint is used to specify the minimum and maximum etch requirements for Xnet or Net. The constraint consists of two portions, which are defined as follows:

- **Total Etch Length Minimum:**

Specifies the minimum allowable total etch length for the Net or Xnet.

- **Total Etch Length Maximum**

Specifies the maximum allowable total etch length for the Net or Xnet.

**Legal Values:** Design Units

**Applicable Objects:** Xnet, Net, ElectricalCSet, NetClass, DiffPair, Bus, NetGroup

**DRC Code:**

**Attribute Name:** TOTALETCH\_LENGTH\_MIN

# Physical

---

# Allow Etch on Subclass

Specifies whether clines and shapes are allowed on an etch subclass. The use of Layer Sets is recommended for layer-based routing rules.

**DRC Code:** SN

**Attribute Name:** ALLOW\_ONETCH\_SUBCLASS

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, PhysicalCSet, ClassClass, RegionClass, RegionClassClass, NetGroup

# Allow Pad&#45;to&#45;Pad Direct Connection

Checks whether a pin/via whose connect point lies within the extents of another pin/via forms a direct connection without the presence of an intermediate cline. You can choose from the available values:

- ALL\_ALLOWED - Specifies that direct connections can form anywhere.
- VIAS\_PINS\_ONLY - Specifies that only pin-via and pinmicrovia direct connections can be formed.
- VIAS\_VIAS\_ONLY - Specifies that only via-via and viamicrovia direct connections can be formed.
- MICROVIAS\_MICROVIAS\_ONLY - Specifies that only microvia-microvia direct connections can be formed.
- MICROVIAS\_MICROVIAS\_COINCIDENT\_ONLY - Specifies that microvia-microvia direct connections can be formed, only if the microvias are co-incident.
- NOT\_ALLOWED - Prohibits direct connections everywhere.
- Clear - Clears the previous settings.

**Note:** Use for conditions where one or both of the pads, vias, or microvias that should be overlapping or coincident is a surface mount device pad. For example, this allows symbol surface mount device pads to embed associated fan-outs without the need to draw a connect line.

**DRC Code:** VG

**Attribute Name:** PAD\_PAD\_DIRECT\_CONNECT

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, PhysicalCSet, ClassClass, RegionClass, RegionClassClass, NetGroup

# Allow T&#45;junctions on Subclass

Specifies whether T-junctions of cline segments are allowed and where they may form.

**DRC Code:** JN

**Attribute Name:** TS\_ALLOWED

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, PhysicalCSet, ClassClass, RegionClass, RegionClassClass, NetGroup

# Maximum Blind/Buried Via Stagger

Checks the maximum center-to-center distance between the connect point of one pin or blind/buried via (the x, y location of the pin or via) and the connect point of another pin. The two pins or vias must be on the same net with a single connect line joining them.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, PhysicalCSet, ClassClass, RegionClass, RegionClassClass, NetGroup

**DRC Code:** VG

**Attribute Name:** MAX\_BVIA\_STAGGER

# Maximum Line Width

Checks the maximum width of cline segments. **Notes:**

- The value for MIN\_LINE\_WIDTH must be less than the value for MAX\_LINE\_WIDTH.
- If you enter a value for MAX\_LINE\_WIDTH that is less than MIN\_LINE\_WIDTH, a message is displayed indicating the line width values are incompatible.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, PhysicalCSet, ClassClass, RegionClass, RegionClassClass, NetGroup

**DRC Code:** LW

**Attribute Name:** MAX\_LINE\_WIDTH

# Minimum Blind/Buried Via Stagger

Checks the minimum center-to-center distance between the connect points of two pins or vias (the x,y location of the pin or via), where the two pins or vias are on the same net and have a single connect line joining them.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, PhysicalCSet, ClassClass, RegionClass, RegionClassClass, NetGroup

**DRC Code:** VG

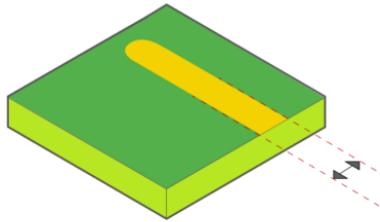
**Attribute Name:** MIN\_BVIA\_STAGGER

# Minimum Line Width

Checks minimum width that is allowed on a line segment in etch/conducting layer.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperFeatureCSet



**DRC Code:** fl

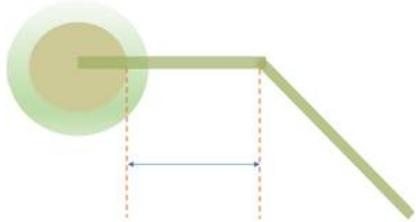
**Attribute Name:** DFF\_CF\_MIN\_LINE\_WIDTH

# Pad exit turn gap distance

Checks the minimum turn gap for a straight line leaving a pad. Turn gap is the length of the first segment of a line leaving a pad, which is the distance between the turning point of the line and the drill point (PMn).

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, PhysicalCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** EL

**Attribute Name:** PAD\_EXIT\_TURN\_GAP\_DIST

## Via List

Lists the padstacks in the database of the current design which are allowed for routing.

**DRC Code:** VN

**Attribute Name:** VIA\_LIST\_VMODE

**Applicable Objects:** System, Design

## Pin

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# Same Net Spacing

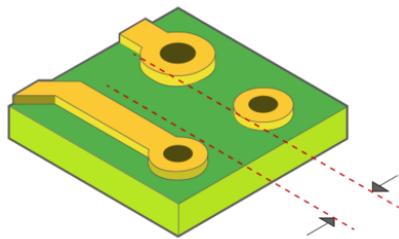
---

# Blind/Buried Via to Blind/Buried Via

Defines the minimum blind/buried via to blind/buried via spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VV

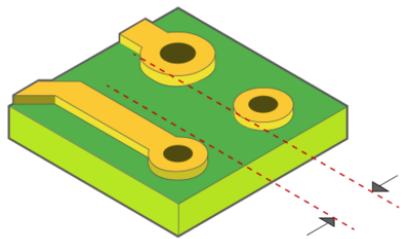
**Attribute Name:** BBV\_TO\_BBV\_SPACING

# Blind/Buried Via to Test Via

Defines the minimum test via to blind/buried via spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VV

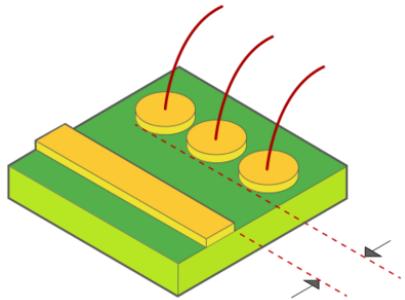
**Attribute Name:** BBV\_TO\_TESTVIA\_SPACING

# Bond Pad to Blind/Buried Via

Defines the minimum blind/buried via to bond finger spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VB

**Attribute Name:** BONDPAD\_TO\_BBV\_SPACING

## Bond Pad to Bond Pad

Defines the minimum bond finger to bond finger spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup

**DRC Code:** BB

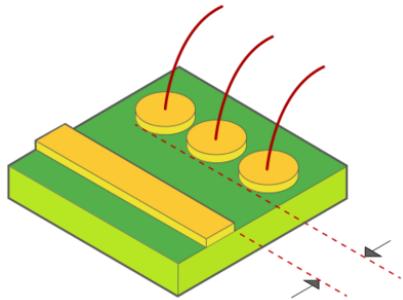
**Attribute Name:** BONDPAD\_TO\_BONDPAD\_SPACING

# Bond Pad to Line

Defines the minimum bond finger to line spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** BL

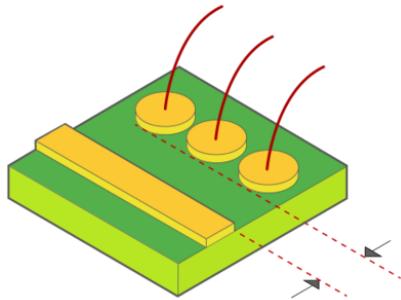
**Attribute Name:** BONDPAD\_TO\_LINE\_SPACING

# Bondpad to Microvia Spacing

Minimum bond finger to microvia spacing

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VB

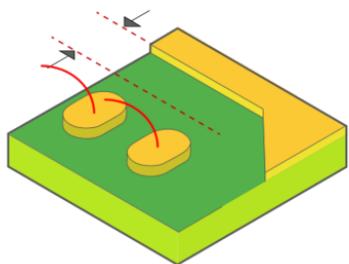
**Attribute Name:** BONDPAD\_TO\_MVIA\_SPACING

# Bond Pad to Shape

Defines the minimum bond finger to shape spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** BS

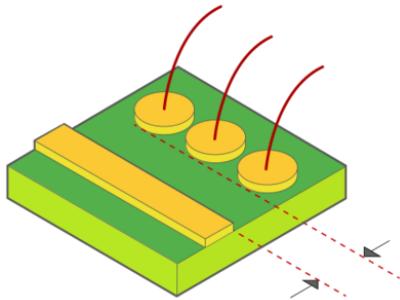
**Attribute Name:** BONDPAD\_TO\_SHAPE\_SPACING

## Bond Pad to SMD Pin

Defines the minimum SMD pin to bond finger spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PB

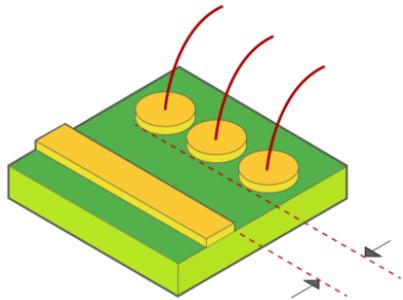
**Attribute Name:** SMDPIN\_TO\_BONDPAD\_SPACING

# Bond Pad to Test Pin

Defines the minimum test pin to bond finger spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PB

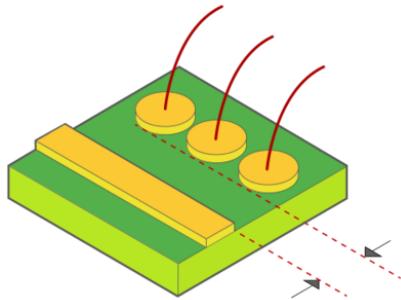
**Attribute Name:** BONDPAD\_TO\_TESTPIN\_SPACING

# Bond Pad to Test Via

Defines the minimum test via to bond finger spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VB

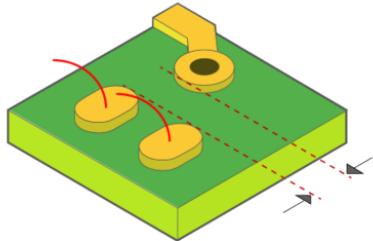
**Attribute Name:** BONDPAD\_TO\_TESTVIA\_SPACING

# Bond Pad to Through Pin

Defines the minimum through pin to bond finger spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PB

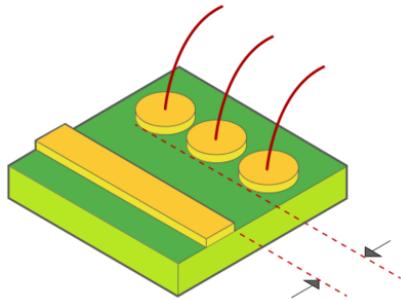
**Attribute Name:** THRUPIN\_TO\_BONDPAD\_SPACING

# Bond Pad to Through Via

Defines the minimum through via to bond finger spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VB

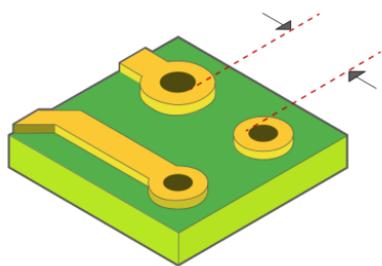
**Attribute Name:** BONDPAD\_TO\_THRUVIA\_SPACING

## Hole to Hole

Defines the minimum hole to hole spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** DD

**Attribute Name:** HOLE\_TO\_HOLE\_SPACING

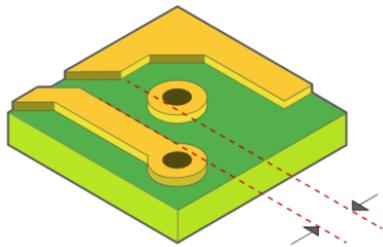
## Hole to Line

Defines the minimum hole to line spacing. Specify this constraint in either of the following situations:

- The hole size is greater than, or equal to, the regular pad size
- The regular pad is suppressed on pins or via holes
- A NULL value is defined for the regular pad

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** DL

**Attribute Name:** HOLE\_TO\_LINE\_SPACING

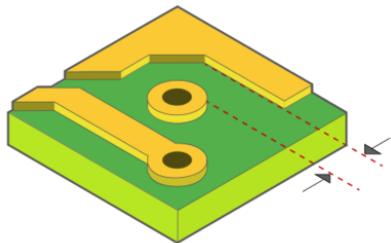
# Hole to Shape

Defines the minimum hole to shape spacing. Specify this constraint in either of the following situations:

- The hole size is greater than, or equal to, the regular pad size
- The regular pad is suppressed on pins or via holes
- A NULL value is defined for the regular pad

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** DS

**Attribute Name:** HOLE\_TO\_SHAPE\_SPACING

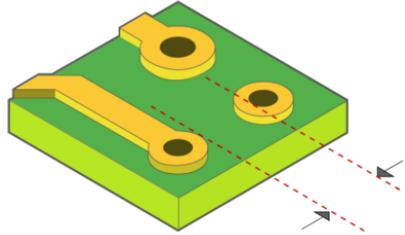
## Hole to Via

Defines the minimum hole to via spacing. Specify this constraint in either of the following situations:

- The hole size is greater than, or equal to, the regular pad size
- The regular pad is suppressed on pins or via holes
- A NULL value is defined for the regular pad

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** DV

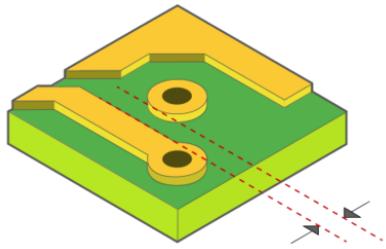
**Attribute Name:** HOLE\_TO\_VIA\_SPACING

## Line to Blind/Buried Via

Defines the minimum blind/buried via to line spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VL

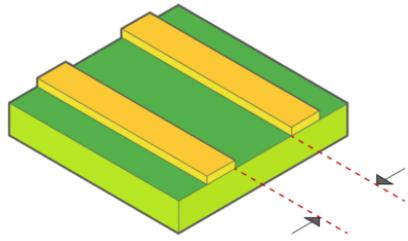
**Attribute Name:** BBV\_TO\_LINE\_SPACING

## Line to Line

Checks the spacing between copper object line and line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** gg

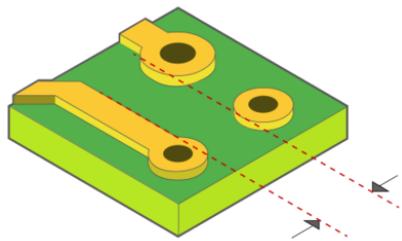
**Attribute Name:** DFF\_CS\_LINE\_TO\_LINE

## Line to SMD Pin

Defines the minimum SMD pin to line spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PL

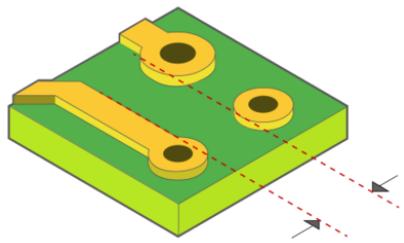
**Attribute Name:** LINE\_TO\_SMDPIN\_SPACING

## Line to Test Pin

Defines the minimum test pin to line spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PL

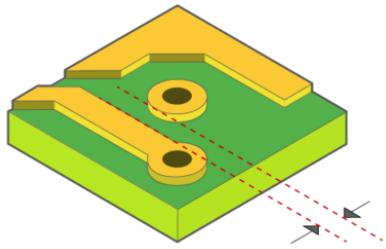
**Attribute Name:** LINE\_TO\_TESTPIN\_SPACING

## Line to Test Via

Defines the minimum test via to line spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VL

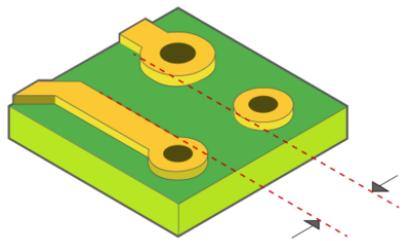
**Attribute Name:** LINE\_TO\_TESTVIA\_SPACING

# Line to Through Pin

Defines the minimum through pin to line spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PL

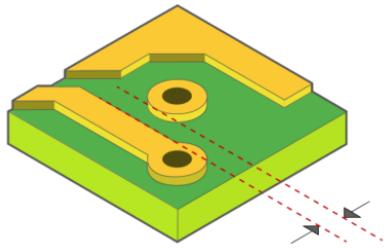
**Attribute Name:** LINE\_TO\_THRUPIN\_SPACING

# Line to Through Via

Defines the minimum through via to line spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VL

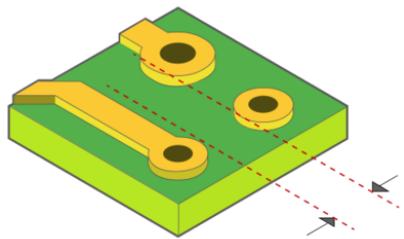
**Attribute Name:** LINE\_TO\_THRUVIA\_SPACING

# Microvia to Blind/Buried Via

Defines the minimum microvia to blind/buried via spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VV

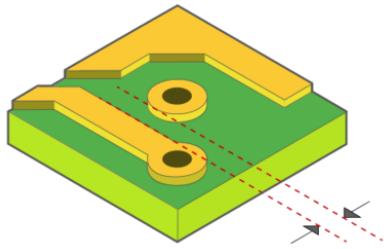
**Attribute Name:** MVIA\_TO\_BBV\_SPACING

## Microvia to Line

Defines the minimum microvia to line spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VL

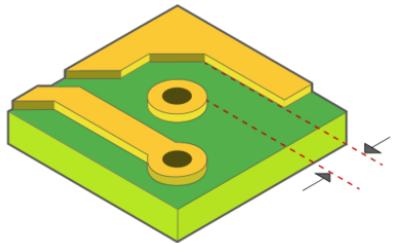
**Attribute Name:** MVIA\_TO\_LINE\_SPACING

# Microvia to Shape

Defines the minimum microvia to shape spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VS

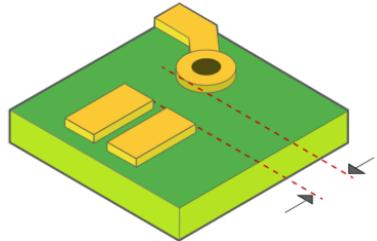
**Attribute Name:** MVIA\_TO\_SHAPE\_SPACING

## Microvia to SMD Pin

Defines the minimum microvia to SMD pin spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PV

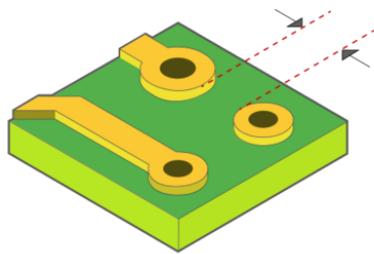
**Attribute Name:** MVIA\_TO\_SMDPIN\_SPACING

## Microvia to Test Pin

Defines the minimum microvia to test pin spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PV

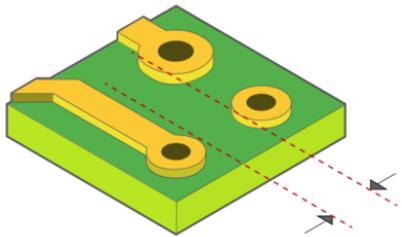
**Attribute Name:** MVIA\_TO\_TESTPIN\_SPACING

# Microvia to Test Via

Defines the minimum microvia to test via spacing. You define a blind/buried via as a microvia by selecting the Microvia checkbox in the Usage Options field in the Parameters tab of the Pad Designer.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VV

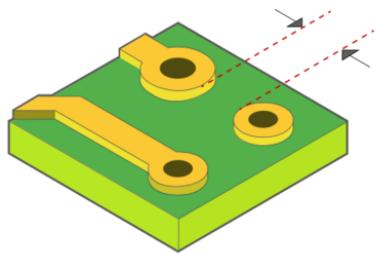
**Attribute Name:** MVIA\_TO\_TESTVIA\_SPACING

# Microvia to Through Pin

Defines the minimum microvia to through pin spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PV

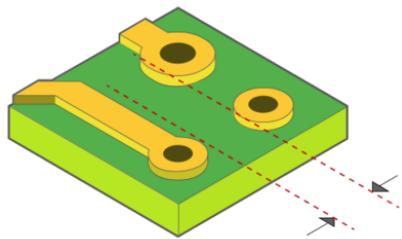
**Attribute Name:** MVIA\_TO\_THRUPIN\_SPACING

# Microvia to Through Via

Defines the minimum microvia to through via spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VV

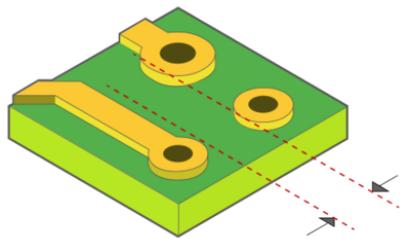
**Attribute Name:** MVIA\_TO\_THRUVIA\_SPACING

# Minimum Metal Spacing

Minimum same net metal to metal spacing

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, ClassClass, RegionClass, RegionClassClass, SameNetSpacingCSet, NetGroup



**DRC Code:** vV

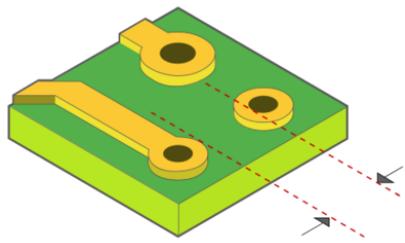
**Attribute Name:** SN\_MVIA\_TO\_MVIA\_SPACING

## Pin to Hole:

Defines the minimum same net hole to pin spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, ClassClass, RegionClass, RegionClassClass, SameNetSpacingCSet, NetGroup



**DRC Code:** dP

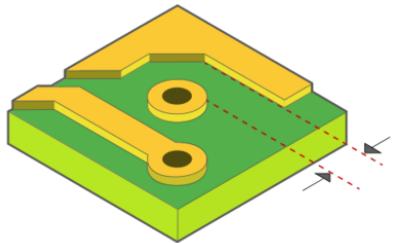
**Attribute Name:** SN\_HOLE\_TO\_PIN\_SPACING

# Shape to Blind/Buried Via

Defines the minimum blind/buried via to shape spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VS

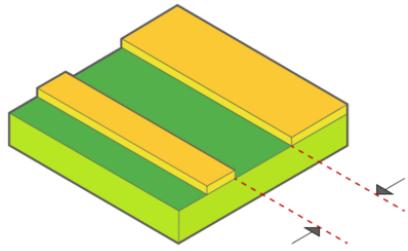
**Attribute Name:** BBV\_TO\_SHAPE\_SPACING

# Shape to Line

Checks the spacing between copper object shape and line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sg

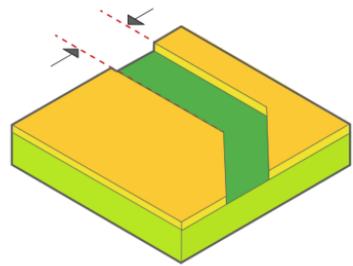
**Attribute Name:** DFF\_CS\_SHP\_TO\_LINE

## Shape to Shape

Checks the spacing between copper-object shape and shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** ss

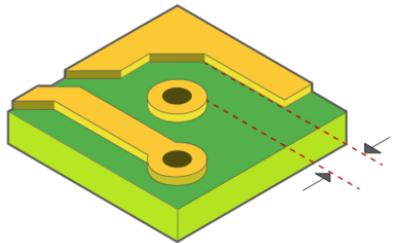
**Attribute Name:** DFF\_CS\_SHP\_TO\_SHP

## Shape to SMD Pin

Defines the minimum SMD pin to shape spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PS

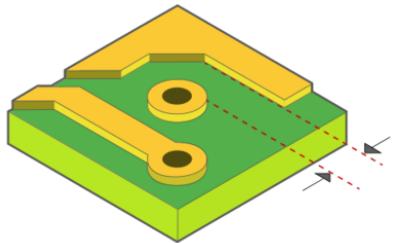
**Attribute Name:** SHAPE\_TO\_SMDPIN\_SPACING

# Shape to Test Pin

Defines minimum test pin to shape spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PS

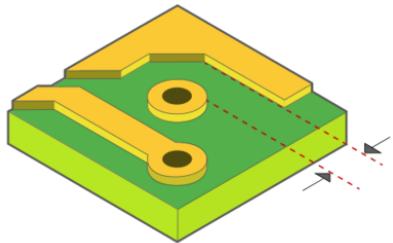
**Attribute Name:** SHAPE\_TO\_TESTPIN\_SPACING

# Shape to Test Via

Defines the minimum test via to shape spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VS

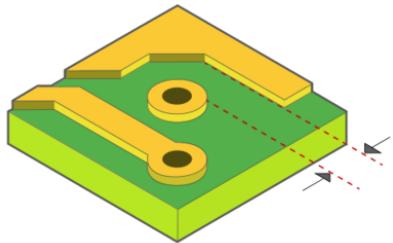
**Attribute Name:** SHAPE\_TO\_TESTVIA\_SPACING

# Shape to Through Pin

Defines the minimum through pin to shape spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PS

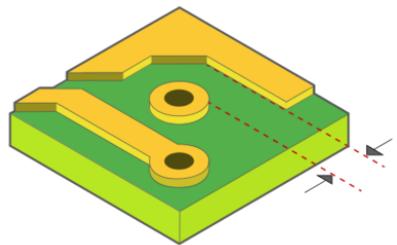
**Attribute Name:** THRUPIN\_TO\_SHAPE\_SPACING

# Shape to Through Via

Defines the minimum through via to shape spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VS

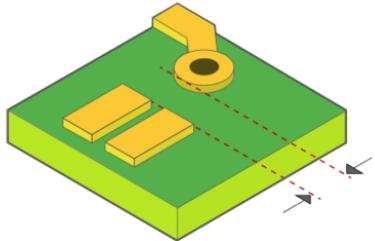
**Attribute Name:** SHAPE\_TO\_THRUVIA\_SPACING

# SMD Pin to Blind/Buried Via

Defines the minimum SMD pin to blind/buried via spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PV

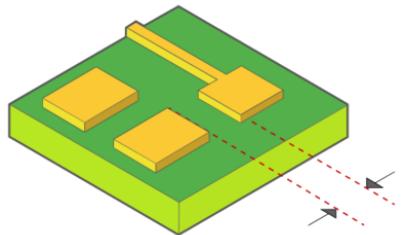
**Attribute Name:** BBV\_TO\_SMDPIN\_SPACING

## SMD Pin to SMD Pin

Defines the minimum SMD pin to SMD pin spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PP

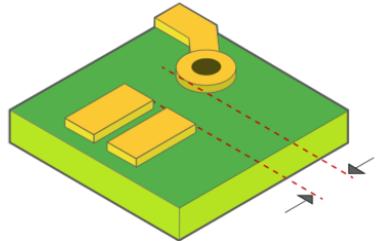
**Attribute Name:** SMDPIN\_TO\_SMDPIN\_SPACING

## SMD Pin to Test Pin

Defines the minimum SMD pin to test pin spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PP

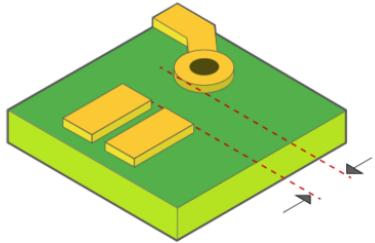
**Attribute Name:** SMDPIN\_TO\_TESTPIN\_SPACING

## SMD Pin to Test Via

Defines the minimum SMD pin to test via spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PV

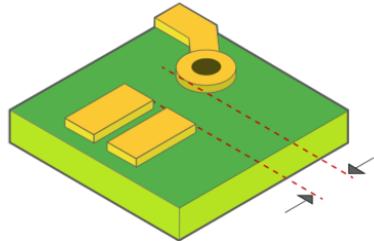
**Attribute Name:** SMDPIN\_TO\_TESTVIA\_SPACING

# SMD Pin to Through Via

Defines the minimum SMD pin to through via spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PV

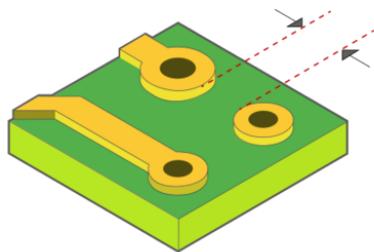
**Attribute Name:** SMDPIN\_TO\_THRUVIA\_SPACING

# Test Pin to Blind/Buried Via

Defines the minimum test pin to blind/buried via spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PV

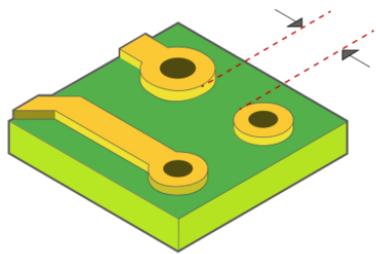
**Attribute Name:** BBV\_TO\_TESTPIN\_SPACING

# Test Pin to Test Pin

Defines the minimum test pin to test pin spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PP

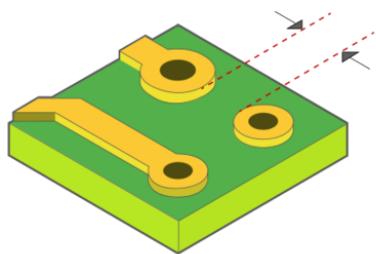
**Attribute Name:** TESTPIN\_TO\_TESTPIN\_SPACING

# Test Pin to Test Via

Defines the minimum test pin to test via spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PV

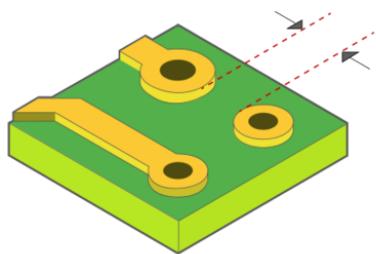
**Attribute Name:** TESTPIN\_TO\_TESTVIA\_SPACING

# Test Pin to Through Via

Defines the minimum test pin to through via spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PV

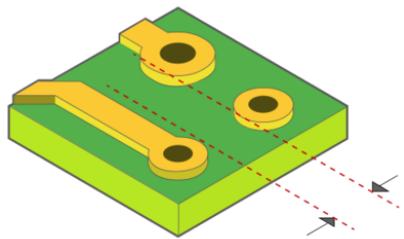
**Attribute Name:** TESTPIN\_TO\_THRUVIA\_SPACING

# Test Via to Test Via

Defines the minimum test via to test via spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VV

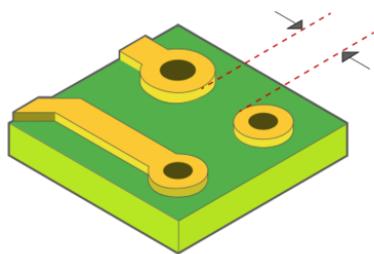
**Attribute Name:** TESTVIA\_TO\_TESTVIA\_SPACING

# Through Pin to Blind/Buried Via

Defines the minimum through pin to blind/buried via spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PV

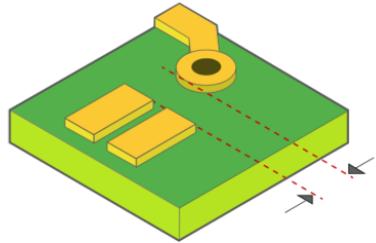
**Attribute Name:** BBV\_TO\_THRUPIN\_SPACING

# Through Pin to SMD Pin

Defines the minimum through pin to SMD pin spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PP

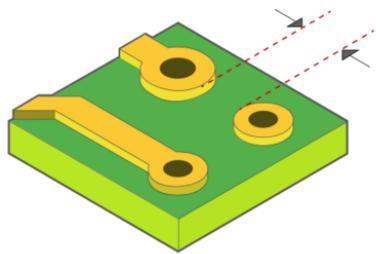
**Attribute Name:** THRUPIN\_TO\_SMDPIN\_SPACING

# Through Pin to Test Pin

Defines the minimum same net thru pin to test pin spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PP

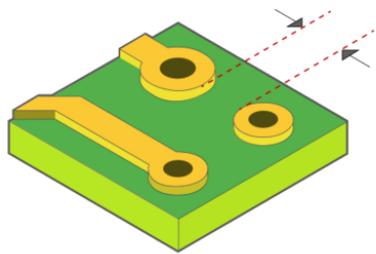
**Attribute Name:** TESTPIN\_TO\_THRUPIN\_SPACING

# Through Pin to Test Via

Defines the minimum through pin to test via spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PV

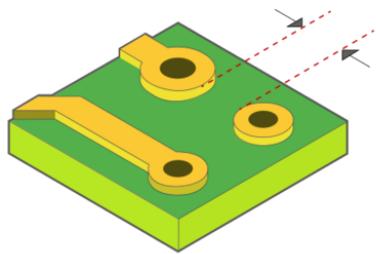
**Attribute Name:** TESTVIA\_TO\_THRUPIN\_SPACING

# Through Pin to Through Pin

Defines the minimum hole to pin spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PP

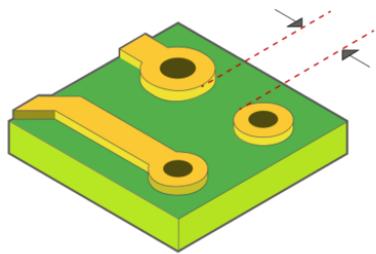
**Attribute Name:** THRUPIN\_TO\_THRUPIN\_SPACING

# Through Pin to Through Via

Defines the minimum through pin to through via spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** PV

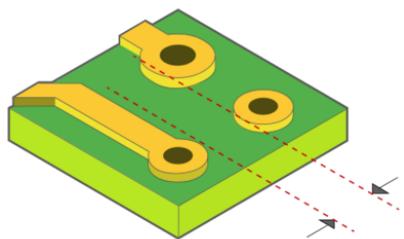
**Attribute Name:** THRUPIN\_TO\_THRUVIA\_SPACING

# Through Via to Blind/Buried Via

Defines the minimum through via to blind/buried via spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VV

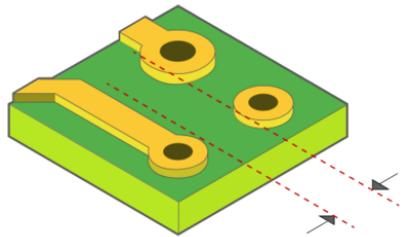
**Attribute Name:** BBV\_TO\_THRUVIA\_SPACING

# Through Via to Test Via

Defines the minimum through via to test via spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VV

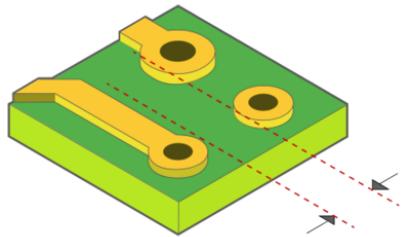
**Attribute Name:** TESTVIA\_TO\_THRUVIA\_SPACING

# Through Via to Through Via

Defines the minimum through via to through via spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VV

**Attribute Name:** THRUVia\_TO\_THRUVia\_SPACING

# Spacing

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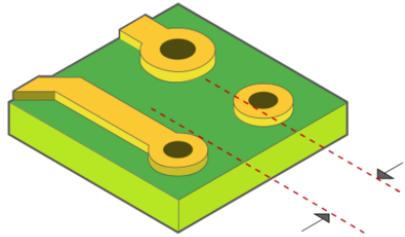
## Hole to Pin

Defines the minimum hole to pin spacing. Specify this constraint in either of the following situations:

- The hole size is greater than, or equal to, the regular pad size.
- The regular pad is suppressed on pins or via holes.
- A NULL value is defined for the regular pad.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** DP

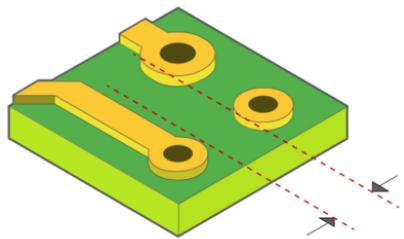
**Attribute Name:** HOLE\_TO\_PIN\_SPACING

# Microvia to Microvia Spacing

Minimum microvia to microvia spacing.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VV

**Attribute Name:** MVIA\_TO\_MVIA\_SPACING

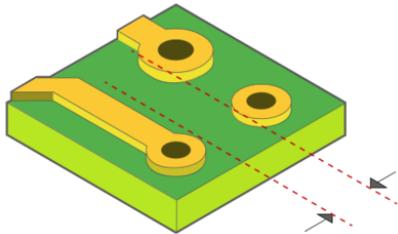
# Minimum Blind/buried Via Gap

Specifies the minimum center-to-center spacing between the connect points of two buried vias that do not share a common layer. Defines the span of layers where the MIN VIA GAP check is applied. By default, the span is infinite, which means that all non-connected vias are checked even if they appear on the opposite sides of the design. **Notes:**

- DRC errors are not generated between vias that share a common layer.
- Define the Bbv\_separation property to specify the minimum line spacing (per layer). If set to zero, unwanted DRCs may appear.

**Legal Values:** Design Units

**Applicable Objects:** Design, Xnet, Net, Region, NetClass, DiffPair, Bus, PinPair, SpacingCSet, ClassClass, RegionClass, RegionClassClass, NetGroup



**DRC Code:** VG

**Attribute Name:** MIN\_BVIA\_GAP

# Design

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# Blind/Buried Via Separation

Blind/Buried Via layer separation.

**DRC Code:**

**Attribute Name:** BBVIA\_SEPARATION

**Applicable Objects:** System, Design

# Clearance distance

This rule specifies the minimum shortest distance between two conductive parts, or between a conductive part and the bounding surface of the equipment, measured through air.

This is a spacing measurement through the air.

**Legal Values:** Design Units

**DRC Code:** CL

**Applicable Objects:** HighVoltageCset

**Attribute Name:** MAX\_CLEARNCE\_DISTANCE

# Clearance Pollution Degree (Groove Length)

For the purpose of evaluating clearances, the following four degrees of pollution in the micro-environment are established to determine length of a groove (X Value) that should be ignored during creepage and clearance measurements.

- Pollution degree 1: No pollution or only dry, non-conductive pollution occurs. The pollution has no influence.
- Pollution degree 2: Only non-conductive pollution occurs except that occasionally a temporary conductivity caused by condensation is to be expected.
- Pollution degree 3: Conductive pollution occurs, or dry non-conductive pollution occurs which becomes conductive due to condensation which is to be expected.
- Pollution degree 4: Continuous conductivity occurs due to conductive dust, rain or other wet conditions.

The value is specified as length of the groove, and that much distance will be ignored while computing clearance distance.

The user needs to map the pollution degree value to the exact groove length and enter the value here. This information is stored at the design level. Following table shows pollution degree to the distance mapping.

Pollution Degree	X Value (Millimeters)
1	0.25
2	1.0
3	1.5
4	2.5

**Legal Values:** Design Units

**DRC Code:**

**Applicable Objects:** System, Design

**Attribute Name:** CLEARANCE\_POLLUTIONLVL



# Creepage distance

This rule specifies the minimum shortest path between two conductive parts, or between a conductive part and the bounding surface of the equipment, measured along the surface of the insulation.

This is the distance measurement over the surface of insulation.

**Legal Values:** Design Units

**DRC Code:** CR

**Applicable Objects:** HighVoltageCset

**Attribute Name:** MAX\_CREEPAGE\_DISTANCE

# Duplicate Drill Hole

Duplicate Drill Hole verification mode

**DRC Code:**

**Attribute Name:** DUP\_DRILL\_HOLE\_VMODE

**Applicable Objects:** System, Design

# Enable Line based check for fillets

This attribute when set would enable line based DRC check for fillets.

**DRC Code:**

**Attribute Name:** DRC\_FILLETS\_USE\_LINE\_SPACING

**Applicable Objects:** System, Design

# Etch Turn in SMD Pins

Allow etch turns in SMD pins verification mode

**DRC Code:** EP

**Attribute Name:** ETCH\_TURN\_UNDER\_PAD\_VMODE

**Applicable Objects:** System, Design

## Hole in Pad

Attribute enables drill to conductor element checking independently of the conductor pad definition status

**DRC Code:**

**Attribute Name:** DRC\_HOLE\_IN\_PAD

**Applicable Objects:** System, Design

# On-line Interlayer DRC

On-line Interlayer DRC

**DRC Code:**

**Attribute Name:** ONLINE\_INTERLAYER\_DRC

**Applicable Objects:** System, Design

# Package Height to Layer

Package Height to Layer verification mode

**DRC Code:**

**Attribute Name:** PACKAGE\_TO\_LAYER\_SPACING\_VMODE

**Applicable Objects:** System, Design

# Package to Keepin Spacing

Package to keepin spacing verification mode

**DRC Code:**

**Attribute Name:** PACKAGE\_KEEPIN\_VMODE

**Applicable Objects:** System, Design

# Package to Keepout Spacing

Package to keepout spacing verification mode

**DRC Code:**

**Attribute Name:** PACKAGE\_KEEPOUT\_VMODE

**Applicable Objects:** System, Design

# Package to Package Spacing

Package to package spacing verification mode

**DRC Code:**

**Attribute Name:** PACKAGE\_PACKAGE\_VMODE

**Applicable Objects:** System, Design

# Package to Room Spacing

Package to room spacing verification mode

**DRC Code:** RC

**Attribute Name:** ROOM\_TYPE\_VMODE

**Applicable Objects:** System, Design

# Pin to Route Keepout

Pin to route keepout verification mode

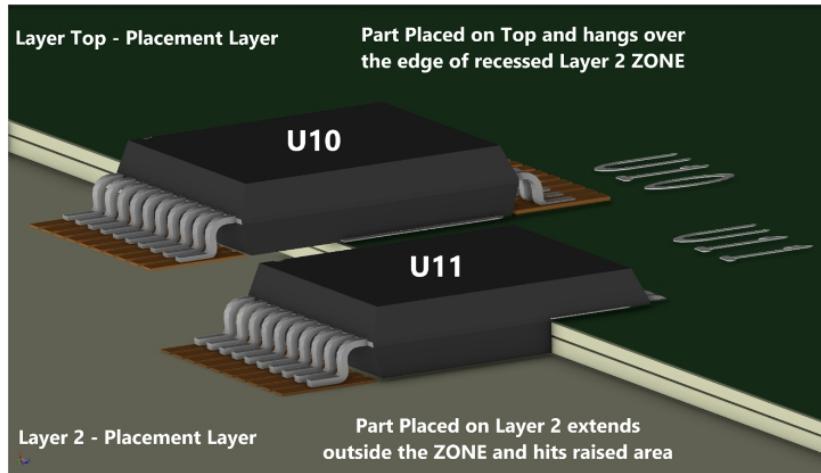
**DRC Code:**

**Attribute Name:** PIN\_TO\_ROUTE\_KEEPOUT\_VMODE

**Applicable Objects:** System, Design

# SMD Pad Zone Adherence Check

Verifies SMD pads of components are fully on placement layer.



**DRC Code:** SZ

**Attribute Name:** DSN\_SMD\_ZONEADH

**Applicable Objects:** System, Design

# **Suppress DRC on exploded pins(NODRC\_SYM\_SAME\_PIN)**

This attribute when set would suppress the DRC behavior on exploded pins when one of the following property is applied at the Board/Symbol Drawing level or at the Symbol Instance level in Board.

NODRC\_SYM\_SAME\_PIN  
NODRC\_SYM\_SAME\_PIN\_SOLDERMASK  
NODRC\_SYM\_SAME\_PIN\_PASTEMASK

**DRC Code:**

**Attribute Name:** NODRC\_SYM\_EXPLODED\_PINS

**Applicable Objects:** System, Design

# Testpoint Allowed Under Component

Testpoint allowed under component verification mode

**DRC Code:** TC

**Attribute Name:** TESTPOINT\_ALLOW\_UNDER\_VMODE

**Applicable Objects:** System, Design

# Through Via in SMD Pins

Allow thru vias in SMD pins verification mode

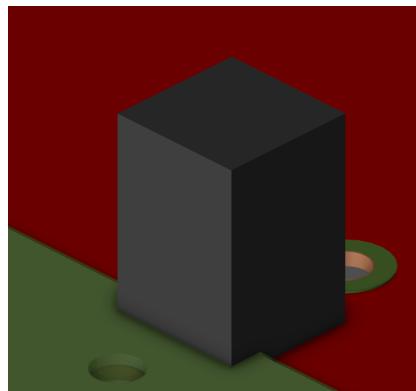
**DRC Code:** TP

**Attribute Name:** VIA\_AT\_SMD\_THRU\_VMODE

**Applicable Objects:** System, Design

# ThruPin Zone Adherence Check

Verifies Thru pins of components are fully on start layer.



**DRC Code:** TZ

**Attribute Name:** DSN\_THRUHOLE\_ZONEADH

**Applicable Objects:** System, Design

# Via at SMD Fit

Vias in SMD pins must fit entirely inside verification mode

**DRC Code:** FP

**Attribute Name:** VIA\_AT\_SMD\_FIT\_VMODE

**Applicable Objects:** System, Design

# Via in SMD Pins

Allow vias in SMD pins verification mode

**DRC Code:**

**Attribute Name:** VIA\_AT\_SMD\_VMODE

**Applicable Objects:** System, Design

# Design for Fabrication

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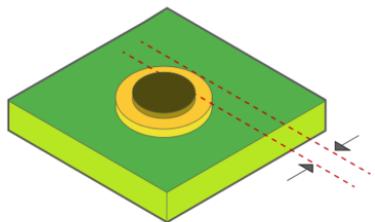
# Annular Ring

## Blind/Buried Via Hole to Antipad

Checks the minimum distance of blind/buried via hole edge to the anti pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ab

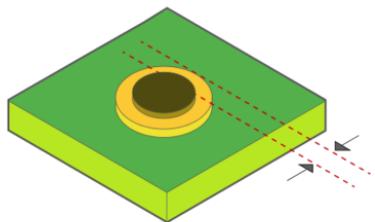
**Attribute Name:** DFF\_AR\_BBVI AHL\_TO\_ANTIPD

## Blind/Buried Via Hole to Mask

Checks the minimum distance of blind/buried via hole edge to mask pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ab

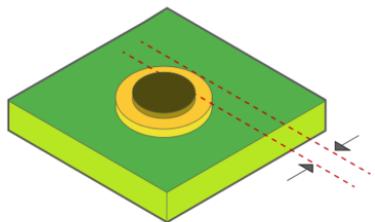
**Attribute Name:** DFF\_AR\_BBVI AHL\_TO\_MSK

## Blind/Buried Via Hole to Pad

Checks the minimum distance of blind/buried via hole edge to pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ab

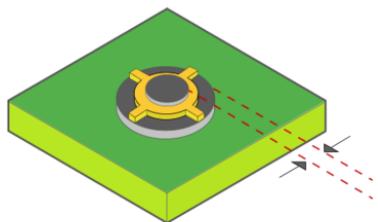
**Attribute Name:** DFF\_AR\_BBVI AHL\_TOPD

## Blind/Buried Via Hole to Thermal

Checks the minimum distance of blind/buried via hole edge to thermal pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ab

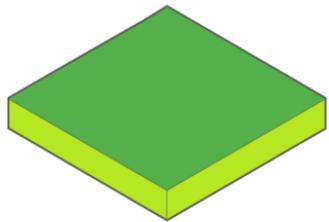
**Attribute Name:** DFF\_AR\_BBVI AHL\_TO\_THRML

## Blind/Buried Via Pad Missing Mask

Checks blind/buried via pad missing mask.

**DRC Code:** ot

**Attribute Name:** DFF\_AR\_BBVIAPD\_MSNGMSK



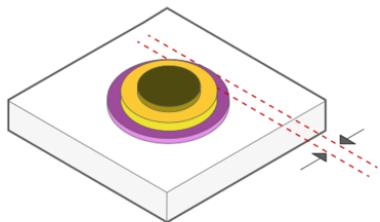
**Applicable Objects:** DFFAnnularRingCSet

## Blind/Buried Via Pad to Mask

Checks the minimum distance of blind/buried via pad edge from mask pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ab

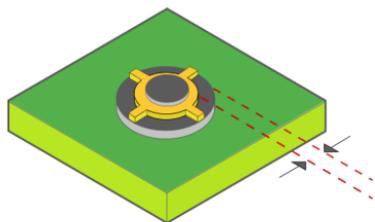
**Attribute Name:** DFF\_AR\_BBVIAPD\_TO\_MSK

## Blind/Buried Via Pad to Thermal

Checks blind/buried via pad to thermal.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

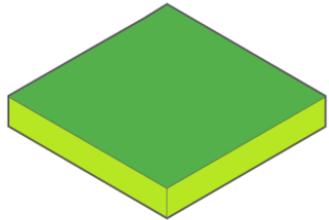
**Attribute Name:** DFF\_AR\_BBVIAPD\_TO\_THRML

## Fiducial Pad Missing Mask

Checks for fiducial pad missing mask.

**DRC Code:** os

**Attribute Name:** DFF\_AR\_FDCL\_MISSING\_MSK



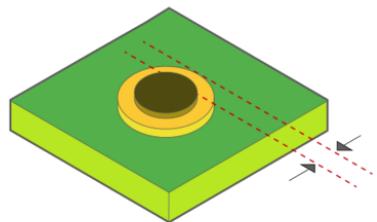
**Applicable Objects:** DFFAnnularRingCSet

## Fiducial to Antipad

Checks the minimum distance of fiducial pad edge from anti pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

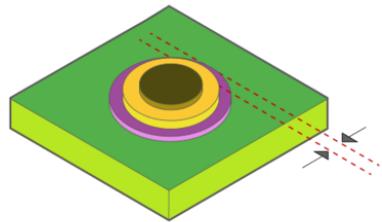
**Attribute Name:** DFF\_AR\_FDCL\_TO\_ANTIPD

## Fiducial to Mask

Checks the minimum distance of fiducial pad edge from mask pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

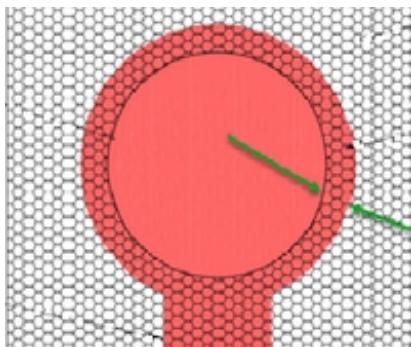
**Attribute Name:** DFF\_AR\_FDCL\_TO\_MSK

## Masked defined Pin Pad to Mask

This constraint checks the maximum allowable distance between pin pad and mask. In mask defined pads, the size of pin pad is driven by solder mask opening. DRC will be flagged if distance between mask and pad is more than the constraint value. In case distance between mask and pad is between zero and constraint value DRC is not flagged.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** on

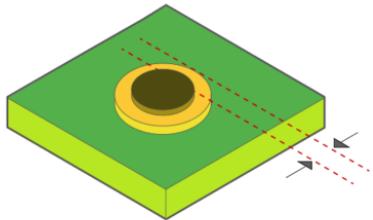
**Attribute Name:** DFF\_AR\_MDPPD\_TO\_MSK

## Micro Via Hole to Antipad

Checks the minimum distance of micro via padstack hole from the outermost edge of antipad geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** au

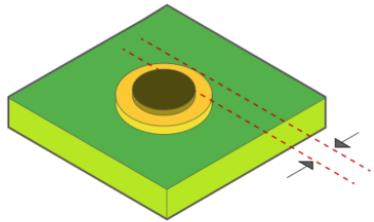
**Attribute Name:** DFF\_AR\_UVIAHL\_TO\_ANTIPD

## Micro Via Hole to Mask

Checks the minimum distance of micro via padstack hole from the outermost edge of pad geometry in the mask layer.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** au

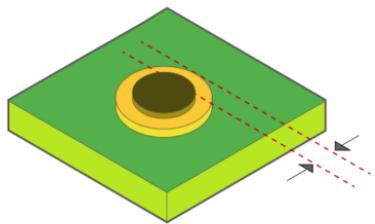
**Attribute Name:** DFF\_AR\_UVIAHL\_TO\_MSK

## Micro Via Hole to Pad

Checks the minimum distance of micro via padstack hole from the outermost edge of pad geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** au

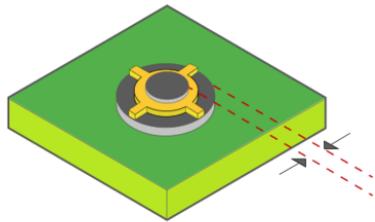
**Attribute Name:** DFF\_AR\_UVIAHL\_TOPD

## Micro Via Hole to Thermal

Checks the minimum distance of micro via padstack hole from the outermost edge of thermal pad geometry. For positive layer, this check evaluates the actual clearance made for thermal relief.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** au

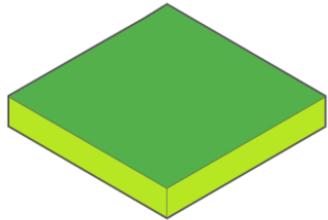
**Attribute Name:** DFF\_AR\_UVIAHL\_TO\_THRML

## Micro Via Pad Missing Mask

Checks for micro via pad missing mask.

**DRC Code:** os

**Attribute Name:** DFF\_AR\_UVIAPD\_MSNGMSK



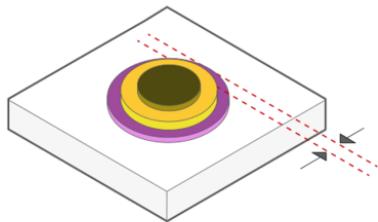
**Applicable Objects:** DFFAnnularRingCSet

## Micro Via Pad to Mask

Checks the minimum distance of the outermost edge of the micro via pad from the outermost edge of mask pad geometry..

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** au

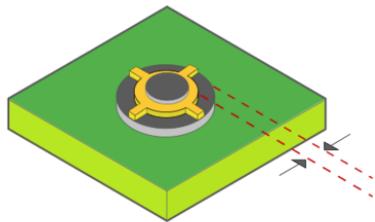
**Attribute Name:** DFF\_AR\_UVIAPD\_TO\_MSK

## Micro Via Pad to Thermal

Checks micro via pad to thermal.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

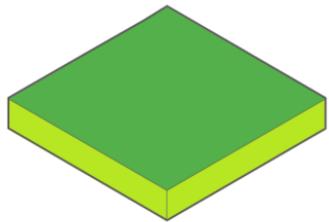
**Attribute Name:** DFF\_AR\_UVIAPD\_TO\_THRML

## Missing Mask in Through Pin

Reports missing mask definitions for through pins.

**DRC Code:** am

**Attribute Name:** DFF\_AR\_TH\_MISSNG\_MSK



**Applicable Objects:** DFFAnnularRingCSet

## **Non-plated hole to anti pad**

Checks the minimum distance of non plated hole edge to antipad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet

**DRC Code:** os

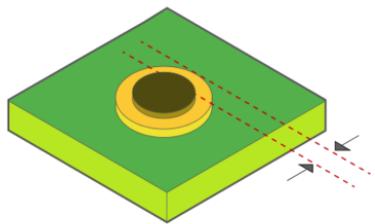
**Attribute Name:** DFF\_AR\_NPHL\_TO\_ANTIPD

## Non plated hole to mask

Checks the minimum distance of non-plated hole edge from mask pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** os

**Attribute Name:** DFF\_AR\_NPHL\_TO\_MSK

## **Non-plated hole to pad**

Checks the minimum distance of non plated hole edge to pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet

**DRC Code:** os

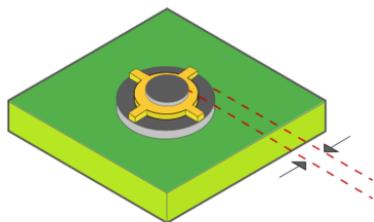
**Attribute Name:** DFF\_AR\_NPHL\_TOPD

## Non-plated hole to thermal

Checks the minimum distance of non plated hole edge from the thermal pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** os

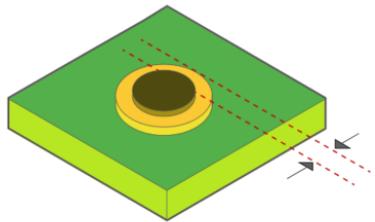
**Attribute Name:** DFF\_AR\_NPHL\_TO\_THRML

## Non-plated Mechanical Hole to Anti Pad

Checks the minimum distance of non-plated mechanical hole edge to anti pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

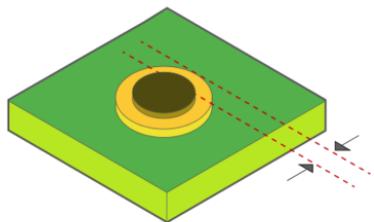
**Attribute Name:** DFF\_AR\_NPMECHHL\_TO\_ANTIPD

## Non-plated Mechanical Hole to Mask

Checks the minimum distance of non-plated mechanical hole edge from mask pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

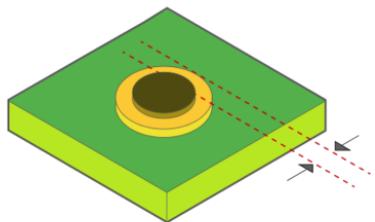
**Attribute Name:** DFF\_AR\_NPMECHHL\_TO\_MSK

## Non-plated Mechanical Hole to Pad

Checks the minimum distance of non-plated mechanical hole edge to pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

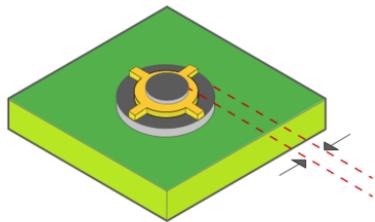
**Attribute Name:** DFF\_AR\_NPMECHHL\_TOPD

## Non-plated Mechanical Hole to Thermal

Checks the minimum distance of non-plated mechanical hole edge from thermal pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

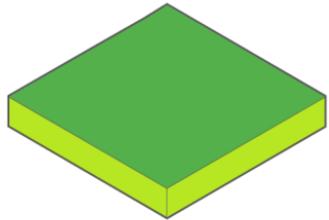
**Attribute Name:** DFF\_AR\_NPMECHHL\_TO\_THRML

## Non-plated Mechanical Pad Missing Mask

Checks for non-plated mechanical pad missing mask.

**DRC Code:** os

**Attribute Name:** DFF\_AR\_NPMECHPD\_MSNGMSK



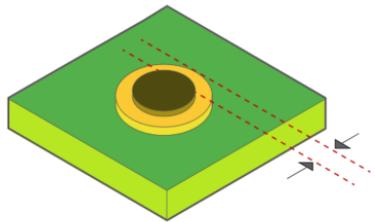
**Applicable Objects:** DFFAnnularRingCSet

## Non-plated Mechanical Pad to Mask

Checks the minimum distance of non-plated mechanical pad edge from mask pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

**Attribute Name:** DFF\_AR\_NPMECHPD\_TO\_MSK

## **Non plated missing mask**

Checks for non plated pad missing mask.

**DRC Code:** os

**Attribute Name:** DFF\_AR\_NP\_MISSING\_MSK

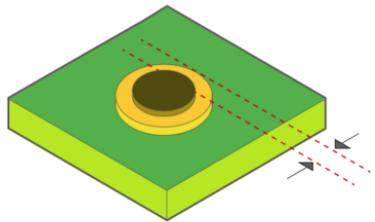
**Applicable Objects:** DFFAnnularRingCSet

## Non-plated Mounting Hole to Antipad

Checks the minimum distance of non-plated mounting hole edge from the antipad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

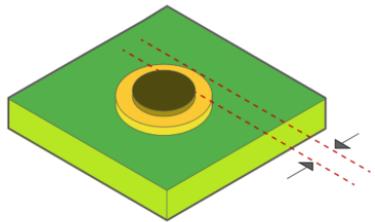
**Attribute Name:** DFF\_AR\_NPMNTHL\_TO\_ANTIPD

## Non-plated Mounting Hole to Mask

Checks the minimum distance of mounting hole edge from mask pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

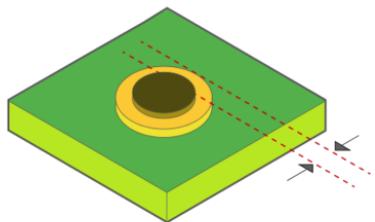
**Attribute Name:** DFF\_AR\_NPMNTHL\_TO\_MSK

## Non-plated Mounting Hole to Pad

Checks the minimum distance of non-plated mounting hole edge from pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

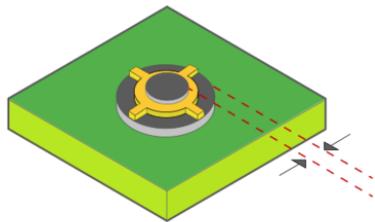
**Attribute Name:** DFF\_AR\_NPMNTHL\_TOPD

## Non-plated Mounting Hole to Thermal

Checks the minimum distance of non-plated mounting hole edge from thermal pad outer edge..

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

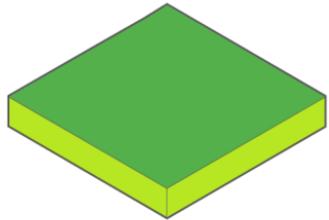
**Attribute Name:** DFF\_AR\_NPMNTHL\_TO\_THRML

## Non-plated Mounting Pad Missing Mask

Checks for non-plated mounting pad missing mask.

**DRC Code:** os

**Attribute Name:** DFF\_AR\_NPMNTPD\_MSNGMSK



**Applicable Objects:** DFFAnnularRingCSet

## Non-plated Mounting Pad to Mask

Checks the minimum distance of non-plated mounting pad edge from mask pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet

**DRC Code:** an

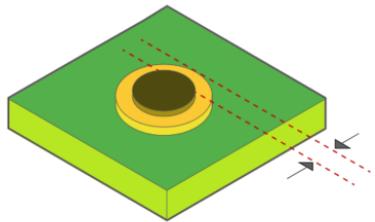
**Attribute Name:** DFF\_AR\_NPMNTPD\_TO\_MSK

## Non plated pad to mask

Checks the minimum distance of non-plated pad edge from mask pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** os

**Attribute Name:** DFF\_AR\_NPPD\_TO\_MSK

## **Non-plated Slot Hole to Antipad**

Checks the minimum distance of a non-plated slot hole edge from antipad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet

**DRC Code:** an

**Attribute Name:** DFF\_AR\_NPSLTHL\_TO\_ANTIPD

## Non-plated Slot Hole to Mask

Checks the minimum distance of a non-plated slot home edge from the mask pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet

**DRC Code:** an

**Attribute Name:** DFF\_AR\_NPSLTHL\_TO\_MSK

## Non-plated Slot Hole to Pad

Checks the minimum distance of non-plated slot hole edge to pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet

**DRC Code:** an

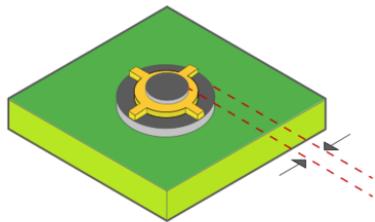
**Attribute Name:** DFF\_AR\_NPSLTHL\_TOPD

## Non-plated Slot Hole to Thermal

Checks the minimum distance of a non-plated slot hole edge from the thermal pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

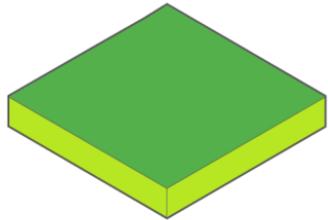
**Attribute Name:** DFF\_AR\_NPSLTHL\_TO\_THRML

## Non-plated Slot Pad Missing Mask

Checks for non-plated slot pad missing mask.

**DRC Code:** os

**Attribute Name:** DFF\_AR\_NPSLTPD\_MSNGMSK



**Applicable Objects:** DFFAnnularRingCSet

## **Non-plated Slot Pad to Mask**

Checks the minimum distance of non-plated slot pad pad edge from mask pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet

**DRC Code:** an

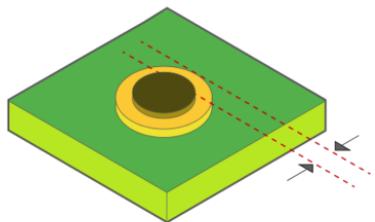
**Attribute Name:** DFF\_AR\_NPSLTPD\_TO\_MSK

## Non-plated Tooling Hole to Antipad

Checks the minimum distance of non-plated tooling hole pad edge from antipad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

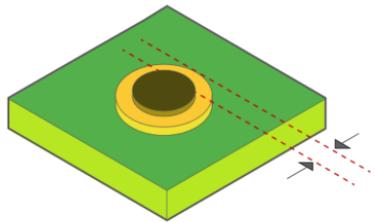
**Attribute Name:** DFF\_AR\_NPTOOLHL\_TO\_ANTIPD

## Non-plated Tooling Hole to Mask

Checks the minimum distance of tooling hole edge from mask pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

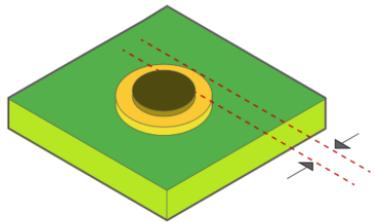
**Attribute Name:** DFF\_AR\_NPTOOLHL\_TO\_MSK

## Non-plated Tooling Hole to Pad

Checks the minimum distance of tooling hole edge from pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

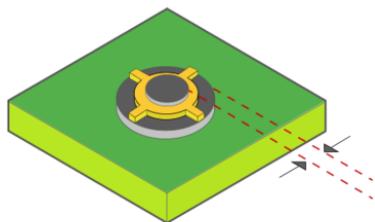
**Attribute Name:** DFF\_AR\_NPTOOLHL\_TOPD

## Non-plated Tooling Hole to Thermal

Checks the minimum distance of tooling hole edge from thermal pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

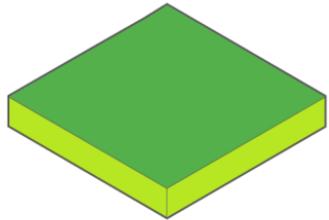
**Attribute Name:** DFF\_AR\_NPTOOLHL\_TO\_THRML

## Non-plated Tooling Pad Missing Mask

Checks for non-plated tooling pad missing mask.

**DRC Code:** os

**Attribute Name:** DFF\_AR\_NPTOOLPD\_MSNGMSK



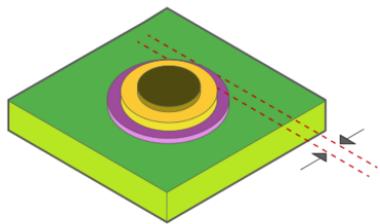
**Applicable Objects:** DFFAnnularRingCSet

## Non-plated Tooling Pad to Mask

Checks the minimum distance of plated tooling pad edge from mask pad outer edge..

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

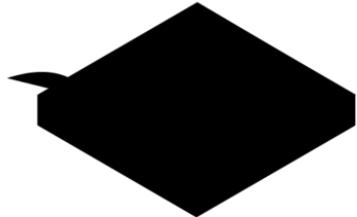
**Attribute Name:** DFF\_AR\_NPTOOLPD\_TO\_MSK

## **Partially Covered Via**

This check detects if there is a via which is partially covered with a mask shape.

**DRC Code:** Vm

**Attribute Name:** DFF\_MASK\_PARTCOV\_VIA



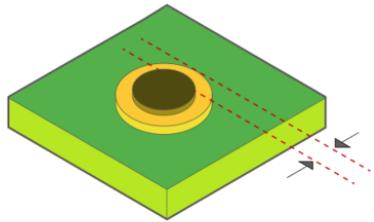
**Applicable Objects:** DFFMaskCSet

## Pin Hole to Antipad

Indicates the minimum distance of the pin padstack hole from the outermost edge of the antipad geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ot

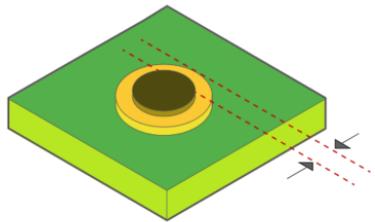
**Attribute Name:** DFF\_AR\_PNHL\_TO\_ANTIPD

## Pin Hole to Mask

Checks the minimum distance of pin hole from mask.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** os

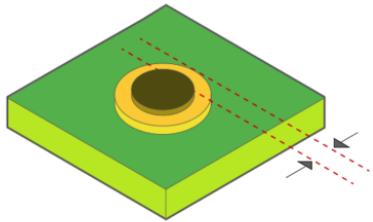
**Attribute Name:** DFF\_AR\_PNHL\_TO\_MSK

## Pin Hole to Pad

Checks the minimum distance of the pin padstack hole from the outermost edge of the pad geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** oP

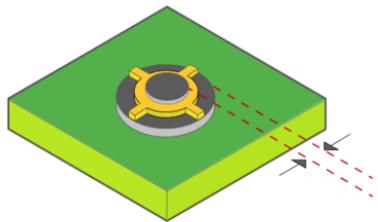
**Attribute Name:** DFF\_AR\_PNHL\_TOPD

## Pin Hole to Thermal

Checks the minimum distance of pin hole from thermal.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ov

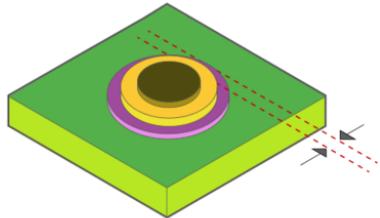
**Attribute Name:** DFF\_AR\_PNHL\_TO\_THRML

## Pin Pad to Mask

Checks the minimum distance of the pin pad edge from the mask pad outer edge. Positive value means the distance is more than the constraint value, negative value means the distance is less than the value.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** on

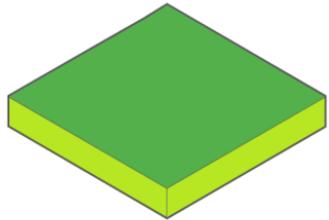
**Attribute Name:** DFF\_AR\_PNPD\_TO\_MSK

## Pin Pad to Missing Mask

Reports missing mask definitions for pin pads.

**DRC Code:** ox

**Attribute Name:** DFF\_AR\_PN\_MISSNG\_MSK



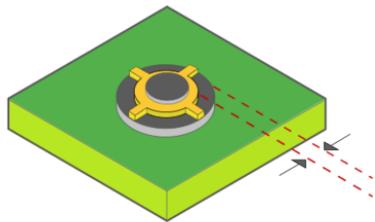
**Applicable Objects:** DFFAnnularRingCSet

## Pin pad to thermal

Checks the minimum distance of pin pad edge to thermal pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

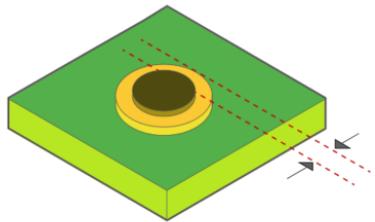
**Attribute Name:** DFF\_AR\_PNPD\_TO\_THRML

## Plated Mechanical Hole to Antipad

Checks the minimum distance of mechanical hole edge from antipad outer edge..

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ap

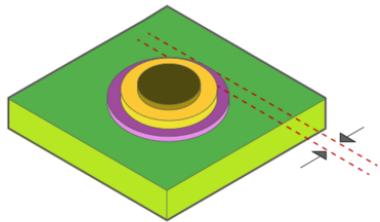
**Attribute Name:** DFF\_AR\_PMECHHL\_TO\_ANTIPD

## Plated Mechanical Hole to Mask

Checks the minimum distance of mechanical hole pad edge from mask pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ap

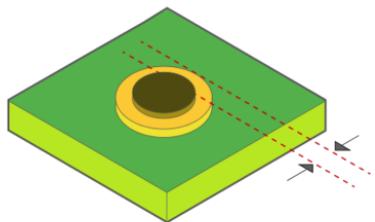
**Attribute Name:** DFF\_AR\_PMECHHL\_TO\_MSK

## Plated Mechanical Hole to Pad

Checks the minimum distance of mechanical hole edge from pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ap

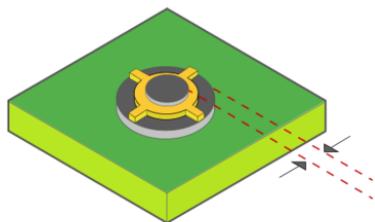
**Attribute Name:** DFF\_AR\_PMECHHL\_TOPD

## Plated Mechanical Hole to Thermal

Checks the minimum distance of mechanical hole pad edge from thermal pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ap

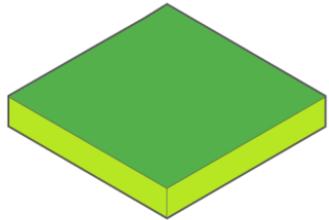
**Attribute Name:** DFF\_AR\_PMECHHL\_TO\_THRML

## Plated Mechanical Pad Missing Mask

Checks for plated mechanical pad missing mask.

**DRC Code:** os

**Attribute Name:** DFF\_AR\_PMECHPD\_MSNGMSK



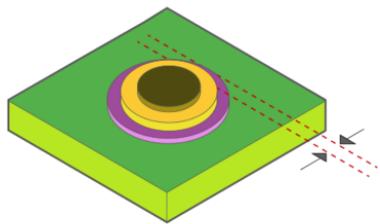
**Applicable Objects:** DFFAnnularRingCSet

## Plated Mechanical Pad to Mask

Checks the minimum distance of mechanical pin pad edge from mask pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ap

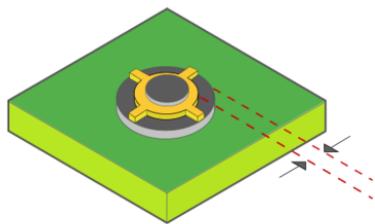
**Attribute Name:** DFF\_AR\_PMECHPD\_TO\_MSK

## Plated Mechanical Pad to Thermal

Checks plated mechanical pad to thermal.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

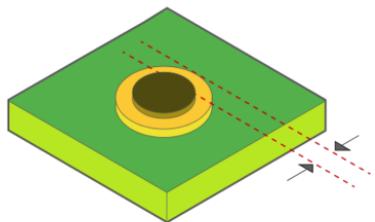
**Attribute Name:** DFF\_AR\_PMECHPD\_TO\_THRML

## Plated Mounting Hole to Antipad

Checks the minimum distance of mounting hole edge from antipad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ap

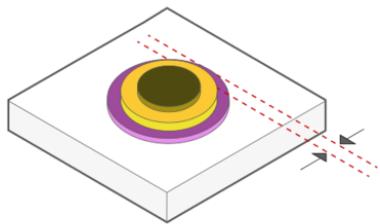
**Attribute Name:** DFF\_AR\_PMNTHL\_TO\_ANTIPD

## Plated Mounting Hole to Mask

Checks the minimum distance of mounting hole edge from mask pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ap

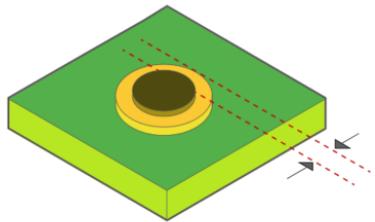
**Attribute Name:** DFF\_AR\_PMNTHL\_TO\_MSK

## Plated Mounting Hole to Pad

Checks the minimum distance of mounting hole edge from pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ap

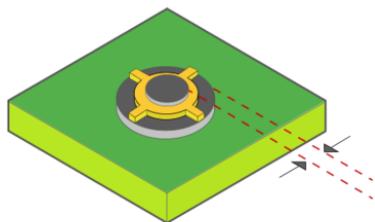
**Attribute Name:** DFF\_AR\_PMNTHL\_TOPD

## Plated Mounting Hole to Thermal

Checks the minimum distance of mounting hole edge from thermal pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ap

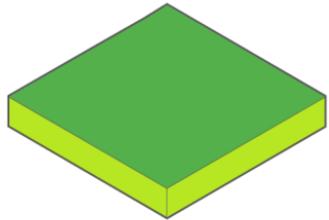
**Attribute Name:** DFF\_AR\_PMNTHL\_TO\_THRML

## Plated Mounting Pad Missing Mask

Checks for plated mounting pad missing mask.

**DRC Code:** os

**Attribute Name:** DFF\_AR\_PMNTPD\_MSNGMSK



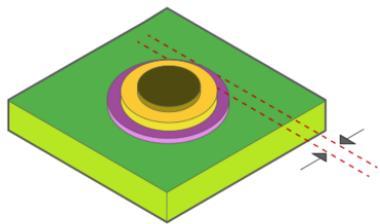
**Applicable Objects:** DFFAnnularRingCSet

## Plated Mounting Pad to Mask

Checks the minimum distance of plated mounting pin pad edge from the mask pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ap

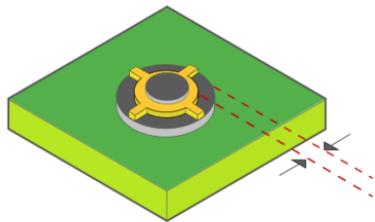
**Attribute Name:** DFF\_AR\_PMNTPD\_TO\_MSK

## Plated Mounting Pad to Thermal

Checks plated mounting pad to thermal.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

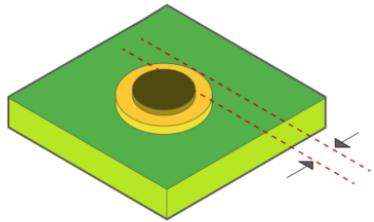
**Attribute Name:** DFF\_AR\_PMNTPD\_TO\_THRML

## Plated Pin Hole to Mask

Checks the minimum distance of thru pin padstack hole from the outermost edge of pad geometry in the mask layer.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ah

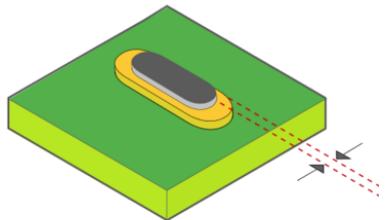
**Attribute Name:** DFF\_AR\_THHL\_TO\_MSK

## Plated Slot Hole to Antipad

Checks the minimum distance of plated slot hole edge from anti-pad outer edge..

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ap

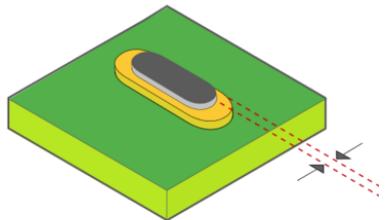
**Attribute Name:** DFF\_AR\_PSLTHL\_TO\_ANTIPD

## Plated Slot Hole to Mask

Checks the minimum distance of plated slot hole edge from mask pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ap

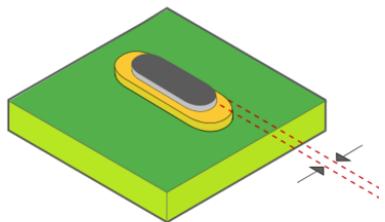
**Attribute Name:** DFF\_AR\_PSLTHL\_TO\_MSK

## Plated Slot Hole to Pad

Checks the minimum distance of plated slot hole edge from pad outer edge..

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ap

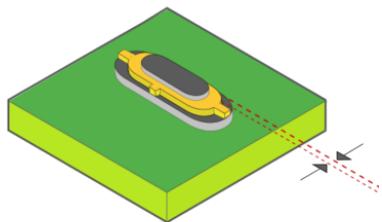
**Attribute Name:** DFF\_AR\_PSLTHL\_TOPD

## Plated Slot Hole to Thermal

Checks the minimum distance of plated slot hole edge from thermal pad outer edge..

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ap

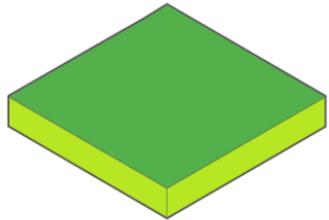
**Attribute Name:** DFF\_AR\_PSLTHL\_TO\_THRML

## Plated Slot Pad Missing Mask

Checks for plated slot pad missing mask.

**DRC Code:** os

**Attribute Name:** DFF\_AR\_PSLTPD\_MSNGMSK



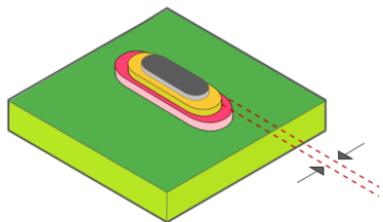
**Applicable Objects:** DFFAnnularRingCSet

## Plated Slot Pad to Mask

Checks the minimum distance of plated slot pad edge from mask pad outer edge..

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ap

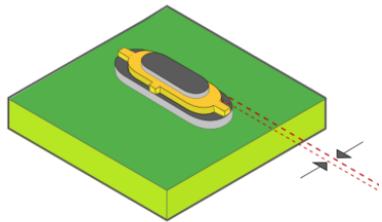
**Attribute Name:** DFF\_AR\_PSLTPD\_TO\_MSK

## Plated Slot Pad to Thermal

Checks the minimum distance of plated slot pad from thermal.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

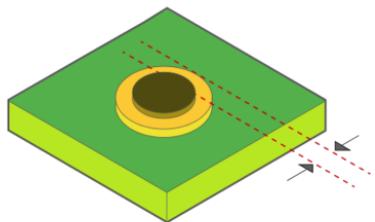
**Attribute Name:** DFF\_AR\_PSLTPD\_TO\_THRML

## Plated Tooling Hole to Antipad

Checks the minimum distance of plated tooling hole edge from the antipad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ap

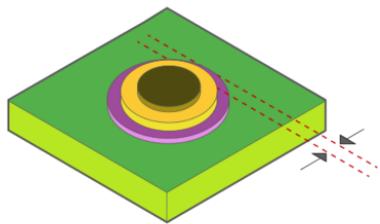
**Attribute Name:** DFF\_AR\_PTOOLHL\_TO\_ANTIPD

## Plated Tooling Hole to Mask

Checks the minimum distance of plated tooling hole edge from mask pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ap

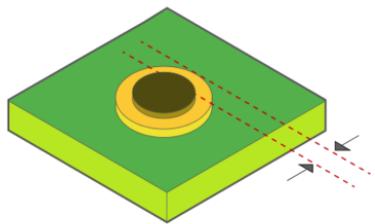
**Attribute Name:** DFF\_AR\_PTOOLHL\_TO\_MSK

## Plated Tooling Hole to Pad

Checks the minimum distance of plated tooling hole edge from outer edge of pad geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ap

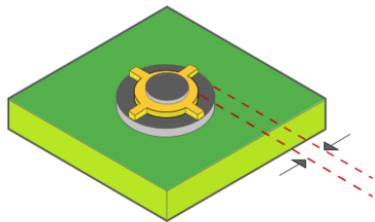
**Attribute Name:** DFF\_AR\_PTOOLHL\_TOPD

## Plated Tooling Hole to Thermal

Checks the minimum distance of plated tooling hole edge from the thermal pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ap

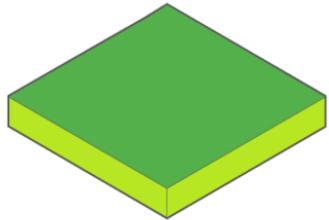
**Attribute Name:** DFF\_AR\_PTOOLHL\_TO\_THRML

## Plated Tooling Pad Missing Mask

Checks for plated tooling pad missing mask.

**DRC Code:** os

**Attribute Name:** DFF\_AR\_PTOOLPD\_MSNGMSK



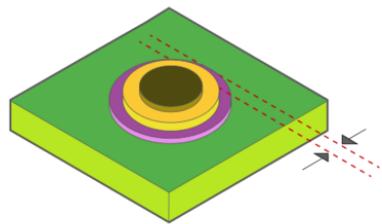
**Applicable Objects:** DFFAnnularRingCSet

## Plated Tooling Pad to Mask

Checks the minimum distance of tooling pin pad edge from mask outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ap

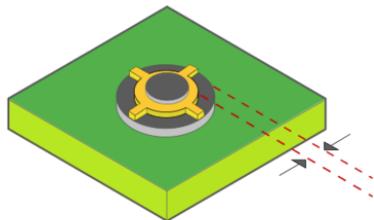
**Attribute Name:** DFF\_AR\_PTOOLPD\_TO\_MSK

## Plated Tooling Pad to Thermal

Checks the minimum distance of plated tooling pad from thermal.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

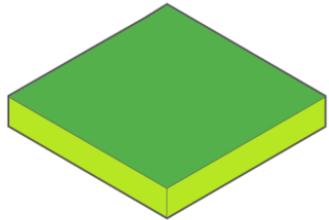
**Attribute Name:** DFF\_AR\_PTOOLPD\_TO\_THRML

## SMD Pin Missing Mask

Checks for SMD pin missing mask.

**DRC Code:** os

**Attribute Name:** DFF\_AR\_SMDPN\_MSNGMSK



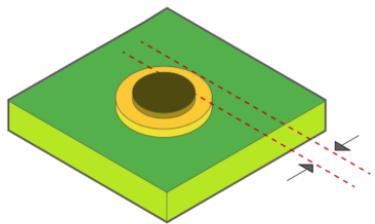
**Applicable Objects:** DFFAnnularRingCSet

## SMD Pin to Antipad

Checks the minimum distance of SMD pin pad edge from antipad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** aA

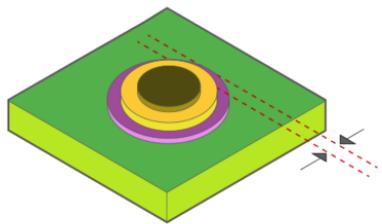
**Attribute Name:** DFF\_AR\_SMDPNPD\_TO\_ANTIPD

## SMD Pin to Mask

Checks the minimum distance of SMD pin pad edge from mask pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** aM

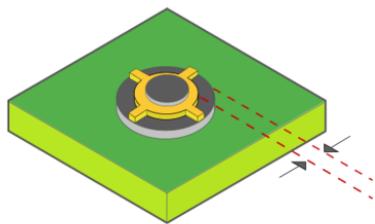
**Attribute Name:** DFF\_AR\_SMDPN\_TO\_MSK

## SMD Pin to Thermal

Checks the minimum distance of SMD pin pad edge from thermal pad outer edge. .

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** at

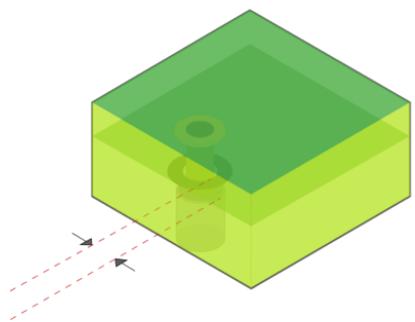
**Attribute Name:** DFF\_AR\_SMDPNPD\_TO\_THRML

## Through Pin Backdrill to Antipad

Checks the minimum distance from through pin backdrill hole to the antipad.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** Ba

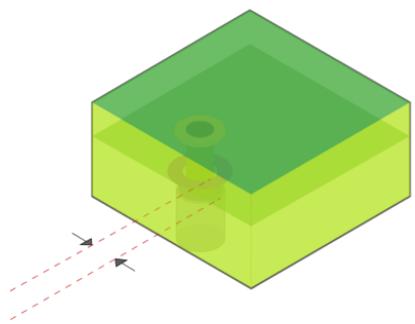
**Attribute Name:** DFF\_AR\_THRPN\_BDRL\_ANTPD

## Through Pin Backdrill to Mask

Checks the minimum distance from through pin backdrill hole to the mask.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** Bm

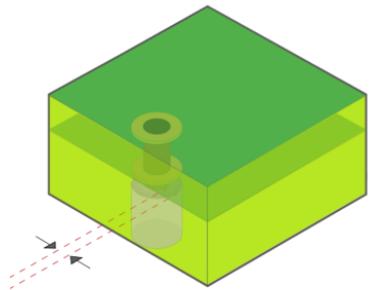
**Attribute Name:** DFF\_AR\_THRPN\_BDRL\_MSK

## Through Pin Backdrill to Pad

Checks the minimum distance of the outermost edge backdrill shape from the outermost edge of pad geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ab

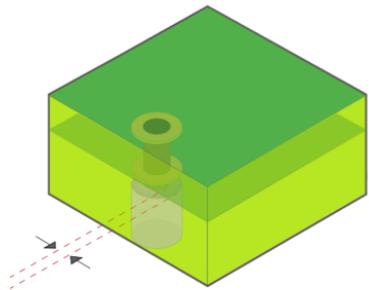
**Attribute Name:** DFF\_AR\_TH\_BACKDRILL\_TOPD

## Through Pin Backdrill to Via

Checks the minimum distance of the outermost edge backdrill shape from the outermost edge of via pad geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** aB

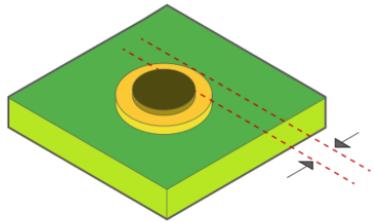
**Attribute Name:** DFF\_AR\_TH\_BACKDRILL\_TOVIA

## Through Pin Hole to Antipad

Checks the minimum distance of thru pin padstack hole from the outermost edge of antipad geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** Ah

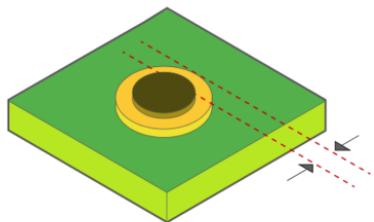
**Attribute Name:** DFF\_AR\_THHL\_TO\_ANTIPD

## Through Pin Hole to Pad

Checks the minimum distance of thru pin padstack hole from the outermost edge of pad geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** aH

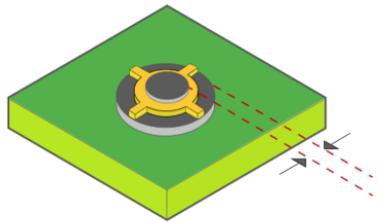
**Attribute Name:** DFF\_AR\_THHL\_TOPD

## Through Pin Hole to Thermal

Checks the minimum distance of the thru pin padstack hole from the outermost edge of thermal pad geometry. For positive layer, evaluates the actual clearance for the thermal connection.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** AH

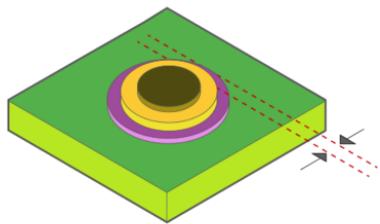
**Attribute Name:** DFF\_AR\_THHL\_TO\_THRML

## Through Pin Pad to Mask

Checks and reports missing mask definitions for thru pins.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** ap

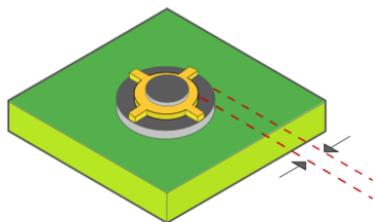
**Attribute Name:** DFF\_AR\_THPD\_TO\_MSK

## Through Pin Pad to Thermal

Checks the minimum distance of through pin pad from thermal.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

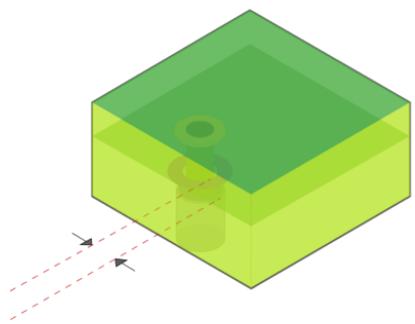
**Attribute Name:** DFF\_AR\_THPD\_TO\_THRML

## Through Via Backdrill to Mask

Checks the minimum distance from through via backdrill hole to the mask.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** Bm

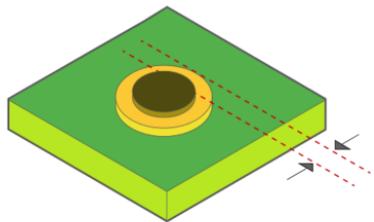
**Attribute Name:** DFF\_AR\_THRVIA\_BDRL\_MSK

## Through Via Hole to Antipad

Checks the minimum distance of thru via padstack hole from the outermost edge of antipad geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** os

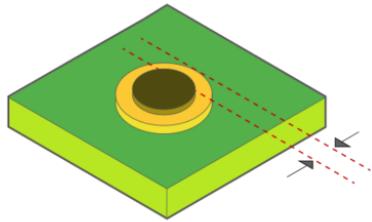
**Attribute Name:** DFF\_AR\_THVIAHL\_TO\_ANTIPD

## Through Via Hole to Mask

Checks the minimum distance of thru via padstack hole from the outermost edge of pad geometry in the mask layer.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** on

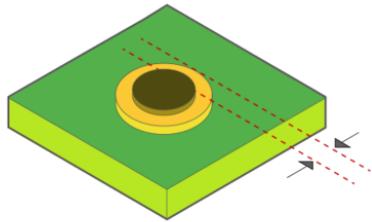
**Attribute Name:** DFF\_AR\_THVIAHL\_TO\_MSK

## Through Via hole to Pad

Checks the minimum distance of the thru via padstack hole from the outermost edge of pad geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** os

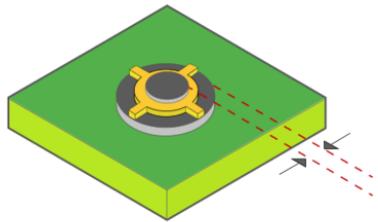
**Attribute Name:** DFF\_AR\_THVIAHL\_TOPD

## Through Via hole to Thermal

Checks the minimum distance of thru via padstack hole from the outermost edge of thermal pad geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** os

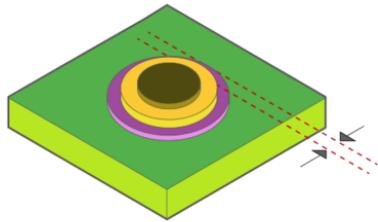
**Attribute Name:** DFF\_AR\_THVIAHL\_TO\_THRML

## Through Via Pad to Mask

Checks the minimum distance of thru via padstack hole from the outermost edge of pad geometry in the mask layer.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** op

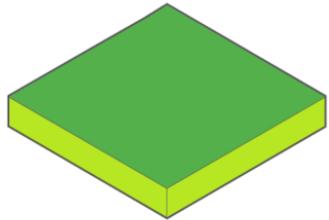
**Attribute Name:** DFF\_AR\_THVIAPD\_TO\_MSK

## Through Via Pad to Missing Mask

Checks and reports missing mask definitions for thru via.

**DRC Code:** ot

**Attribute Name:** DFF\_AR\_THVIAPD\_MSNGMSK



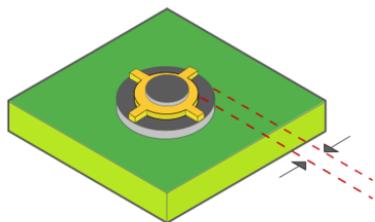
**Applicable Objects:** DFFAnnularRingCSet

## Through Via Pad to Thermal

Checks through via pad to thermal.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

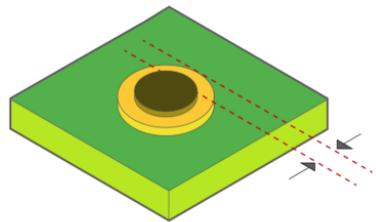
**Attribute Name:** DFF\_AR\_THVIAPD\_TO\_THRML

## Via Hole to Antipad

Checks the minimum distance of the via padstack hole from the outermost edge of the antipad geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** av

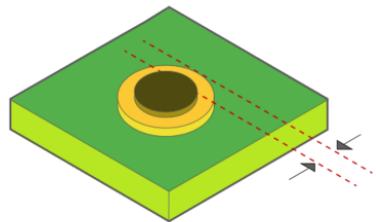
**Attribute Name:** DFF\_AR\_VIAHL\_TO\_ANTIPD

## Via Hole to Mask

Checks the minimum distance of pin padstack hole from the outermost edge of pad geometry in the mask layer.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** av

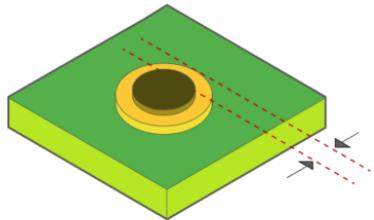
**Attribute Name:** DFF\_AR\_VIAHL\_TO\_MSK

## Via Hole to Pad

Checks the minimum distance of the via padstack hole from the outermost edge of the pad geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** av

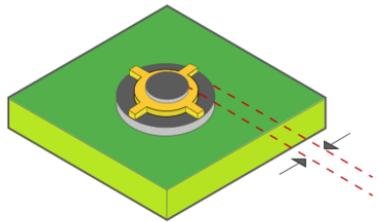
**Attribute Name:** DFF\_AR\_VIAHL\_TOPD

## Via Hole to Thermal

Checks the minimum distance of pin padstack hole from the outermost edge of thermal pad geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** av

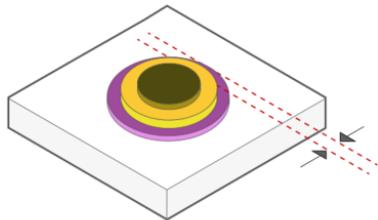
**Attribute Name:** DFF\_AR\_VIAHL\_TO\_THRML

## Via Pad to Mask

Checks the minimum distance of the via pad edge from the mask pad outer edge. Positive value means the distance is more than the constraint value, negative value means the distance is less than the value.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** av

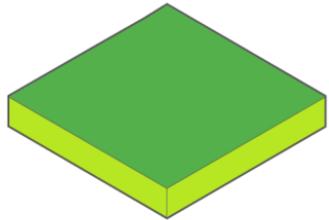
**Attribute Name:** DFF\_AR\_VIAPD\_TO\_MSK

## Via Pad to Missing Mask

Reports missing mask definitions for via pads.

**DRC Code:** ov

**Attribute Name:** DFF\_AR\_VIAPD\_MSNGMSK



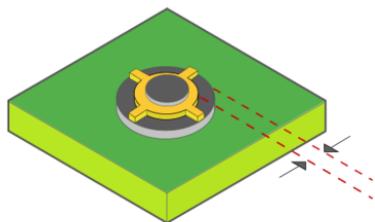
**Applicable Objects:** DFFAnnularRingCSet

## Via pad to thermal

Checks the minimum distance of via pad edge to thermal pad outer edge.

**Legal Values:** Design Units

**Applicable Objects:** DFFAnnularRingCSet



**DRC Code:** an

**Attribute Name:** DFF\_AR\_VIAPD\_TO\_THRML

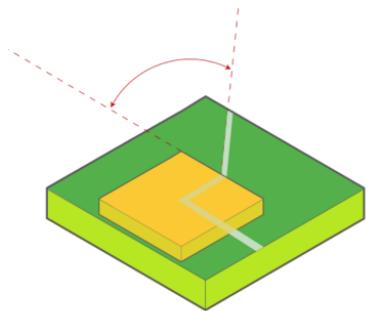
# Copper Features

## Acid Traps Angle

Checks for acid trap angle. Acid trap angle check is a condition where a trace exiting a pad or intersecting another connection creates an acute angle where the acid used in etching is trapped, causing an over-etching condition.

**Legal Values:** Angle Units

**Applicable Objects:** DFFCopperFeatureCSet



**DRC Code:** fa

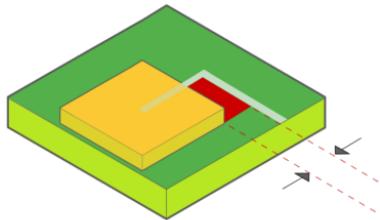
**Attribute Name:** DFF\_CF\_ACID\_TRAP\_ANGLE

## Acid Traps Area

Checks for creation of acid trap creation. Acid trap area check is an acid trap condition when a trace exits a pad and forms a right angle across the pad edge. Here acid trap is created if the trace is too close to the pad edge. This condition creates a box like effect that traps the acid material.

**Legal Values:** Design Units Area

**Applicable Objects:** DFFCopperFeatureCSet



**DRC Code:** fA

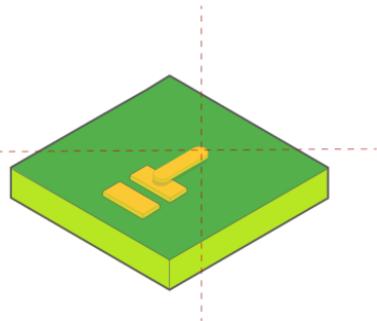
**Attribute Name:** DFF\_CF\_ACID\_TRAP\_AREA

## Antenna Traces

Checks antenna traces.

**DRC Code:** FT

**Attribute Name:** DFF\_CF\_ANTENNA\_TRACES



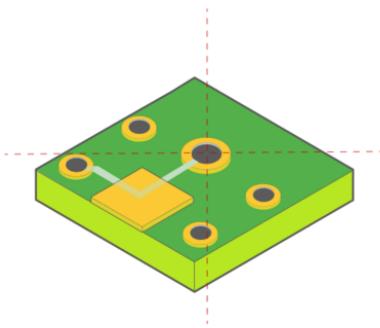
**Applicable Objects:** DFFCopperFeatureCSet

## Antenna Via

Checks for existenc of antenna via. Via with one end open is treated as antenna via.

**DRC Code:** fV

**Attribute Name:** DFF\_CF\_ANTENNA\_VIA



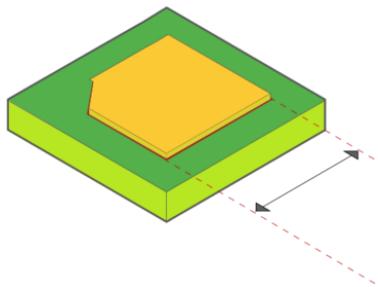
**Applicable Objects:** DFFCopperFeatureCSet

## Flex Maximum Solid Fill Shapes

Checks flex maximum solid fill shapes.

**Legal Values:** Design Units Area

**Applicable Objects:** DFFCopperFeatureCSet



**DRC Code:** fS

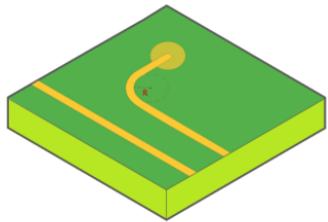
**Attribute Name:** DFF\_CF\_MAXSOLIDFILLSHPS

## Flex Minimum Radius on All Trace Corners

Checks the flex minimum radius on all trace corners.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperFeatureCSet



**DRC Code:** Ft

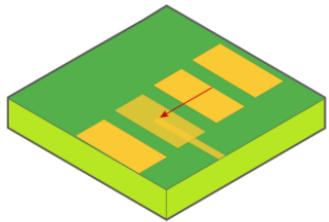
**Attribute Name:** DFF\_CF\_MINRADIUSTRCCRNRS

## Flex missing pad fillets

Checks for missing fillets on connections at pads.

**DRC Code:** ff

**Attribute Name:** DFF\_CF\_MISSNGPD\_FILLETS



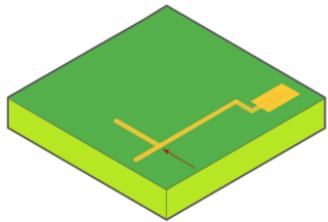
**Applicable Objects:** DFFCopperFeatureCSet

## Flex Missing T Fillets

Checks for missing fillets on T junction connections.

**DRC Code:** ff

**Attribute Name:** DFF\_CF\_MISSNGT\_FILLETS



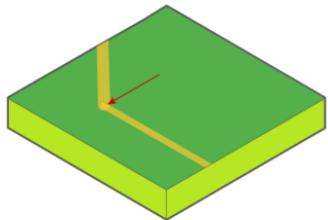
**Applicable Objects:** DFFCopperFeatureCSet

## Flex Missing Trace Tapers

Checks flex missing trace tapers.

**DRC Code:** fT

**Attribute Name:** DFF\_CF\_MISSNG\_TRCTAPERS



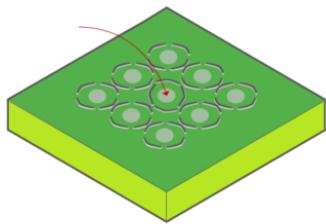
**Applicable Objects:** DFFCopperFeatureCSet

## Isolated thermal on negative layer

Checks for isolated thermal on negative layer.

**DRC Code:** fl

**Attribute Name:** DFF\_CF\_ISOLATED\_THRML\_NEG



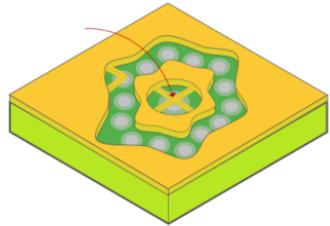
**Applicable Objects:** DFFCopperFeatureCSet

## Isolated thermal on positive layer

Checks isolated thermal on positive layer.

**DRC Code:** fl

**Attribute Name:** DFF\_CF\_ISOLATED\_THRML



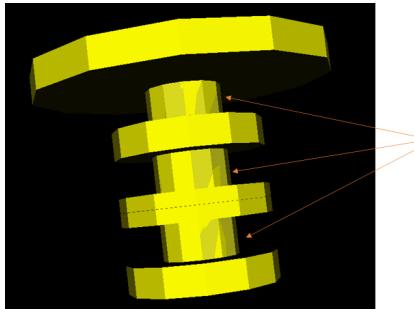
**Applicable Objects:** DFFCopperFeatureCSet

## Max dielectric layer span for a via

This rule defines the maximum allowable number of dielectric layers that a via can cross. This rule also considers the vias stacked together to determine the cumulative layer count for this rule.

**DRC Code:** sv

**Attribute Name:** DFF\_CF\_MAXVIA\_DIELSPAN



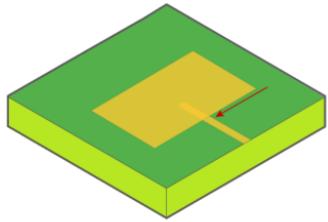
**Applicable Objects:** DFFCopperFeatureCSet

## Maximum Line into pad ratio(SMD)

Checks the maximum required trace width to SMD pad ratio. The trace width should be equal to or less than the narrowest width of the pad based on pad entry of the trace.

**Legal Values:** Percentage Units

**Applicable Objects:** DFFCopperFeatureCSet



**DRC Code:** Fr

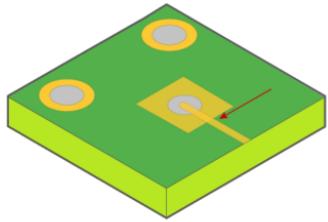
**Attribute Name:** DFF\_CF\_LINE\_TOPD\_RATIO\_SMD

## Maximum Line into pad ratio(Thru Hole)

Checks the maximum required trace width to thru hole pad ratio. The trace width should be equal to or less than the narrowest width of the pad based on pad entry of the trace.

**Legal Values:** Percentage Units

**Applicable Objects:** DFFCopperFeatureCSet



**DRC Code:** Fr

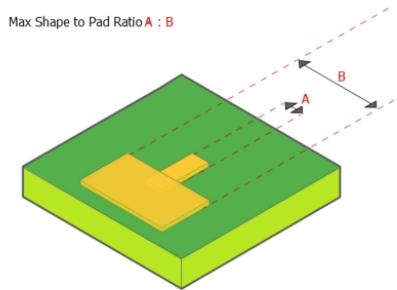
**Attribute Name:** DFF\_CF\_LINE\_TOPD\_RATIO\_TH

## Maximum Shape into pad ratio

Checks the maximum required shape to pad ratio. For each side of the pad, the shape should not cover more than the specified ratio.

**Legal Values:** Percentage Units

**Applicable Objects:** DFFCopperFeatureCSet



**DRC Code:** FR

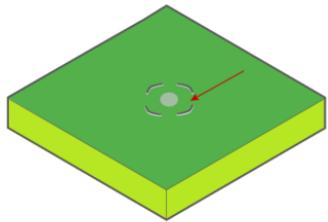
**Attribute Name:** DFF\_CF\_SHP\_TOPD\_RATIO

## Maximum spoke width of thermal on negative layer

Checks the maximum required spoke width of thermal on negative layer.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperFeatureCSet



**DRC Code:** fl

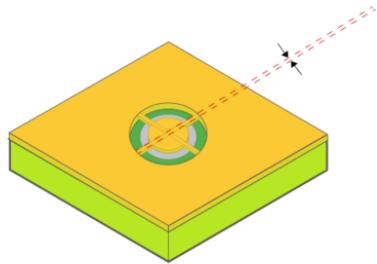
**Attribute Name:** DFF\_CF\_MAXSPOKE\_WID\_NEG

## Maximum spoke width of thermal on positive layer

Checks the maximum required spoke width of thermal on positive layer.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperFeatureCSet



**DRC Code:** fl

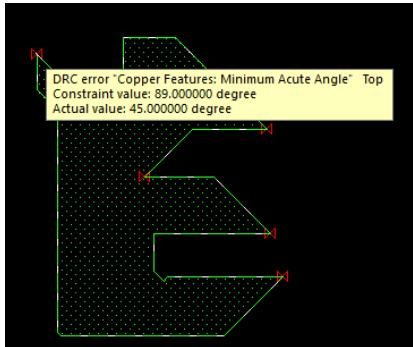
**Attribute Name:** DFF\_CF\_MAXSPOKE\_WID

## Minimum Acute Angle

This check detects acute angle formed by a shape, route or a combination of copper objects. This rule detects any acute angle, unlike only concave angles detected by acid trap angle check.

**Legal Values:** Angle Units

**Applicable Objects:** DFFCopperFeatureCSet



**DRC Code:** Aa

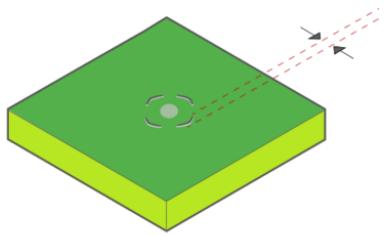
**Attribute Name:** DFF\_CF\_MIN\_ACUTE\_ANGLE

## Minimum air gap of thermal on negative layer

Checks the required minimum width of air clearances between pad and connected shape in a negative layer

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperFeatureCSet



**DRC Code:** fl

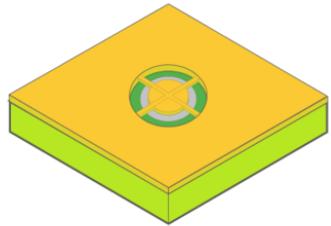
**Attribute Name:** DFF\_CF\_MINAIRGAP\_NEG

## Minimum air gap of thermal on positive layer

Checks the required minimum air clearance between pad and connected shape in a positive layer.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperFeatureCSet



**DRC Code:** fl

**Attribute Name:** DFF\_CF\_MINAIRGAP

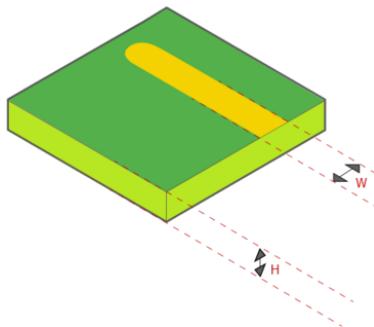
## Minimum Line Width Ratio

Checks the minimum line width ratio.

**Legal Values:** Percentage Units

**Applicable Objects:** DFFCopperFeatureCSet

Copper Features : Min Line Width ratio~~H~~: W



**DRC Code:** fr

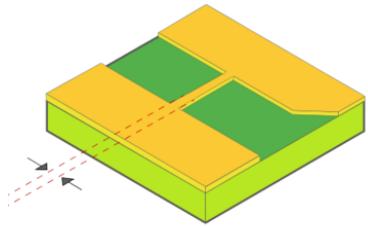
**Attribute Name:** DFF\_CF\_LINE\_WIDTH\_RATIO

## Minimum Shape Width

Checks the minimum required width of any portion of a shape in order to eliminate rip ups during manufacturing.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperFeatureCSet



**DRC Code:** fs

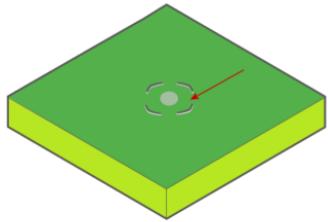
**Attribute Name:** DFF\_CF\_SHP\_WIDTH

## Minimum spoke count of thermal on negative layer

Checks the required minimum number of spokes that must be present on a thermal connection of a pad with a shape in a negative layer.

**DRC Code:** fl

**Attribute Name:** DFF\_CF\_MINSPOKE\_CNT\_NEG



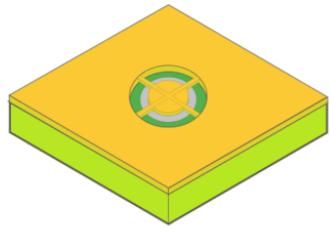
**Applicable Objects:** DFFCopperFeatureCSet

## Minimum spoke count of thermal on positive layer

Checks the required minimum number of spokes that must be present on a thermal connection of a pad with a shape in a positive layer.

**DRC Code:** fl

**Attribute Name:** DFF\_CF\_MINSPOKE\_CNT



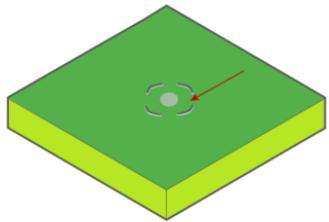
**Applicable Objects:** DFFCopperFeatureCSet

## Minimum spoke width of thermal on negative layer

Checks the minimum required spoke width of thermal on negative layer.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperFeatureCSet



**DRC Code:** fl

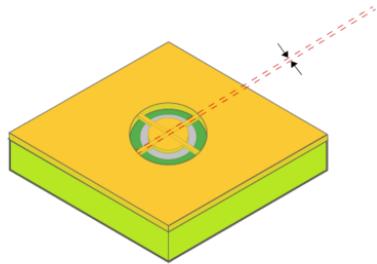
**Attribute Name:** DFF\_CF\_MINSPOKE\_WID\_NEG

## Minimum spoke width of thermal on positive layer

Checks the minimum required spoke width of thermal on positive layer.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperFeatureCSet



**DRC Code:** fl

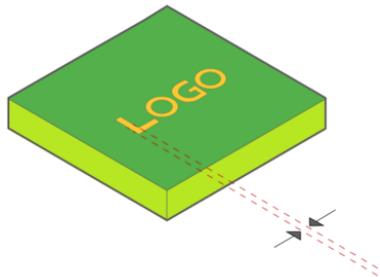
**Attribute Name:** DFF\_CF\_MINSPOKE\_WID

## Minimum Text Line Width

Checks the minimum text line width.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperFeatureCSet



**DRC Code:** ft

**Attribute Name:** DFF\_CF\_TEXT\_LINE\_WIDTH

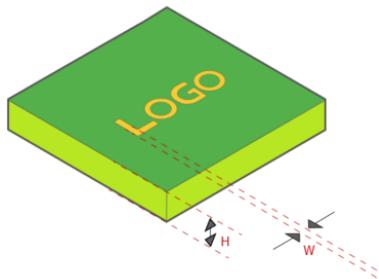
## Minimum Text Line Width Ratio

Checks the minimum text line width ratio.

**Legal Values:** Percentage Units

**Applicable Objects:** DFFCopperFeatureCSet

Copper Features : Min Line Width ratio $\geq$  W



**DRC Code:** fR

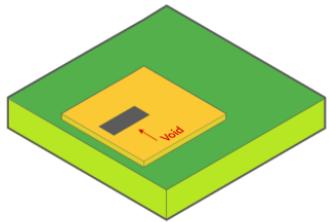
**Attribute Name:** DFF\_CF\_TEXT\_LNEWDTHRATIO

## Minimum Void Opening

Checks the minimum void opening (Positive).

**Legal Values:** Design Units Area

**Applicable Objects:** DFFCopperFeatureCSet



**DRC Code:** fv

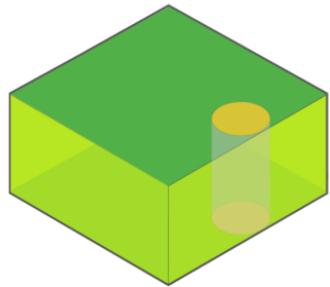
**Attribute Name:** DFF\_CF\_VOID\_OPENNG

## Plating in pin

Checks for plating of holes in the pin.

**DRC Code:** Fp

**Attribute Name:** DFF\_CF\_PLATING\_IN\_PIN



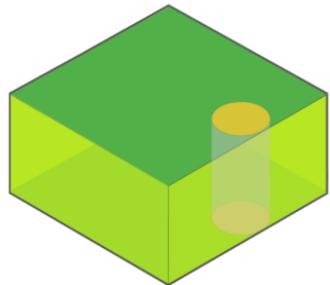
**Applicable Objects:** DFFCopperFeatureCSet

## Plating in via

Checks for plating of via holes.

**DRC Code:** Fv

**Attribute Name:** DFF\_CF\_PLATING\_IN\_VIA



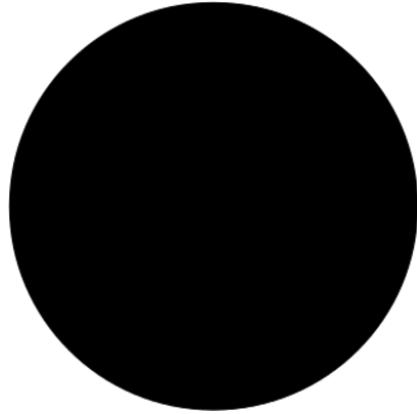
**Applicable Objects:** DFFCopperFeatureCSet

## Shape Island Oversize

Identifies negative plane islands formed because anti-pads or thermal reliefs are very close together on a negative layer.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperFeatureCSet



**DRC Code:** DI

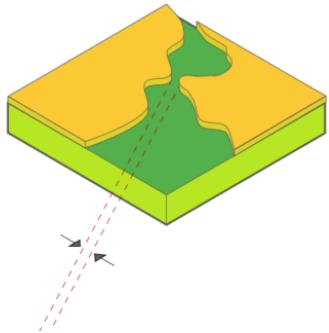
**Attribute Name:** DFF\_CF\_SHPILND\_OVRSIZE\_NEG

## Void Slivers

This check is for detecting the narrow air gap formed due to voids. Constraint specifies the minimum width of the air gap at any location of the shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperFeatureCSet



**DRC Code:** vs

**Attribute Name:** DFF\_CF\_VOID\_SLIVER

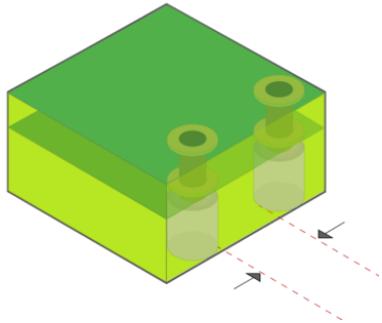
# Copper Spacing

## Backdrilled pin hole to backdrilled pin spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a backdrilled pin.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

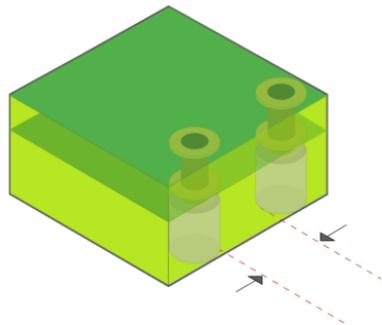
**Attribute Name:** DFF\_CS\_BDLPNHL\_BDLPIN

## Backdrilled pin hole to backdrilled via spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a backdrilled via.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dv

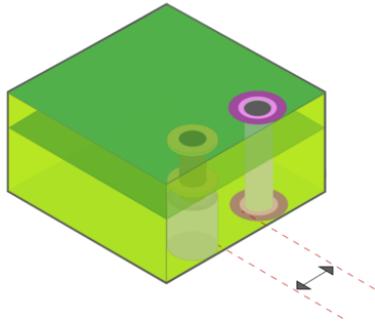
**Attribute Name:** DFF\_CS\_BDLPNHL\_BDLVIA

## Backdrilled pin hole to blind/buried via hole spacing

This rule defines the minimum allowable distance between a pin that is backdrilled to a blind/buried via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dv

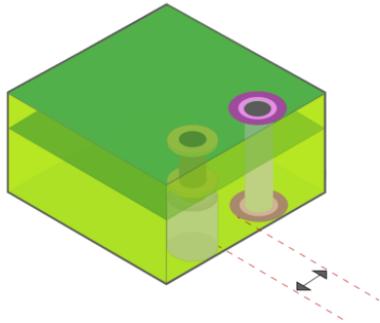
**Attribute Name:** DFF\_CS\_BDLPNHL\_BBVIAHL

## Backdrilled pin hole to blind/buried via spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a blind/buried via.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dv

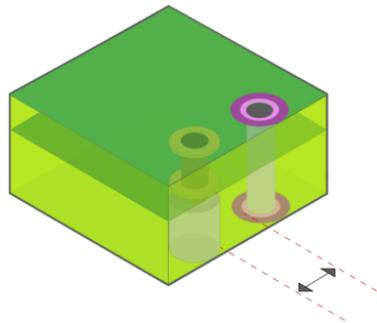
**Attribute Name:** DFF\_CS\_BDLPNHL\_BBVIAPAD

## Backdrilled pin hole to fiducial spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a fiducial pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dp

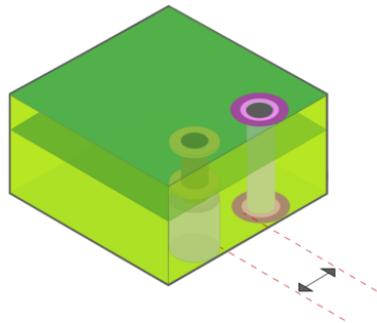
**Attribute Name:** DFF\_CS\_BDLPNHL\_FIDUCIAL

## Backdrilled pin hole to mechanical hole spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

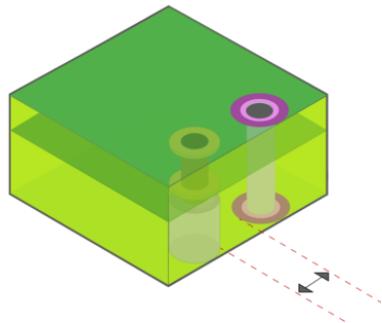
**Attribute Name:** DFF\_CS\_BDLPNHL\_MECHL

## Backdrilled pin hole to mechanical pin spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a mechanical pin.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dp

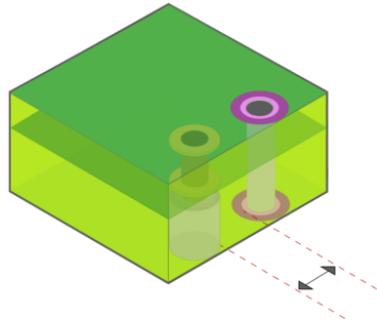
**Attribute Name:** DFF\_CS\_BDLPNHL\_MCHLPAD

## Backdrilled pin hole to micro via hole spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a micro via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dv

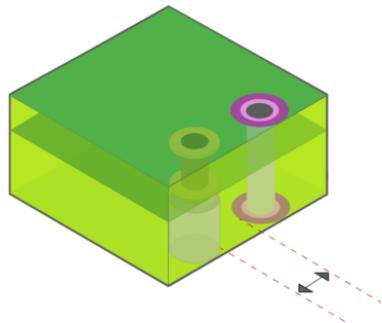
**Attribute Name:** DFF\_CS\_BDLPNHL\_MVIAHL

## Backdrilled pin hole to micro via spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a micro via.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dv

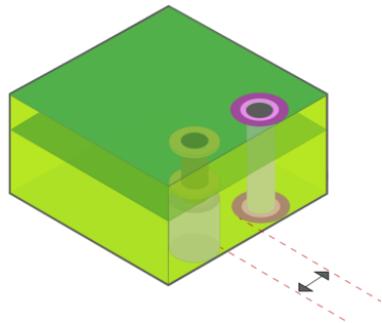
**Attribute Name:** DFF\_CS\_BDLPNHL\_MVIAPAD

## Backdrilled pin hole to mounting hole pad spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a mounting hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dp

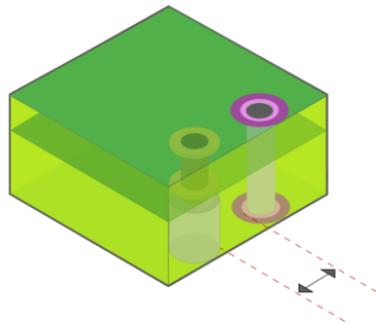
**Attribute Name:** DFF\_CS\_BDLPNHL\_MNTHL\_PAD

## Backdrilled pin hole to mounting hole spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

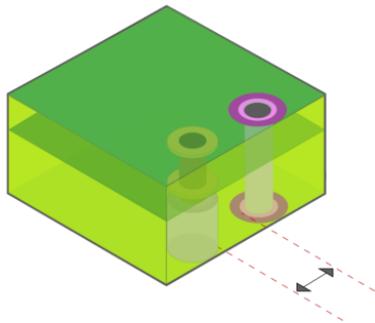
**Attribute Name:** DFF\_CS\_BDLPNHL\_MNTHL

## Backdrilled pin hole to non plated mechanical hole spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a non plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

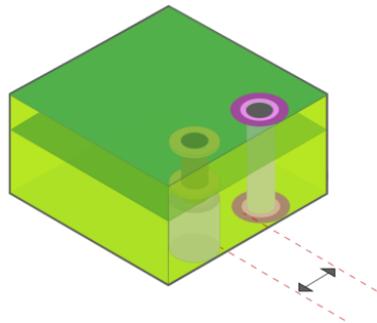
**Attribute Name:** DFF\_CS\_BDLPNHL\_NPTMECHL

## Backdrilled pin hole to non plated mounting hole spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a non plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

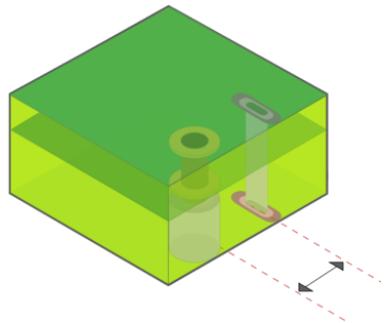
**Attribute Name:** DFF\_CS\_BDLPNHL\_NPTMNTHL

## Backdrilled pin hole to non plated slot hole spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a non plated slot hole spacing.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

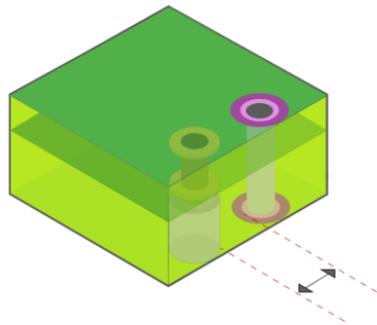
**Attribute Name:** DFF\_CS\_BDLPNHL\_NPTSLTHL

## Backdrilled pin hole to non plated tooling hole spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a non plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

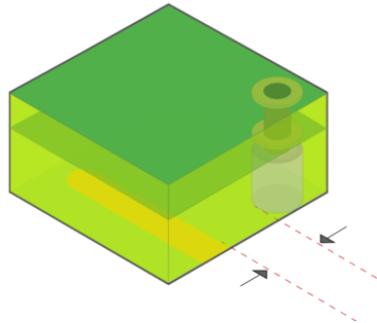
**Attribute Name:** DFF\_CS\_BDLPNHL\_NPTOOHL

## Backdrilled pin hole to non signal line spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a non signal line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

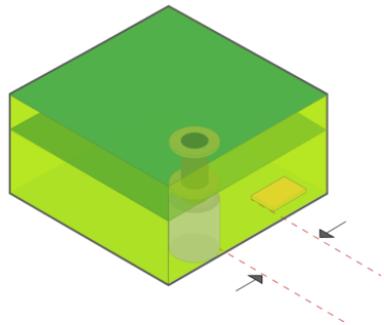
**Attribute Name:** DFF\_CS\_BDLPNHL\_LINE

## Backdrilled pin hole to non signal shape spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a non signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

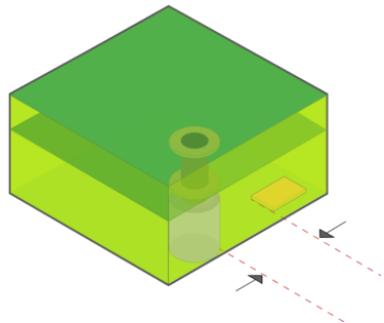
**Attribute Name:** DFF\_CS\_BDLPNHL\_NSS

## Backdrilled pin hole to shape spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a shape on net.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** ds

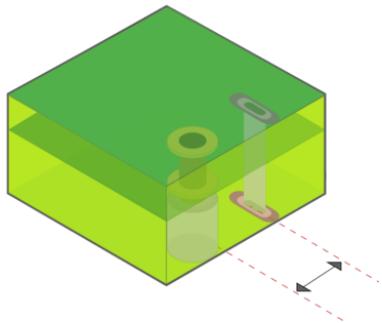
**Attribute Name:** DFF\_CS\_BDLPNHL\_SHP

## Backdrilled pin hole to slot hole spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

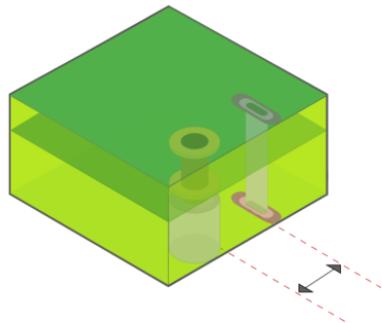
**Attribute Name:** DFF\_CS\_BDLPNHL\_SLTHL

## Backdrilled pin hole to slot pad spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a slot pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dp

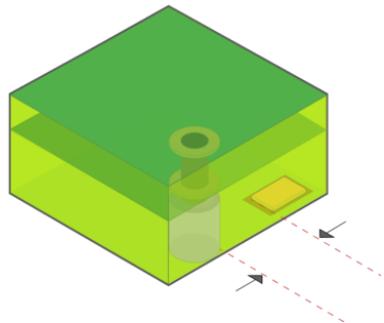
**Attribute Name:** DFF\_CS\_BDLPNHL\_SLPAD

## Backdrilled pin hole to smd pin spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a smd pin.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dp

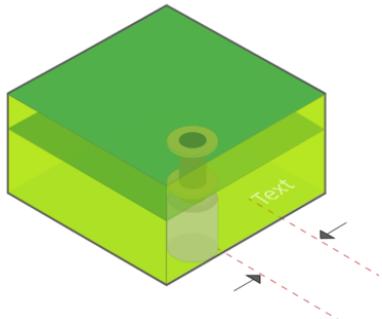
**Attribute Name:** DFF\_CS\_BDLPNHL\_SMDPIN

## Backdrilled pin hole to text spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

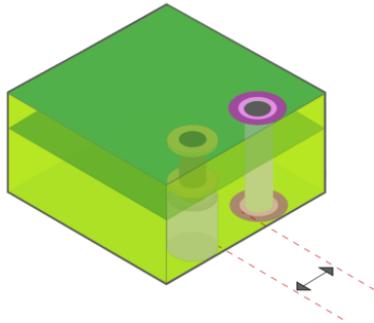
**Attribute Name:** DFF\_CS\_BDLPNHL\_TXT

## Backdrilled pin hole to thru pin hole spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a thru pin hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

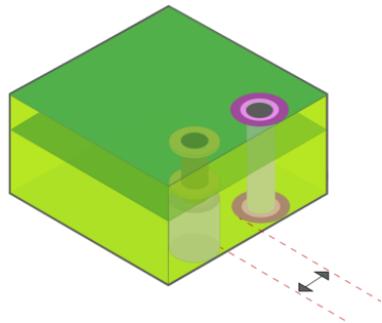
**Attribute Name:** DFF\_CS\_BDLPNHL\_THPINHL

## Backdrilled pin hole to thru pin spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a thru pin.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dp

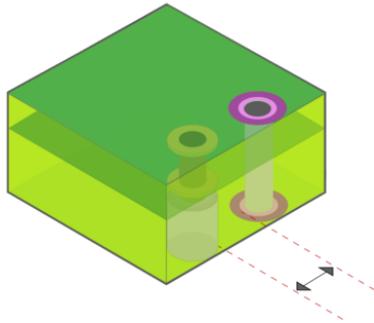
**Attribute Name:** DFF\_CS\_BDLPNHL\_THPIN

## Backdrilled pin hole to thru hole spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a thru via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dv

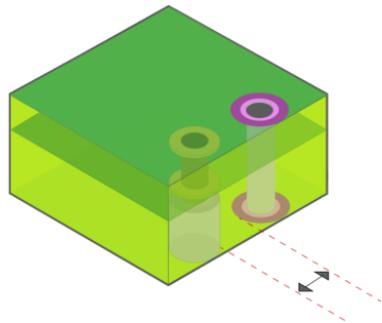
**Attribute Name:** DFF\_CS\_BDLPNHL\_THVIAHL

## Backdrilled pin hole to thru via spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a thru via.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dv

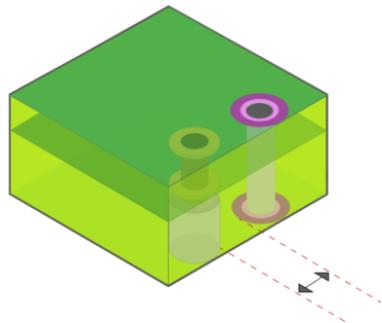
**Attribute Name:** DFF\_CS\_BDLPNHL\_THVIAPAD

## Backdrilled pin hole to tooling hole pad spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a tooling hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dp

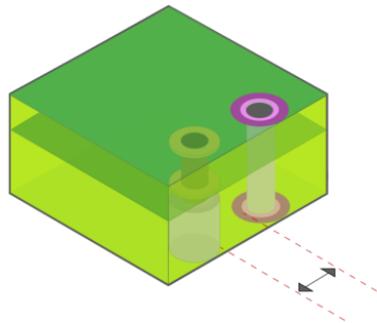
**Attribute Name:** DFF\_CS\_BDLPNHL\_TOOLHLPAD

## Backdrilled pin hole to tooling hole spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

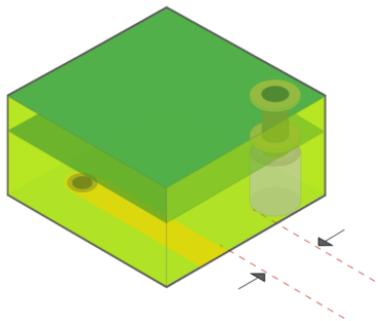
**Attribute Name:** DFF\_CS\_BDLPNHL\_TOOLHL

## Backdrilled pin hole to trace spacing

This rule defines the minimum allowable distance between a pin hole that is backdrilled to a trace.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

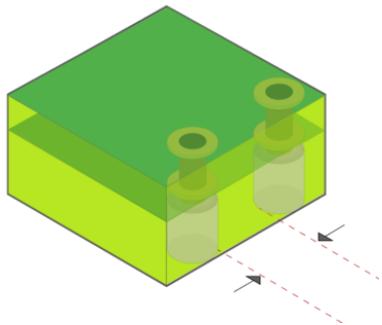
**Attribute Name:** DFF\_CS\_BDLPNHL\_TRC

## Backdrilled via hole to backdrilled via spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a backdrilled via.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** VV

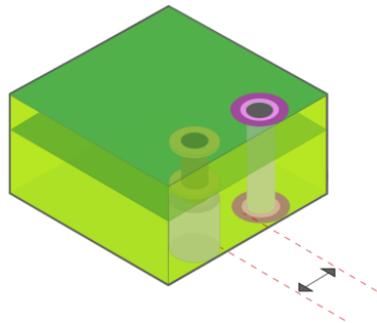
**Attribute Name:** DFF\_CS\_BDLVIAHL\_BDLVIA

## Backdrilled via hole to blind/buried via hole spacing

This rule defines the minimum allowable distance between a via that is backdrilled to a blind/buried via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** VV

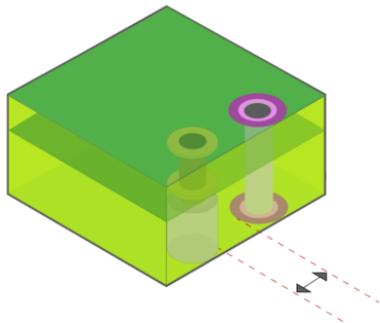
**Attribute Name:** DFF\_CS\_BDLVIAHL\_BBVIAHL

## Backdrilled via hole to blind/buried via spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a blind/buried via.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** VV

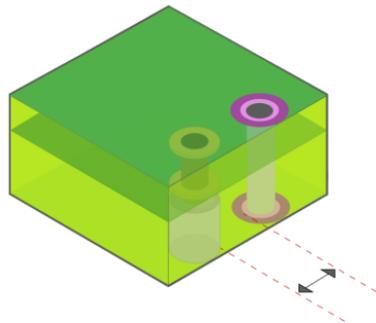
**Attribute Name:** DFF\_CS\_BDLVIAHL\_BBVIAPAD

## Backdrilled via hole to fiducial spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a fiducial pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vp

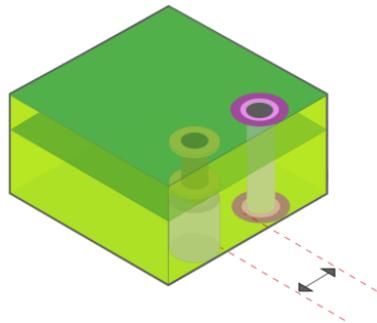
**Attribute Name:** DFF\_CS\_BDLVIAHL\_FIDUCIAL

## Backdrilled via hole to mechanical hole spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

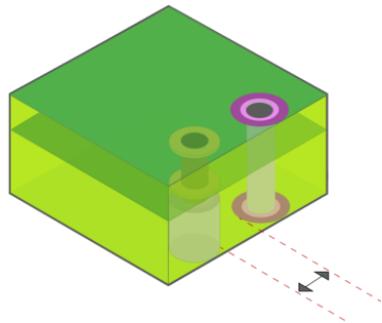
**Attribute Name:** DFF\_CS\_BDLVIAHL\_MECHL

## Backdrilled via hole to mechanical via spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a mechanical via.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vp

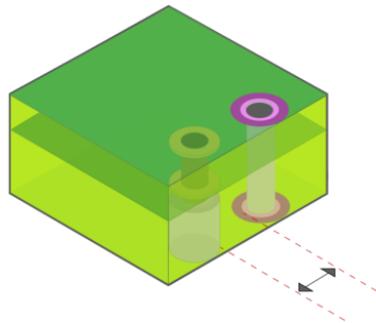
**Attribute Name:** DFF\_CS\_BDLVIAHL\_MCHLPAD

## Backdrilled via hole to micro via hole spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a micro via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** VV

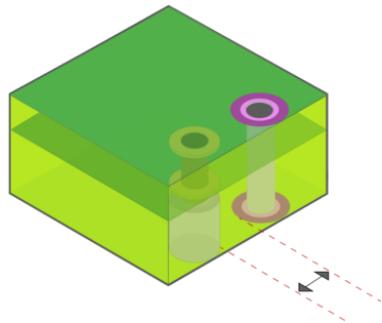
**Attribute Name:** DFF\_CS\_BDLVIAHL\_MVIAHL

## Backdrilled via hole to micro via spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a micro via.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** VV

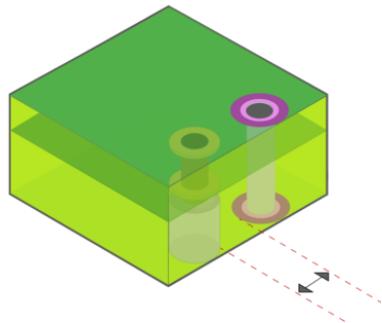
**Attribute Name:** DFF\_CS\_BDLVIAHL\_MVIAPAD

## Backdrilled via hole to mounting hole pad spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a mounting hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vp

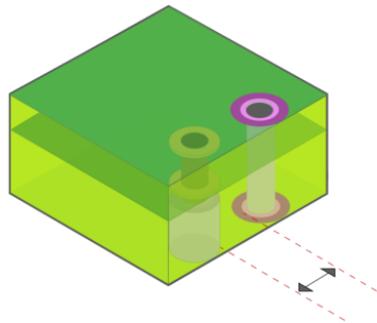
**Attribute Name:** DFF\_CS\_BDLVIAHL\_MNTHL\_PAD

## Backdrilled via hole to mounting hole spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

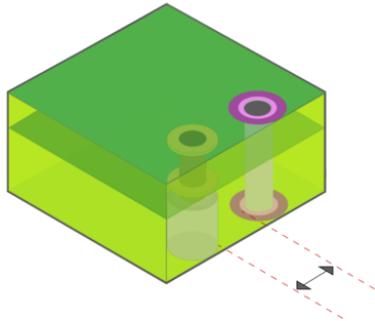
**Attribute Name:** DFF\_CS\_BDLVIAHL\_MNTHL

## Backdrilled via hole to non plated mechanical hole spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a non plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

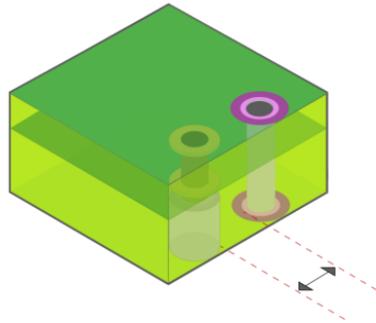
**Attribute Name:** DFF\_CS\_BDLVIAHL\_NPTMECHL

## Backdrilled via hole to non plated mounting hole spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a non plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

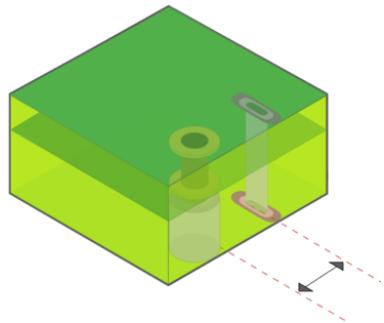
**Attribute Name:** DFF\_CS\_BDLVIAHL\_NPTMNTHL

## Backdrilled via hole to non plated slot hole spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a non plated slot hole spacing.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

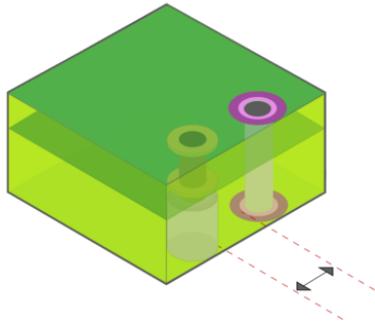
**Attribute Name:** DFF\_CS\_BDLVIAHL\_NPTSLTHL

## Backdrilled via hole to non plated tooling hole spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a non plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

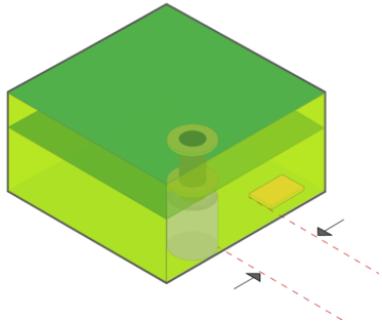
**Attribute Name:** DFF\_CS\_BDLVIAHL\_NPTOOHL

## Backdrilled via hole to non signal shape spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a non signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vg

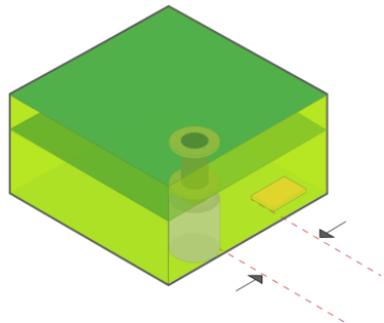
**Attribute Name:** DFF\_CS\_BDLVIAHL\_NSS

## Backdrilled via hole to shape spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a shape on net.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vs

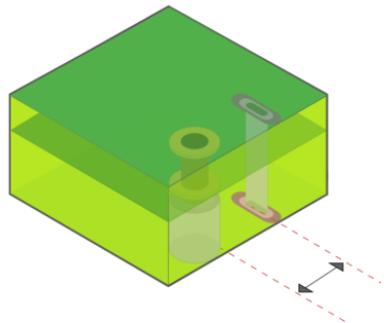
**Attribute Name:** DFF\_CS\_BDLVIAHL\_SHP

## Backdrilled via hole to slot hole spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

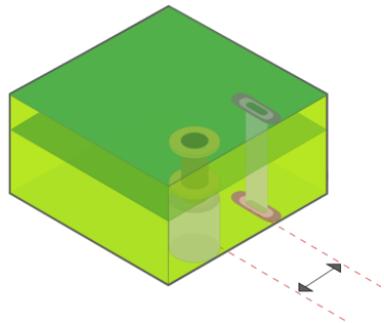
**Attribute Name:** DFF\_CS\_BDLVIAHL\_SLTHL

## Backdrilled via hole to slot pad spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a slot pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vp

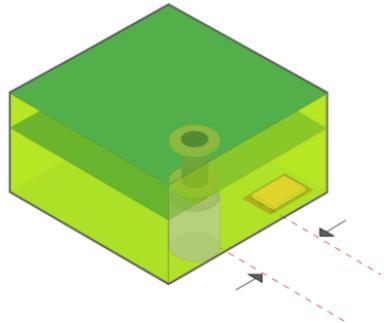
**Attribute Name:** DFF\_CS\_BDLVIAHL\_SLPAD

## Backdrilled via hole to smd via spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a smd via.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vp

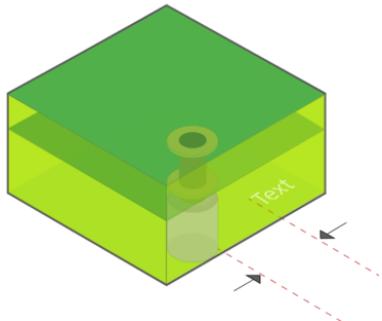
**Attribute Name:** DFF\_CS\_BDLVIAHL\_SMDPIN

## Backdrilled via hole to text spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vg

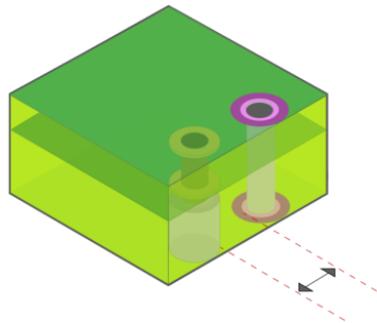
**Attribute Name:** DFF\_CS\_BDLVIAHL\_TXT

## Backdrilled via hole to thru hole spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a thru via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** VV

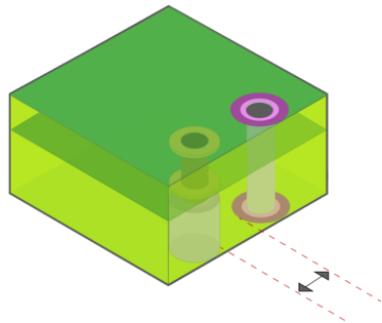
**Attribute Name:** DFF\_CS\_BDLVIAHL\_THVIAHL

## Backdrilled via hole to thru via spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a thru via.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** VV

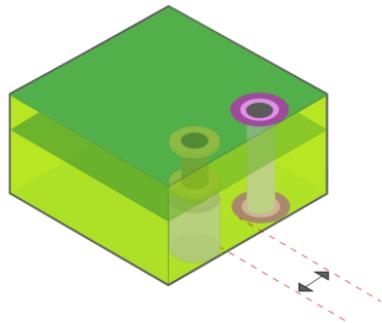
**Attribute Name:** DFF\_CS\_BDLVIAHL\_THVIAPAD

## Backdrilled via hole to tooling hole pad spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a tooling hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vp

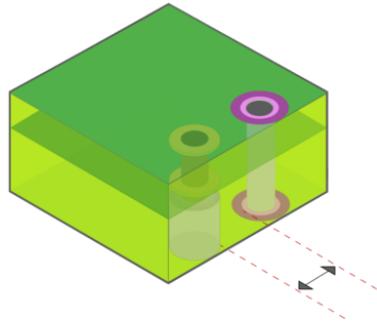
**Attribute Name:** DFF\_CS\_BDLVIAHL\_TOOLHLPAD

## Backdrilled via hole to tooling hole spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

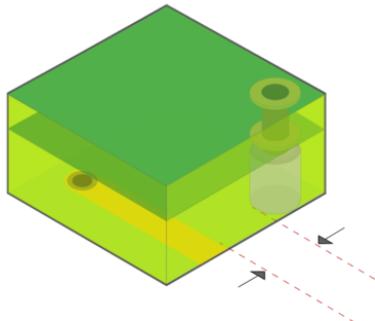
**Attribute Name:** DFF\_CS\_BDLVIAHL\_TOOLHL

## Backdrilled via hole to trace spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a trace.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vg

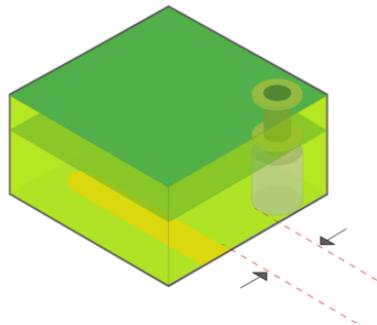
**Attribute Name:** DFF\_CS\_BDLVIAHL\_TRC

## Backdrilled via to non signal line spacing

This rule defines the minimum allowable distance between a via hole that is backdrilled to a non signal line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vg

**Attribute Name:** DFF\_CS\_BDLVIAHL\_LINE

## BB via hole to staggered BB via hole

This rule defines the minimum allowable distance between BB via hole to another staggered BB via hole. Staggered vias are connected through same net such that end connection layer of one via is start connection layer of other via or vice versa.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** vs

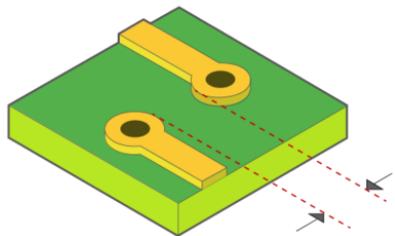
**Attribute Name:** DFF\_CS\_BBVIAHL\_TO\_BBVIAHLSTG

## Blind/Buried Via Hole to Blind/Buried Via Hole

Checks the spacing between copper object blind/buried via hole to blind/buried via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

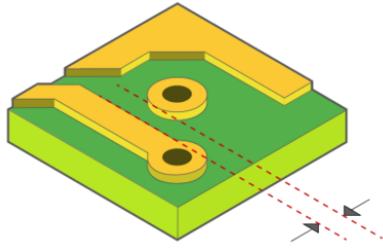
**Attribute Name:** DFF\_CS\_BBVIAHL\_TO\_BBVIAHL

## Blind/Buried Via Hole to Line

Checks the spacing between copper object blind/buried via hole to line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

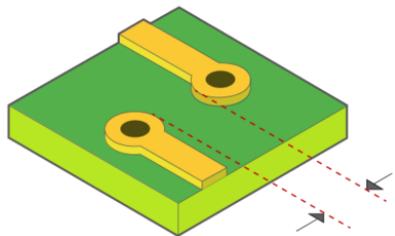
**Attribute Name:** DFF\_CS\_BBVI AHL\_TO\_LINE

## Blind/Buried Via Hole to Micro Via Hole

Checks the spacing between copper object blind/buried via hole and micro via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



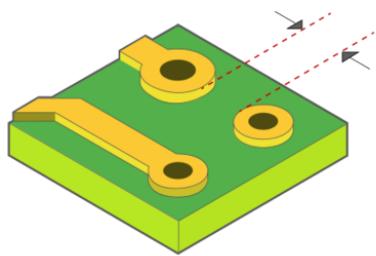
**DRC Code:** dd

**Attribute Name:** DFF\_CS\_BBVIAHL\_TO\_UVIAHL

## Blind/Buried Via Hole to Non-plated Mechanical Hole

Checks the spacing between copper object blind/buried via hole to non-plated mechanical hole.  
**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

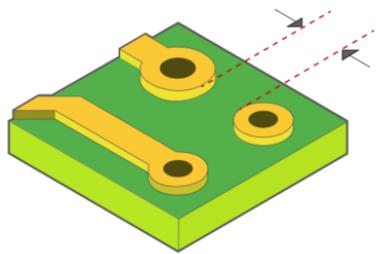
**Attribute Name:** DFF\_CS\_BBVI AHL\_TO\_NPM ECHL

## Blind/Buried Via Hole to Non-plated Mounting Hole

Checks the spacing between copper object blind/buried via hole to non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

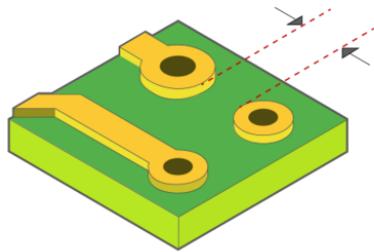
**Attribute Name:** DFF\_CS\_BBVIAHL\_TO\_NPMNTHL

## Blind/Buried Via Hole to Non-plated Slot Hole

Checks the spacing between copper object blind/buried via hole to non-plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

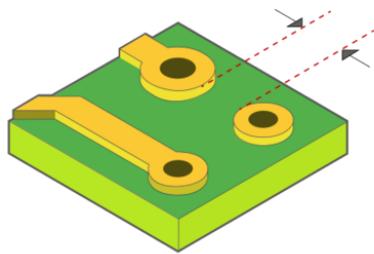
**Attribute Name:** DFF\_CS\_BBVIAHL\_TO\_NPSLTHL

## Blind/Buried Via Hole to Non-plated Tooling Hole

Checks the spacing between copper object blind/buried via hole to non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

**Attribute Name:** DFF\_CS\_BBVIAHL\_TO\_NPTLHL

## Blind/Buried Via Hole to Non-signal Geometry

Checks the spacing between copper object blind/buried via hole to non-signal geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** dg

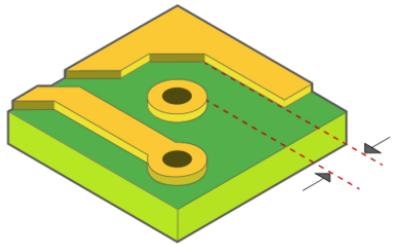
**Attribute Name:** DFF\_CS\_BBVIAHL\_TO\_NSQ

## Blind/Buried Via Hole to Non-signal shape

Checks the spacing between copper object blind/buried via hole to non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

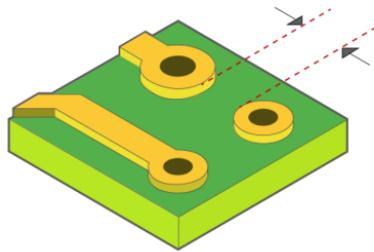
**Attribute Name:** DFF\_CS\_BBVI AHL\_TO\_NSS

## Blind/Buried Via Hole to Plated Mechanical Hole

Checks the spacing between copper object blind/buried via hole to plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

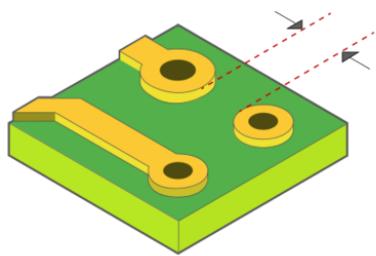
**Attribute Name:** DFF\_CS\_BBVIAHL\_TO\_PMECHHL

## Blind/Buried Via Hole to Plated Mounting Hole

Checks the spacing between copper object blind/buried via hole and plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

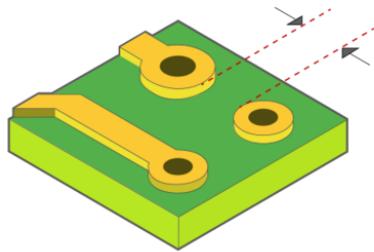
**Attribute Name:** DFF\_CS\_BBVI AHL\_TO\_PMNTHL

## Blind/Buried Via Hole to Plated Slot Hole

Checks the spacing between copper object blind/buried via hole and plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

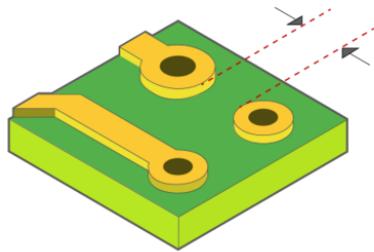
**Attribute Name:** DFF\_CS\_BBVI AHL\_TO\_PSLTHL

## Blind/Buried Via Hole to Plated Tooling Hole

Checks the spacing between copper object blind/buried via hole and plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

**Attribute Name:** DFF\_CS\_BBVIAHL\_TO\_PTOOLHL

## Blind/Buried Via Hole to Text

Checks the spacing between copper object blind/buried via hole and text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** dg

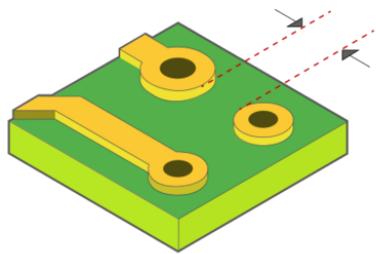
**Attribute Name:** DFF\_CS\_BBVIAHL\_TO\_TEXT

## Blind/Buried Via Pad to Blind/Buried Via Hole

Checks the spacing between copper object blind/buried via and blind/buried via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

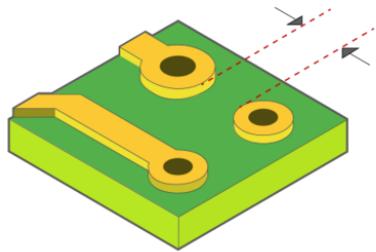
**Attribute Name:** DFF\_CS\_BBVIAPD\_TO\_BBVIAHL

## Blind/Buried Via Pad to Blind/Buried Via Pad

Checks the spacing between copper object blind/buried via and blind/buried via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** VV

**Attribute Name:** DFF\_CS\_BBVIAPD\_TO\_BBVIAPD

## Blind/Buried Via Pad to Fiducial Pad

Checks the spacing between copper object blind/buried via and fiducial pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** vp

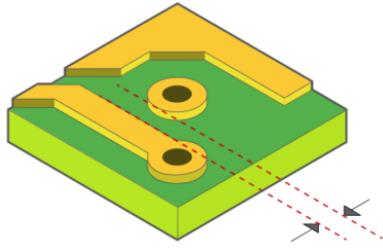
**Attribute Name:** DFF\_CS\_BBVIAPD\_TO\_FDCLPD

## Blind/Buried Via Pad to Line

Checks the spacing between copper object blind/buried via and line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vg

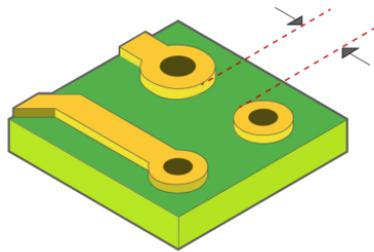
**Attribute Name:** DFF\_CS\_BBVIAPD\_TO\_LINE

## Blind/Buried Via Pad to Mechanical Hole Pad

Checks the spacing between copper object blind/buried via and mechanical hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vp

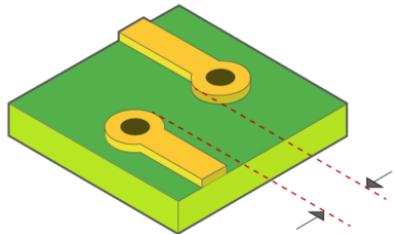
**Attribute Name:** DFF\_CS\_BBVIAPD\_TO\_MEHLPD

## Blind/Buried Via Pad to Micro Via Hole

Checks the spacing between copper object blind/buried via and micro via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

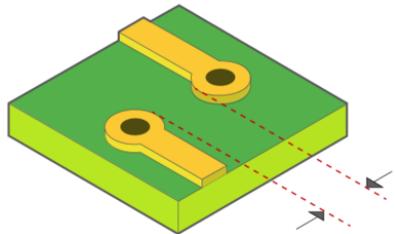
**Attribute Name:** DFF\_CS\_BBVIAPD\_TO\_UVIAHL

## Blind/Buried Via Pad to Micro Via Pad

Checks the spacing between copper object blind/buried via and micro via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** VV

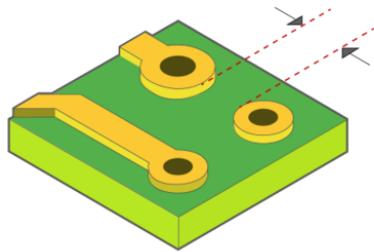
**Attribute Name:** DFF\_CS\_BBVIAPD\_TO\_UVIAPD

## Blind/Buried Via Pad to Mounting Hole Pad

Checks the spacing between copper object blind/buried via and mounting hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vp

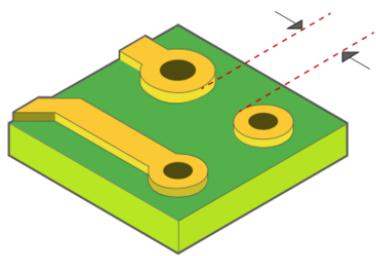
**Attribute Name:** DFF\_CS\_BBVIAPD\_TO\_MNTHLPD

## Blind/Buried Via Pad to Non-plated Mechanical Hole

Checks the spacing between copper object blind/buried via and non-plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

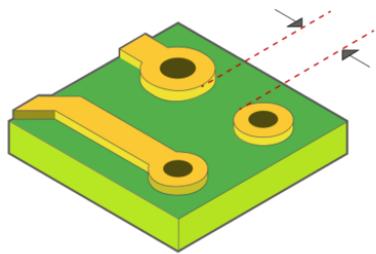
**Attribute Name:** DFF\_CS\_BBVIAPD\_TO\_NPMECHL

## Blind/Buried Via Pad to Non-plated Mounting Hole

Checks the spacing between copper object blind/buried via and non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

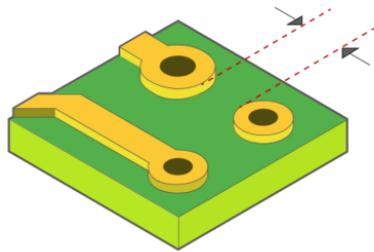
**Attribute Name:** DFF\_CS\_BBVIAPD\_TO\_NPMNTHL

## Blind/Buried Via Pad to Non-plated Slot Hole

Checks the spacing between copper object blind/buried via and non-plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

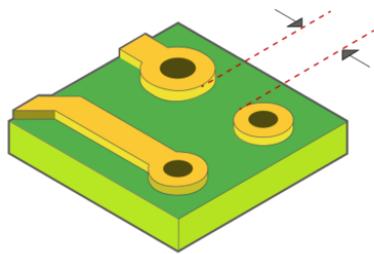
**Attribute Name:** DFF\_CS\_BBVIAPD\_TO\_NPSLTHL

## Blind/Buried Via Pad to Non-plated Tooling Hole

Checks the spacing between copper object blind/buried via and non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

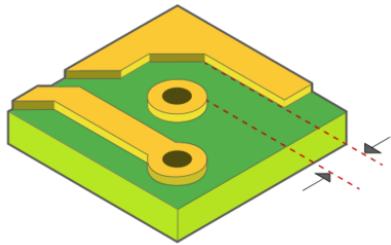
**Attribute Name:** DFF\_CS\_BBVIAPD\_TO\_NPTLHL

## Blind/Buried Via Pad to Non-signal shape

Checks the spacing between copper object blind/buried via and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vg

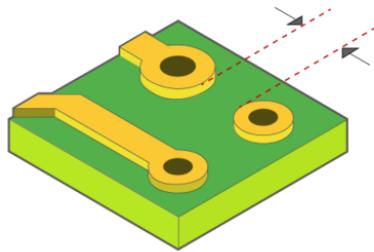
**Attribute Name:** DFF\_CS\_BBVIAPD\_TO\_NSS

## Blind/Buried Via Pad to Plated Mechanical Hole

Check the spacing between copper object blind/buried via and plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

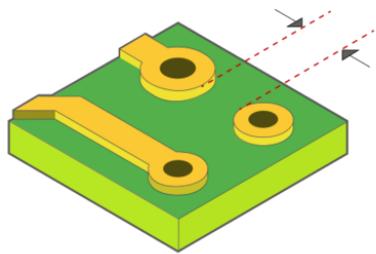
**Attribute Name:** DFF\_CS\_BBVIAPD\_TO\_PMECHHL

## Blind/Buried Via Pad to Plated Mounting Hole

Checks the spacing between copper object blind/buried via and plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

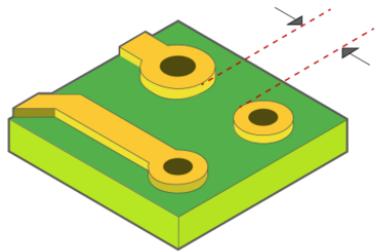
**Attribute Name:** DFF\_CS\_BBVIAPD\_TO\_PMNTHL

## Blind/Buried Via Pad to Plated Slot Hole

Checks the spacing between copper object blind/buried via and plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

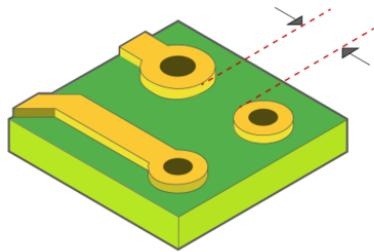
**Attribute Name:** DFF\_CS\_BBVIAPD\_TO\_PSLTHL

## Blind/Buried Via Pad to Plated Tooling Hole

Checks the spacing between copper object blind/buried via and plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

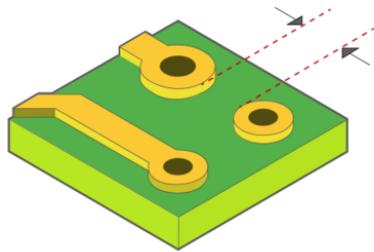
**Attribute Name:** DFF\_CS\_BBVIAPD\_TO\_PTOOLHL

## Blind/Buried Via Pad to Slot Pad

Checks the spacing between copper object blind/buried via and slot pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vp

**Attribute Name:** DFF\_CS\_BBVIAPD\_TO\_SLTPD

## Blind/Buried Via Pad to Text

Checks the spacing between copper object blind/buried via and text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** vg

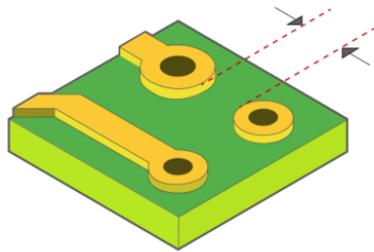
**Attribute Name:** DFF\_CS\_BBVIAPD\_TO\_TEXT

## Blind/Buried Via Pad to Throughpin Hole

Checks the spacing between copper object blind/buried via and throughpin hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

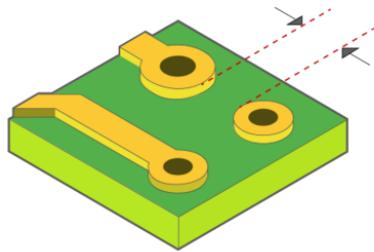
**Attribute Name:** DFF\_CS\_BBVIAPD\_TO\_THPNHL

## Blind/Buried Via Pad to Tooling Hole Pad

Checks the spacing between copper object blind/buried via and tooling hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vp

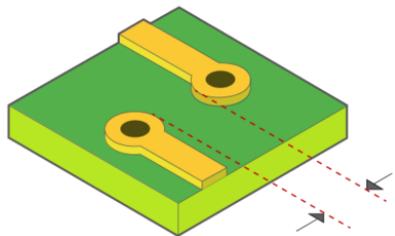
**Attribute Name:** DFF\_CS\_BBVIAPD\_TO\_TLHLPD

## Blind/Buried Via Pad to Via Hole

Checks the spacing between copper object blind/buried via and via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

**Attribute Name:** DFF\_CS\_BBVIAPD\_TO\_VIAHL

## **Fiducial Pad to Blind/Buried Via Hole**

Checks the spacing between copper object fiducial pad and blind/buried via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pd

**Attribute Name:** DFF\_CS\_FDCLPD\_TO\_BBVIAHL

## Fiducial Pad to Fiducial Pad

Checks the spacing between copper object fiducial pad and fiducial pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pp

**Attribute Name:** DFF\_CS\_FDCLPD\_TO\_FDCLPD

## **Fiducial Pad to line**

Checks the spacing between copper object fiducial pad and line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pg

**Attribute Name:** DFF\_CS\_FDCLPD\_TO\_LINE

## **Fiducial Pad to Micro Via Hole**

Checks the spacing between copper object fiducial pad and micro via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pd

**Attribute Name:** DFF\_CS\_FDCLPD\_TO\_UVIAHL

## **Fiducial Pad to Non-plated Mechanical Hole**

Checks the spacing between copper object fiducial pad and non-plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pd

**Attribute Name:** DFF\_CS\_FDCLPD\_TO\_NPMECHHL

## Fiducial Pad to Non-plated Mounting Hole

Checks the spacing between copper object fiducial pad and non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pd

**Attribute Name:** DFF\_CS\_FDCLPD\_TO\_NPMNTHL

## Fiducial Pad to Non-plated Slot Hole

Checks the spacing between copper object fiducial pad and non-plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pd

**Attribute Name:** DFF\_CS\_FDCLPD\_TO\_NPSLTHL

## Fiducial Pad to Non-plated Tooling Hole

Checks the spacing between copper object fiducial pad and non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pd

**Attribute Name:** DFF\_CS\_FDCLPD\_TO\_NPTOOLHL

## **Fiducial Pad to Non -signal Geometry**

Checks the spacing between copper object fiducial pad and non-signal geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pg

**Attribute Name:** DFF\_CS\_FDCLPD\_TO\_NSG

## **Fiducial Pad to non signal shape**

Checks the spacing between copper object fiducial pad and non signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pg

**Attribute Name:** DFF\_CS\_FDCLPD\_TO\_NSS

## Fiducial Pad to Plated Mechanical Hole

Checks the spacing between copper object fiducial pad and plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pd

**Attribute Name:** DFF\_CS\_FDCLPD\_TO\_PMECHHL

## Fiducial Pad to Plated Mounting Hole

Checks the spacing between copper object fiducial pad and plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pd

**Attribute Name:** DFF\_CS\_FDCLPD\_TO\_PMNTHL

## Fiducial Pad to Plated Slot Hole

Checks the spacing between copper object fiducial pad and plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pd

**Attribute Name:** DFF\_CS\_FDCLPD\_TO\_PSLTHL

## Fiducial Pad to Plated Tooling Hole

Checks the spacing between copper object fiducial pad and plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pd

**Attribute Name:** DFF\_CS\_FDCLPD\_TO\_PTOOLHL

## Fiducial Pad to text

Checks the spacing between copper object fiducial pad and text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pg

**Attribute Name:** DFF\_CS\_FDCLPD\_TO\_TEXT

## **Fiducial Pad to Throughpin Hole**

Checks the spacing between copper object fiducial pad and throughpin hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pd

**Attribute Name:** DFF\_CS\_FDCLPD\_TO\_THPNHL

## Fiducial Pad to Via Hole

Checks the spacing between copper object fiducial pad and via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pd

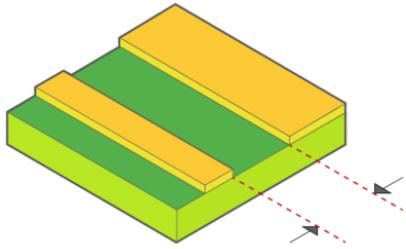
**Attribute Name:** DFF\_CS\_FDCLPD\_TO\_VIAHL

## Line to Non-signal Shape

Checks the spacing between copper object line and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** gg

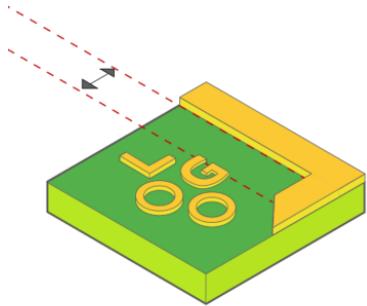
**Attribute Name:** DFF\_CS\_LINE\_TO\_NSS

## Line to Text

Checks the minimum required spacing between a non-electrical line segment and a text in the conducting layer.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** gg

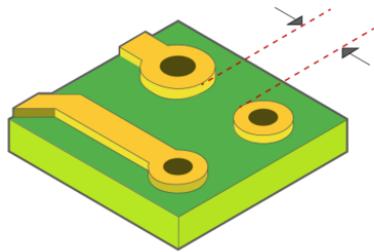
**Attribute Name:** DFF\_CS\_LINE\_TO\_TEXT

## Mechanical Hole Pad to Blind/Buried Via Hole

Checks the spacing between copper object mechanical hole pad and blind/buried via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

**Attribute Name:** DFF\_CS\_MECHLPD\_TO\_BBVIAHL

## Mechanical Hole Pad to Fiducial Pad

Checks the spacing between copper object mechanical hole pad and fiducial pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pp

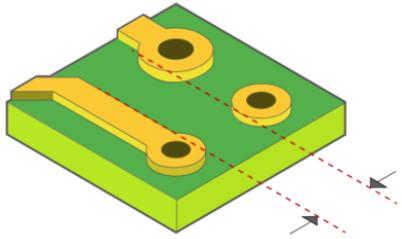
**Attribute Name:** DFF\_CS\_MECHHLPD\_TO\_FDCLPD

## Mechanical Hole Pad to Line

Checks the spacing between copper object mechanical hole pad and line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pg

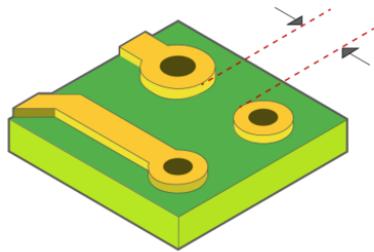
**Attribute Name:** DFF\_CS\_MECHHLPD\_TO\_LINE

## Mechanical Hole Pad to Mechanical Hole Pad

Checks the spacing between copper object mechanical hole pad and mechanical hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pp

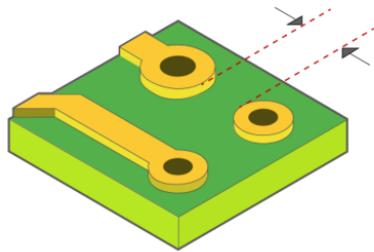
**Attribute Name:** DFF\_CS\_MECHLPD\_TO\_MECHLPD

## Mechanical Hole Pad to Micro Via Hole

Checks the spacing between copper object mechanical hole pad and micro via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

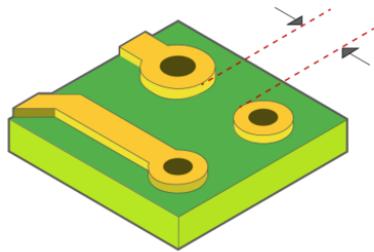
**Attribute Name:** DFF\_CS\_MECHHLPD\_TO\_UVIAHL

## Mechanical Hole Pad to Mounting Hole Pad

Checks the spacing between copper object mechanical hole pad and mounting hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pp

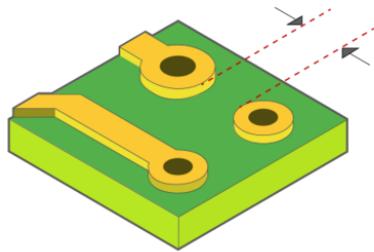
**Attribute Name:** DFF\_CS\_MECHLPD\_TO\_MNTHLPD

## Mechanical Hole Pad to Non-plated Mechanical Hole

Checks the spacing between copper object mechanical hole pad and non-plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

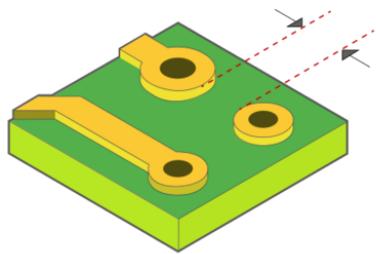
**Attribute Name:** DFF\_CS\_MECHLPD\_TO\_NPMECHL

## Mechanical Hole Pad to Non-plated mounting Hole

Checks the spacing between copper object mechanical hole pad and non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

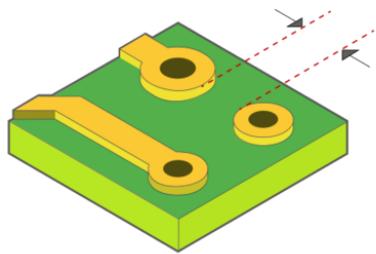
**Attribute Name:** DFF\_CS\_MECHLPD\_TO\_NPMNTHL

## Mechanical Hole Pad to Non-plated Slot Hole

Checks the spacing between copper object mechanical hole pad and non-plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

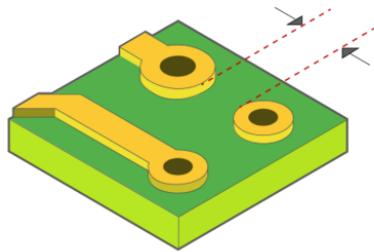
**Attribute Name:** DFF\_CS\_MECHLPD\_TO\_NPSLTHL

## Mechanical Hole Pad to Non-plated Tooling Hole

Checks the spacing between copper object mechanical hole pad and non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

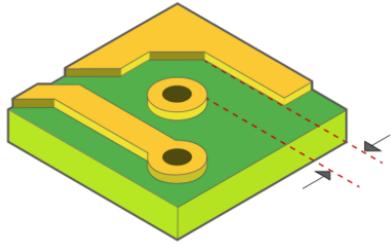
**Attribute Name:** DFF\_CS\_MECHLPD\_TO\_NPTLHL

## Mechanical Hole Pad to Non signal shape

Checks the spacing between copper object mechanical hole pad and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pg

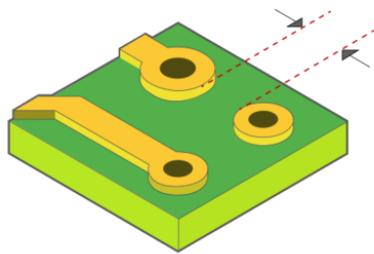
**Attribute Name:** DFF\_CS\_MECHHLPD\_TO\_NSS

## Mechanical Hole Pad to Plated Mechanical Hole

Checks the spacing between copper object mechanical hole pad and plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

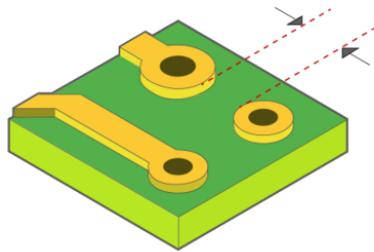
**Attribute Name:** DFF\_CS\_MECHLPD\_TO\_PMECHL

## Mechanical Hole Pad to Plated mounting Hole

Checks the spacing between copper object mechanical hole pad and plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

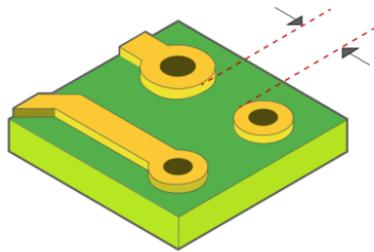
**Attribute Name:** DFF\_CS\_MECHHLPD\_TO\_PMNTHL

## Mechanical Hole Pad to Plated Slot Hole

Checks the spacing between copper object mechanical hole pad and plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

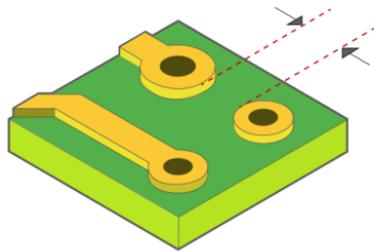
**Attribute Name:** DFF\_CS\_MECHHLPD\_TO\_PSLTHL

## Mechanical Hole Pad to Plated Tooling Hole

Checks the spacing between copper object mechanical hole pad and plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

**Attribute Name:** DFF\_CS\_MECHLPD\_TO\_PTLHL

## Mechanical Hole Pad to Text

Checks the spacing between copper object mechanical hole pad and text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pg

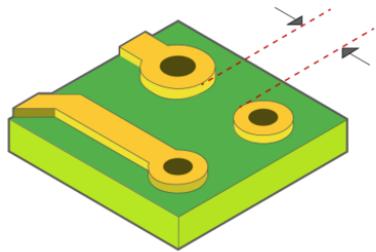
**Attribute Name:** DFF\_CS\_MECHHLPD\_TO\_TEXT

## Mechanical Hole Pad to Through Pin Hole

Checks the spacing between copper object mechanical hole pad and through pin hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

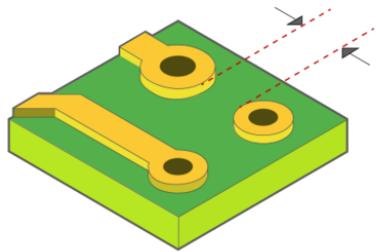
**Attribute Name:** DFF\_CS\_MECHHLPD\_TO\_THPNHL

## Mechanical Hole Pad to Tooling Hole Pad

Checks the spacing between copper object mechanical hole pad and tooling hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pp

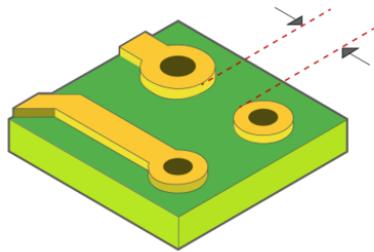
**Attribute Name:** DFF\_CS\_MECHLPD\_TO\_TLHLPD

## Mechanical Hole Pad to Via Hole

Checks the spacing between copper object Mechanical hole pad and via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

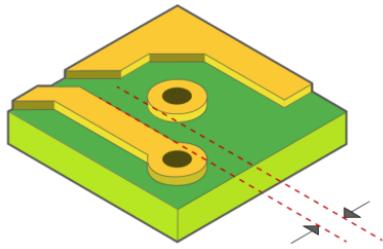
**Attribute Name:** DFF\_CS\_MECHHLPD\_TO\_VIAHL

## Micro Via Hole to Line

Checks the spacing between copper object micro via hole and line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

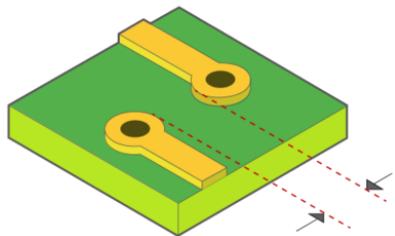
**Attribute Name:** DFF\_CS\_UVIAHL\_TO\_LINE

## Micro Via Hole to Micro Via Hole

Checks the spacing between copper object micro via hole and micro via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

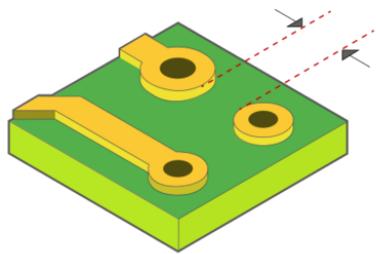
**Attribute Name:** DFF\_CS\_UVIAHL\_TO\_UVIAHL

## Micro Via Hole to Non-plated Mechanical Hole

Checks the spacing between copper object micro via hole and non-plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

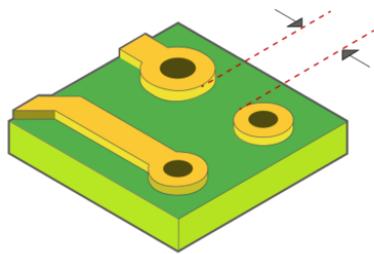
**Attribute Name:** DFF\_CS\_UVIAHL\_TO\_NPMECHHL

## Micro Via Hole to Non-plated Mounting Hole

Checks the spacing between copper object micro via hole and non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

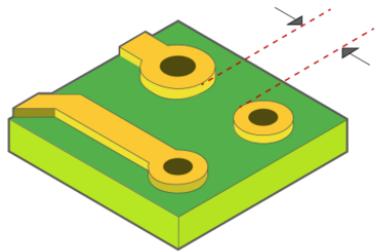
**Attribute Name:** DFF\_CS\_UVIAHL\_TO\_NPMNTHL

## Micro Via Hole to Non-plated Slot Hole

Checks the spacing between copper object micro via hole and non-plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

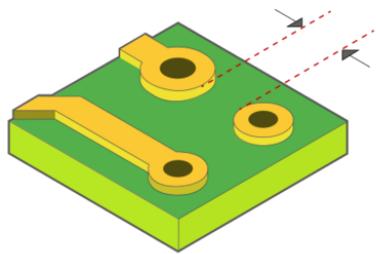
**Attribute Name:** DFF\_CS\_UVIAHL\_TO\_NPSLTHL

## Micro Via Hole to Non-plated Tooling Hole

Checks the spacing between copper object micro via hole and non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

**Attribute Name:** DFF\_CS\_UVIAHL\_TO\_NPTOOLHL

## **Micro Via Hole to Non-signal Geometry**

Checks the spacing between copper object micro via hole and non-signal geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** dg

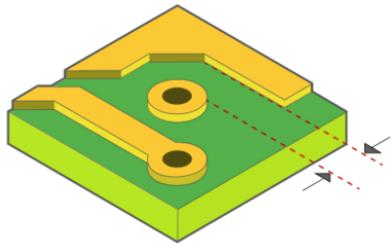
**Attribute Name:** DFF\_CS\_UVIAHL\_TO\_NSG

## Micro Via Hole to Non-signal shape

Checks the spacing between copper object micro via hole and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

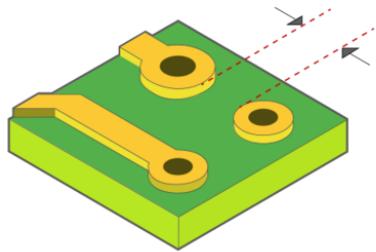
**Attribute Name:** DFF\_CS\_UVIAHL\_TO\_NSS

## Micro Via Hole to Plated Mechanical Hole

Checks the spacing between copper object micro via hole and plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

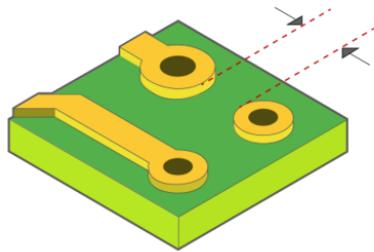
**Attribute Name:** DFF\_CS\_UVIAHL\_TO\_PMECHHL

## Micro Via Hole to Plated Mounting Hole

Checks the spacing between copper object micro via hole and plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

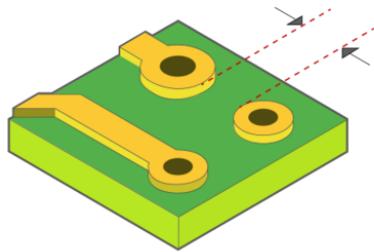
**Attribute Name:** DFF\_CS\_UVIAHL\_TO\_PMNTHL

## Micro Via Hole to Plated Slot Hole

Checks the spacing between copper object micro via hole and plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

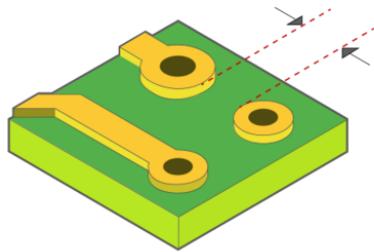
**Attribute Name:** DFF\_CS\_UVIAHL\_TO\_PSLTHL

## Micro Via Hole to Plated Tooling Hole

Checks the spacing between copper object micro via hole and plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

**Attribute Name:** DFF\_CS\_UVIAHL\_TO\_PTOOLHL

## Micro via hole to staggered Micro via hole

This rule defines the minimum allowable distance between micro via hole to another staggered micro via hole. Staggered vias are connected through same net such that end connection layer of one via is start connection layer of other via or vice versa.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** vs

**Attribute Name:** DFF\_CS\_UVIAHL\_TO\_UVIAHLSTG

## Micro Via Hole to Text

Checks the spacing between copper object micro via hole and text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** dg

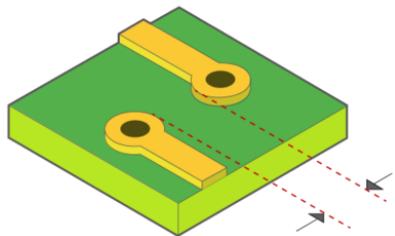
**Attribute Name:** DFF\_CS\_UVIAHL\_TO\_TEXT

## Micro Via Pad to Blind/Buried Via Hole

Checks the spacing between copper object micro via pad and blind/buried via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

**Attribute Name:** DFF\_CS\_UVIAPD\_TO\_BBVIAHL

## Micro Via Pad to Fiducial Pad

Checks the spacing between copper object micro via pad and fiducial pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** vp

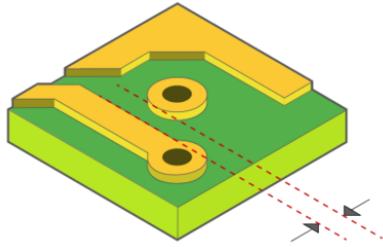
**Attribute Name:** DFF\_CS\_UVIAPD\_TO\_FDCLPD

## Micro Via Pad to Line

Checks the spacing between copper object micro via pad and line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vg

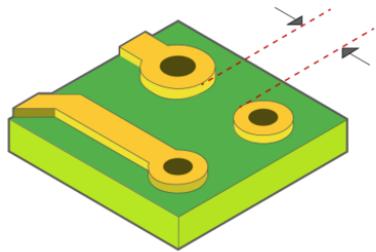
**Attribute Name:** DFF\_CS\_UVIAPD\_TO\_LINE

## Micro Via Pad to Mechanical Hole Pad

Checks the spacing between copper object micro via pad and mechanical hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vp

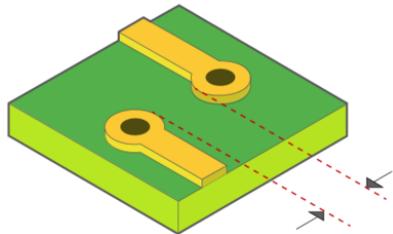
**Attribute Name:** DFF\_CS\_UVIAPD\_TO\_MECHHLPD

## Micro Via Pad to Micro Via Hole

Checks the spacing between copper object micro via pad and micro via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

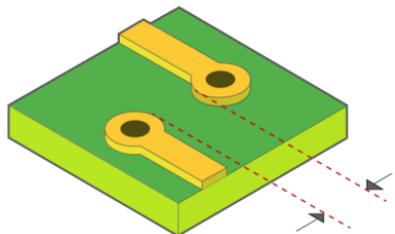
**Attribute Name:** DFF\_CS\_UVIAPD\_TO\_UVIAHL

## Micro Via Pad to Micro Via Pad

Checks the spacing between copper object micro via pad and micro via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** VV

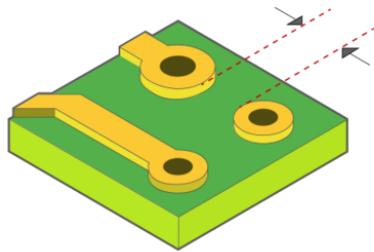
**Attribute Name:** DFF\_CS\_UVIAPD\_TO\_UVIAPD

## Micro Via Pad to Mounting Hole Pad

Checks the spacing between copper object micro via pad and mounting hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vp

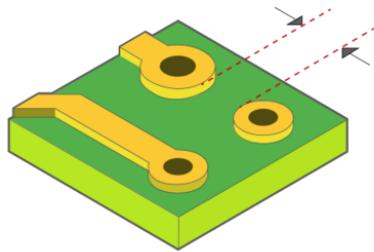
**Attribute Name:** DFF\_CS\_UVIAPD\_TO\_MNTHLPD

## Micro Via Pad to Non-plated Mechanical Hole

Checks the spacing between copper object micro via pad and non-plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

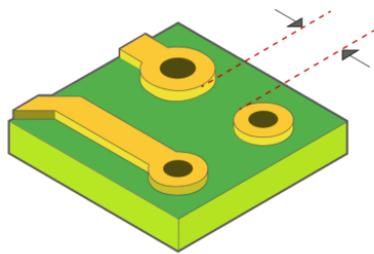
**Attribute Name:** DFF\_CS\_UVIAPD\_TO\_NPMECHHL

## Micro Via Pad to Non-plated Mounting Hole

Checks the spacing between copper object micro via pad and non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

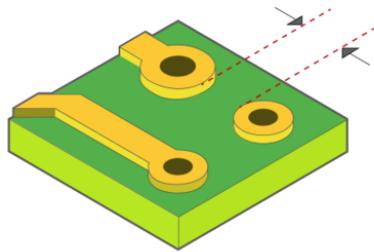
**Attribute Name:** DFF\_CS\_UVIAPD\_TO\_NPMNTHL

## Micro Via Pad to Non-plated Slot Hole

Checks the spacing between copper object micro via pad and non-plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

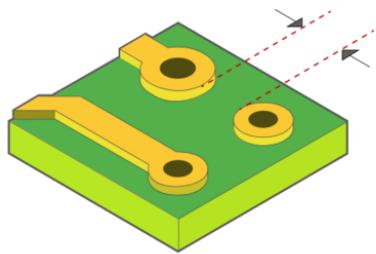
**Attribute Name:** DFF\_CS\_UVIAPD\_TO\_NPSLTHL

## Micro Via Pad to Non-plated Tooling Hole

Checks the spacing between copper object micro via pad and non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

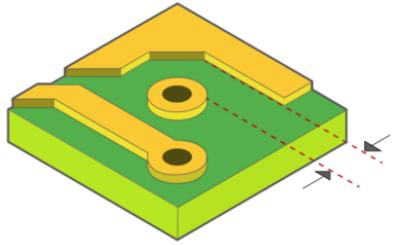
**Attribute Name:** DFF\_CS\_UVIAPD\_TO\_NPTOOLHL

## Micro Via Pad to Non-signal shape

Checks the spacing between copper object micro via pad and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vg

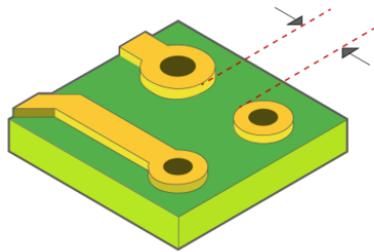
**Attribute Name:** DFF\_CS\_UVIAPD\_TO\_NSS

## Micro Via Pad to Plated Mechanical Hole

Checks the spacing between copper object micro via pad and plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

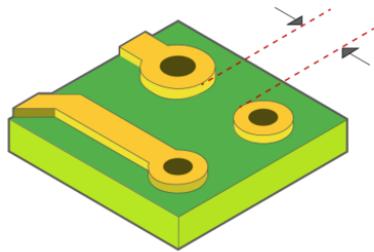
**Attribute Name:** DFF\_CS\_UVIAPD\_TO\_PMECHHL

## Micro Via Pad to Plated Mounting Hole

Checks the spacing between copper object micro via pad and plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

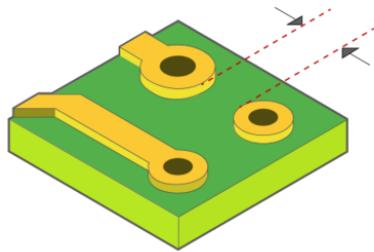
**Attribute Name:** DFF\_CS\_UVIAPD\_TO\_PMNTHL

## Micro Via Pad to Plated Slot Hole

Checks the spacing between copper object micro via pad and plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

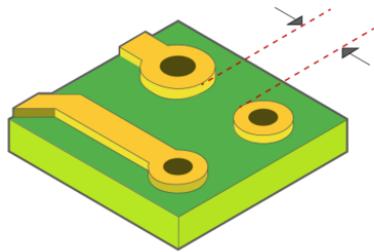
**Attribute Name:** DFF\_CS\_UVIAPD\_TO\_PSLTHL

## Micro Via Pad to Plated Tooling Hole

Checks the spacing between copper object micro via pad and plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

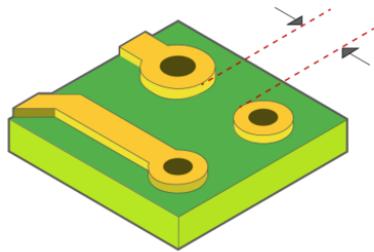
**Attribute Name:** DFF\_CS\_UVIAPD\_TO\_PTOOLHL

## Micro Via Pad to Slot Pad

Checks the spacing between copper object micro via pad and slot pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vp

**Attribute Name:** DFF\_CS\_UVIAPD\_TO\_SLTPD

## **Micro Via Pad to Text**

Checks the spacing between copper object micro via pad and text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** vg

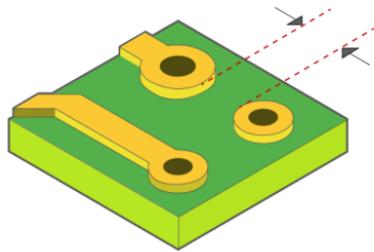
**Attribute Name:** DFF\_CS\_UVIAPD\_TO\_TEXT

## Micro Via Pad to Through Pin Hole

Checks the spacing between copper object micro via pad and through pin hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

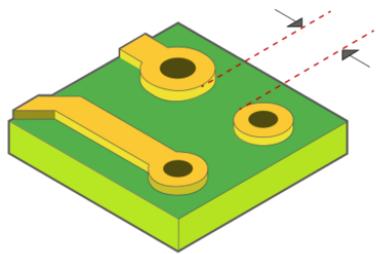
**Attribute Name:** DFF\_CS\_UVIAPD\_TO\_THPNHL

## Micro Via Pad to Tooling Hole Pad

Checks the spacing between copper object micro via pad and tooling hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vp

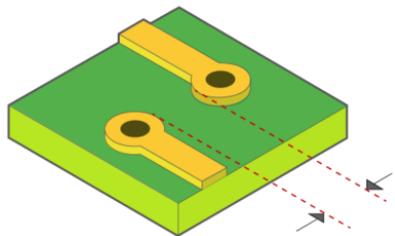
**Attribute Name:** DFF\_CS\_UVIAPD\_TO\_TOOLHLPD

## Micro Via Pad to Via Hole

Checks the spacing between copper object micro via pad and via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

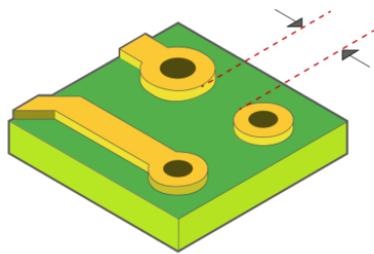
**Attribute Name:** DFF\_CS\_UVIAPD\_TO\_VIAHL

## Mounting Hole Pad to Blind/Buried Via Hole

Checks the spacing between copper object mounting hole pad and blind/buried via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

**Attribute Name:** DFF\_CS\_MNTHLPD\_TO\_BBVIAHL

## Mounting Hole Pad to Fiducial Pad

Checks the spacing between copper object mounting hole pad and fiducial pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pp

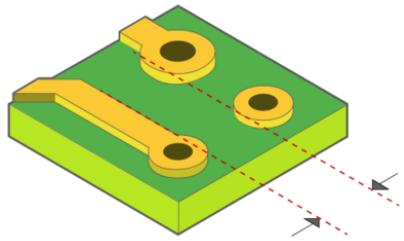
**Attribute Name:** DFF\_CS\_MNTHLPD\_TO\_FDCLPD

## Mounting Hole Pad to Line

Checks the spacing between copper object mounting hole pad and line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pg

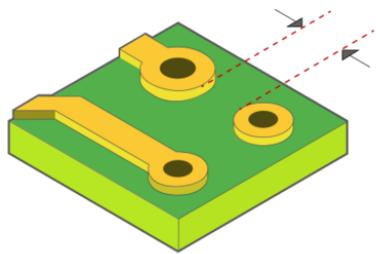
**Attribute Name:** DFF\_CS\_MNTHLPD\_TO\_LINE

## Mounting Hole Pad to Micro Via Hole

Checks the spacing between copper object mounting hole pad and micro via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

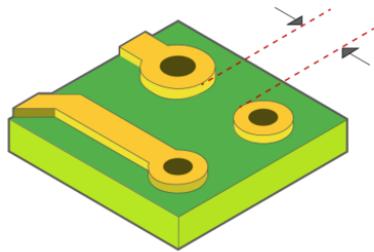
**Attribute Name:** DFF\_CS\_MNTHLPD\_TO\_UVIAHL

## Mounting Hole Pad to Mounting Hole Pad

Checks the spacing between copper object mounting hole pad and mounting hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



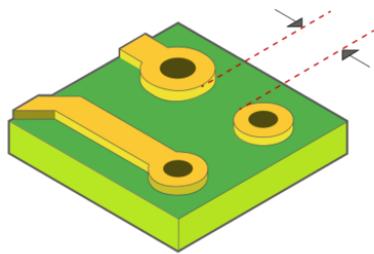
**DRC Code:** pp

**Attribute Name:** DFF\_CS\_MNTHLPD\_TO\_MNTHLPD

## Mounting Hole Pad to Non-plated Mechanical Hole

Checks the spacing between copper object mounting hole pad and non-plated mechanical hole.  
**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

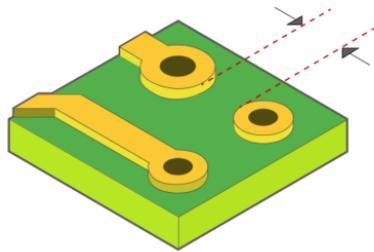
**Attribute Name:** DFF\_CS\_MNTHLPD\_TO\_NPMECHL

## Mounting Hole Pad to Non-plated Mounting Hole

Checks the spacing between copper object mounting hole pad and non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

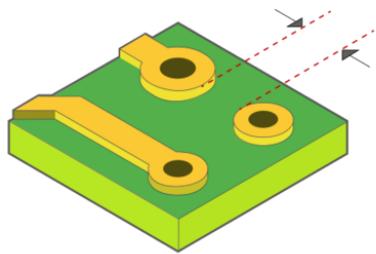
**Attribute Name:** DFF\_CS\_MNTHLPD\_TO\_NPMNTHL

## Mounting Hole Pad to Non-plated Slot Hole

Checks the spacing between copper object mounting hole pad and non-plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

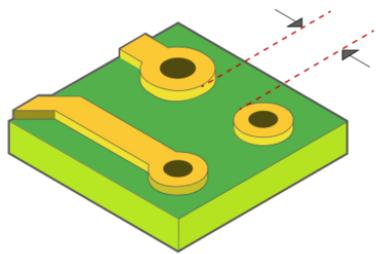
**Attribute Name:** DFF\_CS\_MNTHLPD\_TO\_NPSLTHL

## Mounting Hole Pad to Non-plated Tooling Hole

Checks the spacing between copper object mounting hole pad and non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

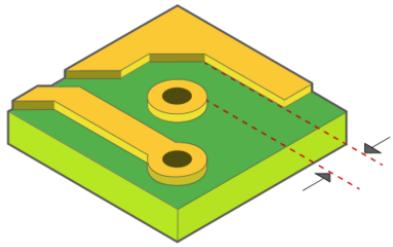
**Attribute Name:** DFF\_CS\_MNTHLPD\_TO\_NPTLHL

## Mounting Hole Pad to Non-signal shape

Checks the spacing between copper object mounting hole pad and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pg

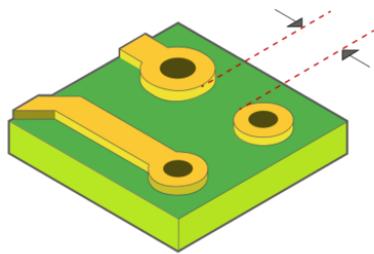
**Attribute Name:** DFF\_CS\_MNTHLPD\_TO\_NSS

## Mounting Hole Pad to Plated Mechanical Hole

Checks the spacing between copper object mounting hole pad and plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

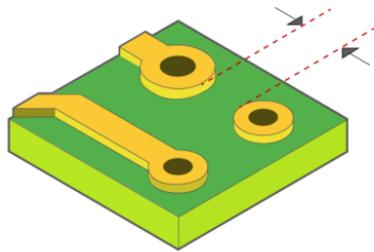
**Attribute Name:** DFF\_CS\_MNTHLPD\_TO\_PMECHHL

## Mounting Hole Pad to Plated Mounting Hole

Checks the spacing between copper object mounting hole pad and plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

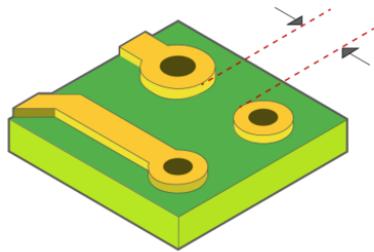
**Attribute Name:** DFF\_CS\_MNTHLPD\_TO\_PMNTHL

## Mounting Hole Pad to Plated Slot Hole

Checks the spacing between copper object mounting hole pad and plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

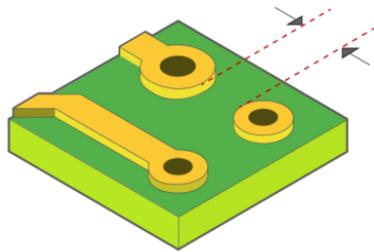
**Attribute Name:** DFF\_CS\_MNTHLPD\_TO\_PSLTHL

## Mounting Hole Pad to Plated Tooling Hole

Checks the spacing between copper object mounting hole pad and plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

**Attribute Name:** DFF\_CS\_MNTHLPD\_TO\_PTOOLHL

## Mounting Hole Pad to Text

Checks the spacing between copper object mounting hole pad and text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pg

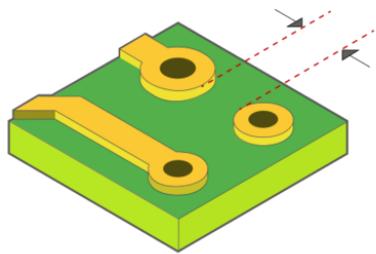
**Attribute Name:** DFF\_CS\_MNTHLPD\_TO\_TEXT

## Mounting Hole Pad to Through Pin Hole

Checks the spacing between copper object mounting hole pad and through pin hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

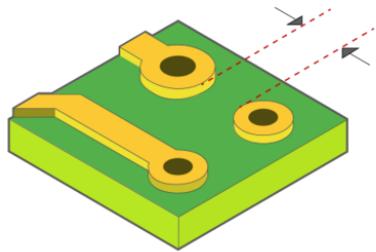
**Attribute Name:** DFF\_CS\_MNTHLPD\_TO\_THPNHL

## Mounting Hole Pad to Via Hole

Checks the spacing between copper object mounting hole pad and via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

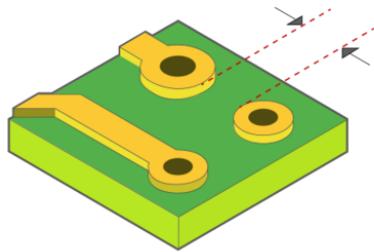
**Attribute Name:** DFF\_CS\_MNTHLPD\_TO\_VIAHL

## Non-plated Hole to Non-plated Hole

Checks the spacing between copper-object non-plated hole and non-plated hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

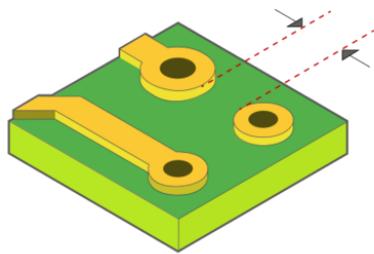
**Attribute Name:** DFF\_CS\_NONPLHL\_TO\_NONPLHL

## Non-plated Hole to Via Pad

Checks the spacing between copper-object non-plated hole and via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

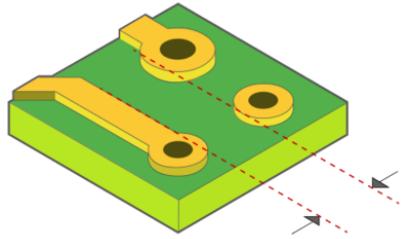
**Attribute Name:** DFF\_CS\_VIAPD\_TO\_NONPLHL

## Non Plated Mechanical Hole to Line

Checks the spacing between copper object non plated mechanical hole and line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

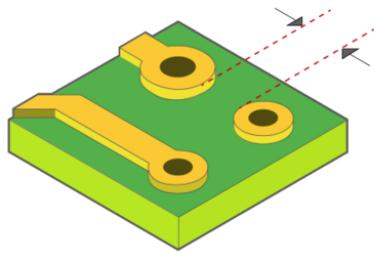
**Attribute Name:** DFF\_CS\_NPMECHHL\_TO\_LINE

## Non-plated Mechanical Hole to Non-plated Mechanical Hole

Checks the spacing between copper object non-plated mechanical hole and non-plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

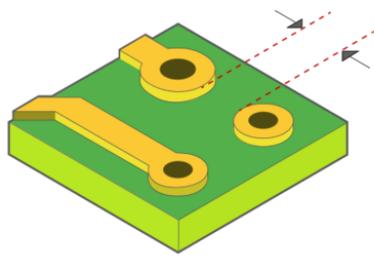
**Attribute Name:** DFF\_CS\_NPMECHL\_TO\_NPMECHL

## Non-plated Mechanical Hole to Non-plated Mounting Hole

Checks the spacing between copper object non-plated mechanical hole and non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

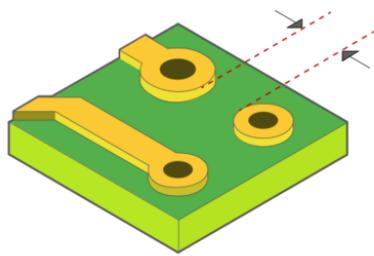
**Attribute Name:** DFF\_CS\_NPMECHL\_TO\_NPMNTHL

## Non-plated Mechanical Hole to Non-plated Tooling Hole

Checks the spacing between copper object non-plated mechanical hole and non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

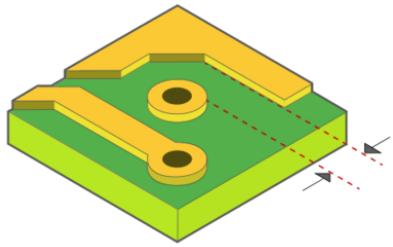
**Attribute Name:** DFF\_CS\_NPMECHL\_TO\_NPTLHL

## Non-plated Mechanical Hole to Non-signal shape

Checks the spacing between copper object non-plated mechanical hole and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



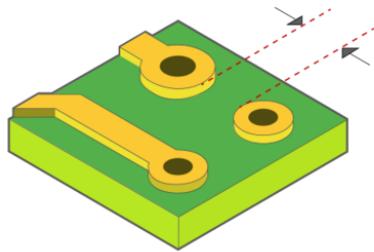
**DRC Code:** dg

**Attribute Name:** DFF\_CS\_NPMECHHL\_TO\_NSS

## Non-plated Mechanical Hole to Plated Mounting Hole

Checks the spacing between copper object non-plated mechanical hole and plated mounting hole.  
**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

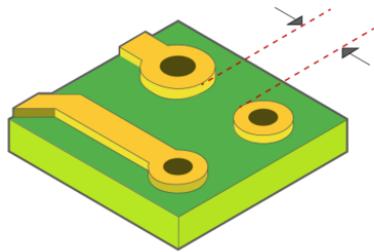
**Attribute Name:** DFF\_CS\_NPMECHHL\_TO\_PMNTHL

## Non-plated Mechanical Hole to Plated Tooling Hole

Checks the spacing between copper object non-plated mechanical hole to plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

**Attribute Name:** DFF\_CS\_NPMECHL\_TO\_PTLHL

## Non-plated Mechanical Hole to Text

Checks the spacing between copper object non-plated mechanical hole and text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** dg

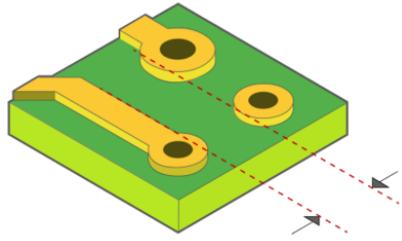
**Attribute Name:** DFF\_CS\_NPMECHHL\_TO\_TEXT

## Non-plated Mounting Hole to Line

Checks the spacing between copper object non-plated mounting hole to line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

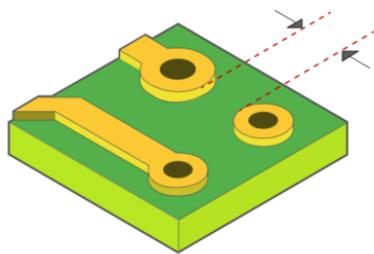
**Attribute Name:** DFF\_CS\_NPMNTHL\_TO\_LINE

## Non-plated Mounting Hole to Non-plated Mounting Hole

Checks the spacing between copper object non-plated mounting hole and non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

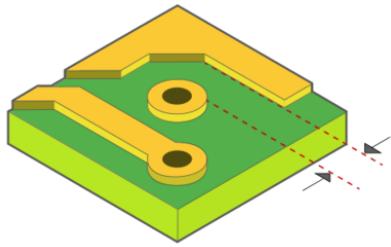
**Attribute Name:** DFF\_CS\_NPMNTHL\_TO\_NPMNTHL

## Non-plated Mounting Hole to Non-signal shape

Checks the spacing between copper object non-plated mounting hole and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

**Attribute Name:** DFF\_CS\_NPMNTHL\_TO\_NSS

## Non-plated Mounting Hole to Text

Checks the spacing between copper object non-plated mounting hole and text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** dg

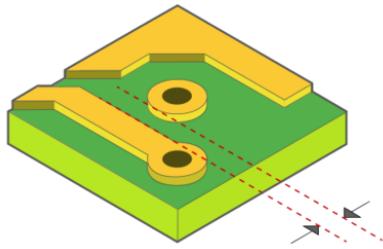
**Attribute Name:** DFF\_CS\_NPMNTHL\_TO\_TEXT

## Non-plated Slot Hole to Line

Checks the spacing between copper object non-plated slot hole and line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

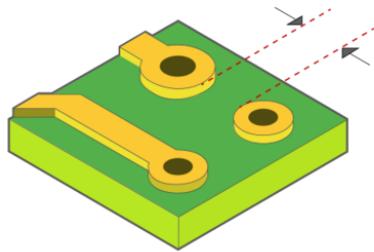
**Attribute Name:** DFF\_CS\_NPSLTHL\_TO\_LINE

## Non-plated Slot Hole to Non-plated Mechanical Hole

Checks the spacing between copper object non-plated slot hole and non-plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

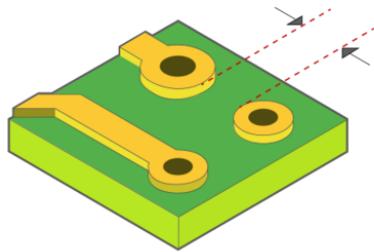
**Attribute Name:** DFF\_CS\_NPSLTHL\_TO\_NPMECHL

## Non-plated Slot Hole to Non-plated Mounting Hole

Checks the spacing between copper object non-plated slot hole and non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

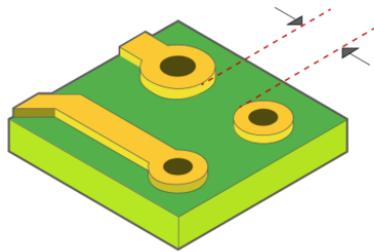
**Attribute Name:** DFF\_CS\_NPSLTHL\_TO\_NPMNTHL

## Non-plated Slot Hole to Non-plated Slot Hole

Checks the spacing between copper object non-plated slot hole and non-plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

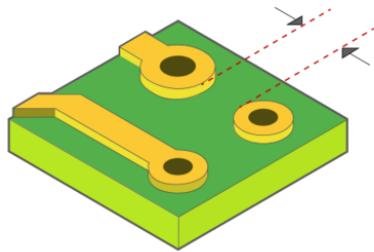
**Attribute Name:** DFF\_CS\_NPSLTHL\_TO\_NPSLTHL

## Non-plated Slot Hole to Non-plated Tooling Hole

Checks the spacing between copper object non-plated slot hole and non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

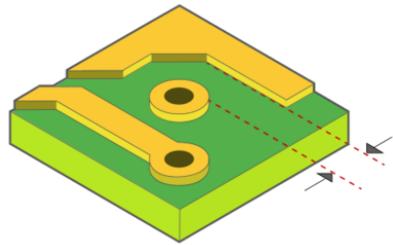
**Attribute Name:** DFF\_CS\_NPSLTHL\_TO\_NPTOOLHL

## Non-plated Slot Hole to Non-signal shape

Checks the spacing between copper object non-plated slot hole and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

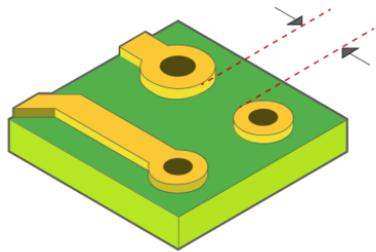
**Attribute Name:** DFF\_CS\_NPSLTHL\_TO\_NSS

## Non-plated Slot Hole to Plated Mechanical Hole

Checks the spacing between copper object non-plated slot hole and plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

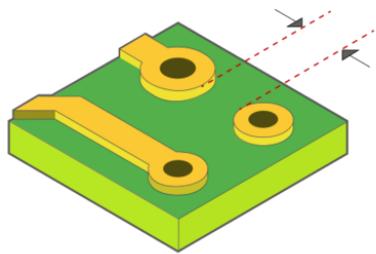
**Attribute Name:** DFF\_CS\_NPSLTHL\_TO\_PMECHHL

## Non-plated Slot Hole to Plated Mounting Hole

Checks the spacing between copper object non-plated slot hole and plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

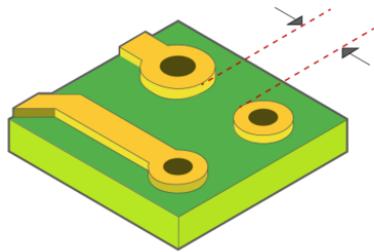
**Attribute Name:** DFF\_CS\_NPSLTHL\_TO\_PMNTHL

## Non-plated Slot Hole to Plated Tooling Hole

Checks the spacing between copper object non-plated slot hole and plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

**Attribute Name:** DFF\_CS\_NPSLTHL\_TO\_PTOOLHL

## Non-plated Slot Hole to Text

Checks the spacing between copper object non-plated slot hole to text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** dg

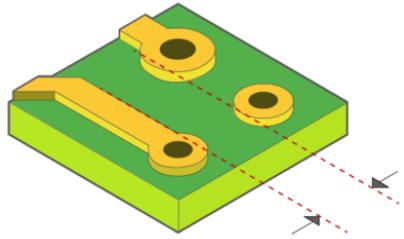
**Attribute Name:** DFF\_CS\_NPSLTHL\_TO\_TEXT

## Non-plated Tooling Hole to Line

Checks the spacing between copper object non-plated tooling hole to line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

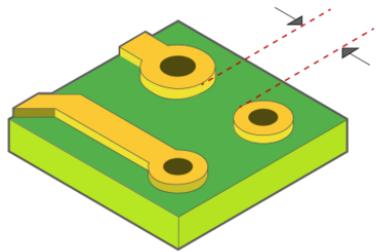
**Attribute Name:** DFF\_CS\_NPTOOLHL\_TO\_LINE

## Non-plated Tooling Hole to Non-plated Mounting Hole

Checks the spacing between copper object non-plated tooling hole to non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

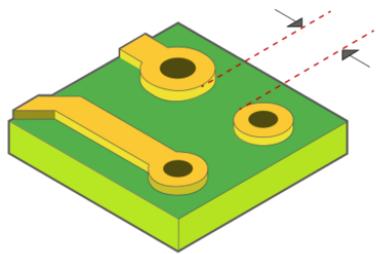
**Attribute Name:** DFF\_CS\_NPTLHL\_TO\_NPMNTHL

## Non-plated Tooling Hole to Non-plated Tooling Hole

Checks the spacing between copper object non-plated tooling hole and non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

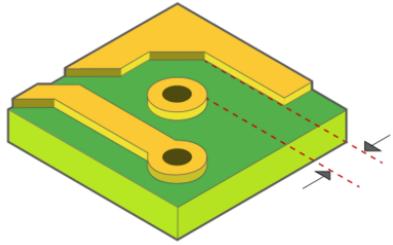
**Attribute Name:** DFF\_CS\_NPTLHL\_TO\_NPTLHL

## Non-plated Tooling Hole to Non-signal shape

Checks the spacing between copper object non-plated tooling hole and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

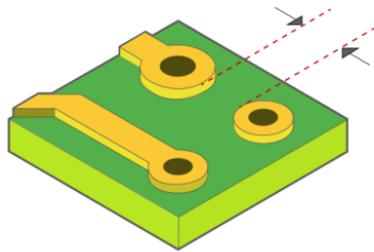
**Attribute Name:** DFF\_CS\_NPTOOLHL\_TO\_NSS

## Non-plated Tooling Hole to Plated Mounting Hole

Checks the spacing between copper object non-plated tooling hole and plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

**Attribute Name:** DFF\_CS\_NPTOOLHL\_TO\_PMNTHL

## Non-plated Tooling Hole to Text

Checks the spacing between copper object non-plated tooling hole to text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** dg

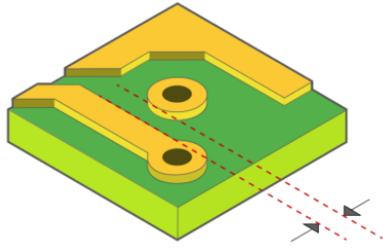
**Attribute Name:** DFF\_CS\_NPTOOLHL\_TO\_TEXT

## Non-signal Geometry to Non-plated Hole

Checks the spacing between copper-object non-signal geometry and non-plated hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

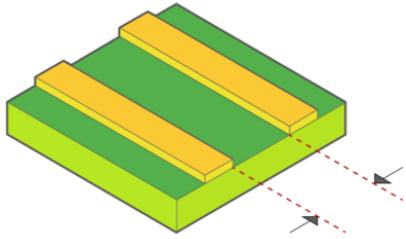
**Attribute Name:** DFF\_CS\_NONPLHL\_TO\_NSQ

## Non-signal Geometry to Non-signal Geometry

Checks the spacing between copper-object non-signal geometry and non-signal geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** gg

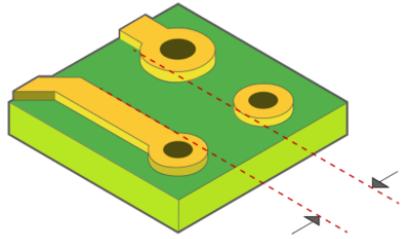
**Attribute Name:** DFF\_CS\_NSG\_TO\_NSG

## Non-signal Geometry to Pin Pad

Checks the spacing between copper-object non-signal geometry and pin pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pg

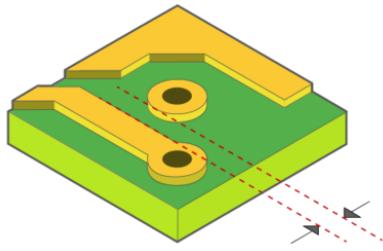
**Attribute Name:** DFF\_CS\_PNPD\_TO\_NSQ

## Non-signal Geometry to Via Pad

Checks the spacing between copper-object non-signal geometry to via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vg

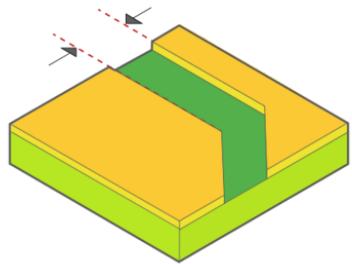
**Attribute Name:** DFF\_CS\_VIAPRIM\_TO\_NSQ

## Non-signal shape to non-signal shape

Checks the spacing between copper object non-signal shape and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** gg

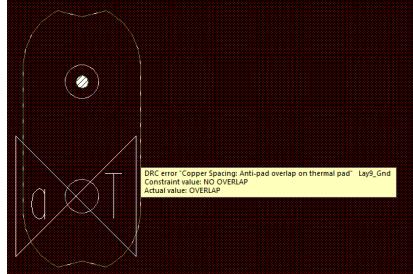
**Attribute Name:** DFF\_CS\_NSS\_TO\_NSS

## Overlap between Anti pad of one pin or via to thermal pad of another pin or via

Checks if anti pad of one pin or via overlaps with thermal pad of another pin or via having connection in that layer. This check is available only for negative artwork.

**DRC Code:** aT

**Attribute Name:** DFF\_CS\_ANTIPD\_TO\_THERMAL



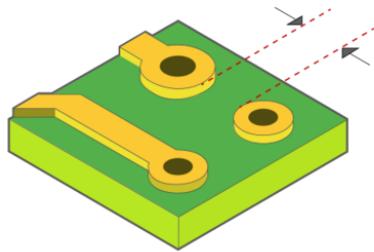
**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

## Pin Pad to Non-plated hole

Checks the spacing between copper-object non-plated hole and pin pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

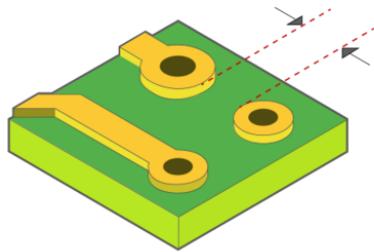
**Attribute Name:** DFF\_CS\_PNPD\_TO\_NONPLHL

## Pin Pad to Pin Pad

Checks the spacing between copper-object pin pad and pin pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pp

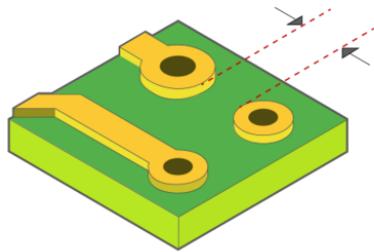
**Attribute Name:** DFF\_CS\_PNPD\_TO\_PNPD

## Pin Pad to Via Pad

Checks the spacing between copper-object via pad and pin pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pv

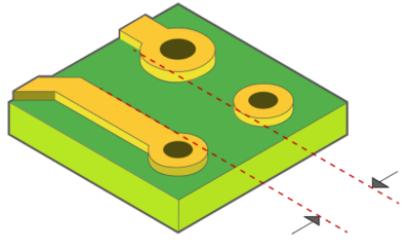
**Attribute Name:** DFF\_CS\_PNPD\_TO\_VIAPD

## Plated Mechanical Hole to Line

Checks the spacing between copper object plated mechanical hole and line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

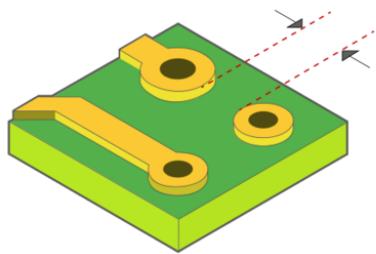
**Attribute Name:** DFF\_CS\_PMECHHL\_TO\_LINE

## Plated Mechanical Hole to Non-plated Mechanical Hole

Checks the spacing between copper object plated mechanical hole and non-plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



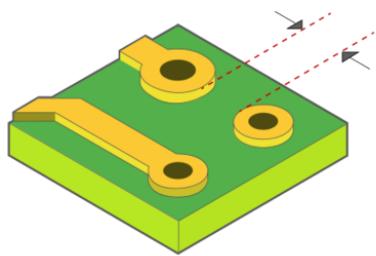
**DRC Code:** dd

**Attribute Name:** DFF\_CS\_PMECHHL\_TO\_NPMECHHL

## Plated Mechanical Hole to Non-plated Mounting Hole

Checks the spacing between copper object plated mechanical hole and non-plated mounting hole.  
**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

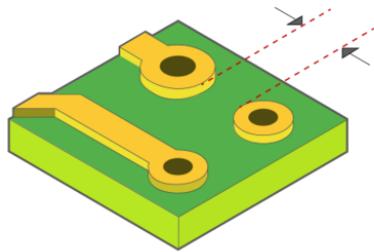
**Attribute Name:** DFF\_CS\_PMECHHL\_TO\_NPMNTHL

## Plated Mechanical Hole to Non-plated Tooling Hole

Checks the spacing between copper object plated mechanical hole and non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

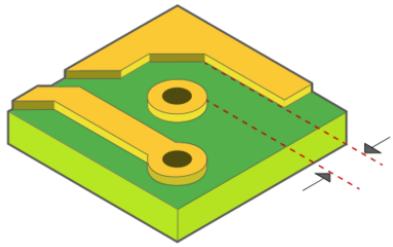
**Attribute Name:** DFF\_CS\_PMECHHL\_TO\_NPTOOLHL

## Plated Mechanical Hole to Non-signal Geometry

Checks the spacing between copper object plated mechanical hole and non-signal geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

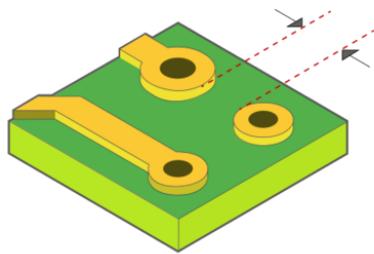
**Attribute Name:** DFF\_CS\_PMECHHL\_TO\_NSS

## Plated Mechanical Hole to Plated Mechanical Hole

Checks the spacing between copper object plated mechanical hole and plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

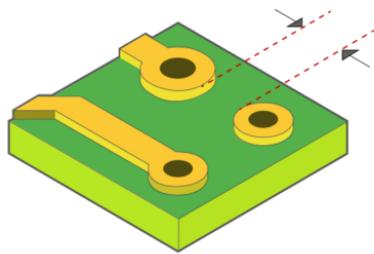
**Attribute Name:** DFF\_CS\_PMECHHL\_TO\_PMECHHL

## Plated Mechanical Hole to Plated Mounting Hole

Checks the spacing between copper object plated mechanical hole and plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

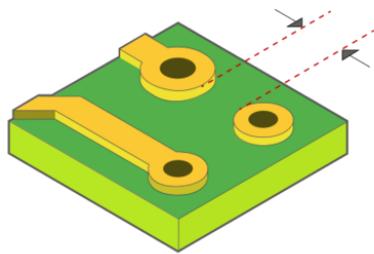
**Attribute Name:** DFF\_CS\_PMECHHL\_TO\_PMNTHL

## Plated Mechanical Hole to Plated Tooling Hole

Checks the spacing between copper object plated mechanical hole and plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

**Attribute Name:** DFF\_CS\_PMECHHL\_TO\_PTOOLHL

## Plated Mechanical Hole to Text

Checks the spacing between copper object plated mechanical hole and text. +  
**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** dg

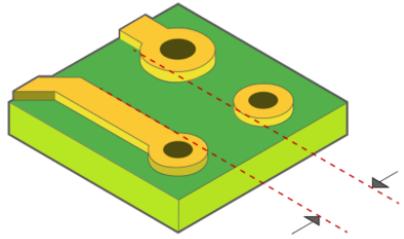
**Attribute Name:** DFF\_CS\_PMECHHL\_TO\_TEXT

## Plated Mounting Hole to Line

Checks the spacing between copper object plated mounting hole and line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

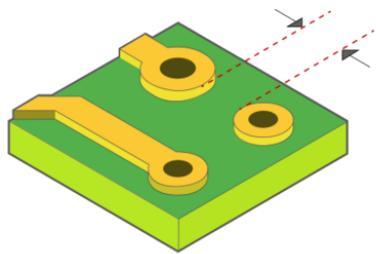
**Attribute Name:** DFF\_CS\_PMNTHL\_TO\_LINE

## Plated Mounting Hole to Non-plated Mounting Hole

Checks the spacing between copper object plated mounting hole and non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

**Attribute Name:** DFF\_CS\_PMNTHL\_TO\_NPMNTHL

## Plated Mounting Hole to Non-signal Geometry

Checks the spacing between copper object plated mounting hole and non-signal geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** dg

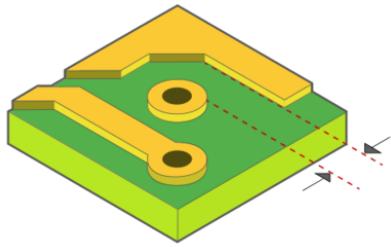
**Attribute Name:** DFF\_CS\_PMNTHL\_TO\_NSG

## Plated Mounting Hole to Non-signal shape

Checks the spacing between copper object plated mounting hole and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

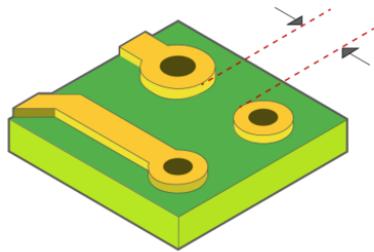
**Attribute Name:** DFF\_CS\_PMNTHL\_TO\_NSS

## Plated Mounting Hole to Plated Mounting Hole

Checks the spacing between copper object plated mounting hole and plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

**Attribute Name:** DFF\_CS\_PMNTHL\_TO\_PMNTHL

## Plated Mounting Hole to Text

checks the spacing between copper object plated mounting hole and text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** dg

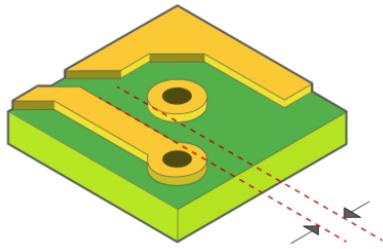
**Attribute Name:** DFF\_CS\_PMNTHL\_TO\_TEXT

## Plated Slot Hole to Line

Checks the spacing between copper object plated slot hole and line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

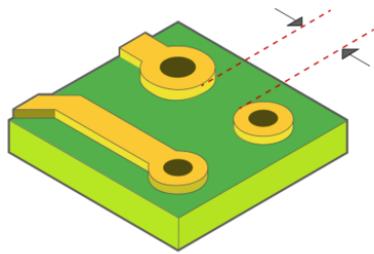
**Attribute Name:** DFF\_CS\_PSLTHL\_TO\_LINE

## Plated Slot Hole to Non-plated Mechanical Hole

This constraint indicates the spacing between copper object plated slot hole and non-plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

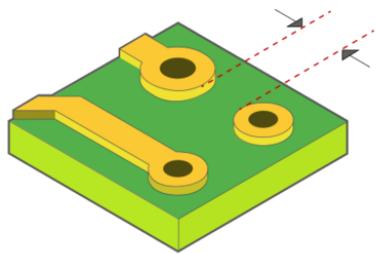
**Attribute Name:** DFF\_CS\_PSLTHL\_TO\_NPMECHHL

## Plated Slot Hole to Non-plated Mounting Hole

Checks the spacing between copper object plated slot hole and non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

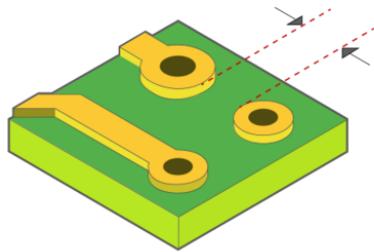
**Attribute Name:** DFF\_CS\_PSLTHL\_TO\_NPMNTHL

## Plated Slot Hole to Non-plated Slot Hole

Checks the spacing between copper object plated slot hole and non-plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

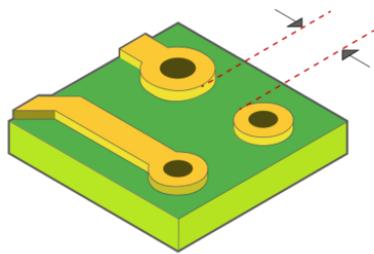
**Attribute Name:** DFF\_CS\_PSLTHL\_TO\_NPSLTHL

## Plated Slot Hole to Non plated Tooling Hole

Checks the spacing between copper object plated slot hole and non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

**Attribute Name:** DFF\_CS\_PSLTHL\_TO\_NPTOOLHL

## Plated Slot Hole to Non-signal Geometry

Checks the spacing between copper object plated slot hole and non-signal geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** dg

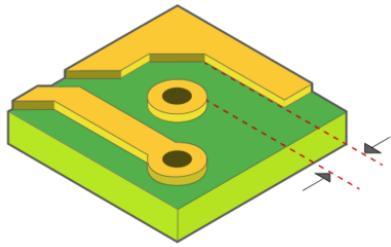
**Attribute Name:** DFF\_CS\_PSLTHL\_TO\_NSG

## Plated Slot Hole to Non-signal shape

Checks the spacing between copper object plated slot hole and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

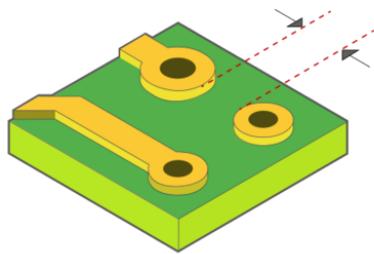
**Attribute Name:** DFF\_CS\_PSLTHL\_TO\_NSS

## Plated Slot Hole to Plated Mechanical Hole

Checks the spacing between copper object plated slot hole and plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

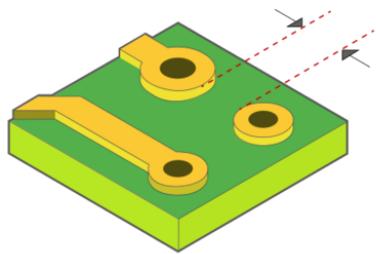
**Attribute Name:** DFF\_CS\_PSLTHL\_TO\_PMECHHL

## Plated Slot Hole to Plated Mounting Hole

Checks the spacing between copper object plated slot hole and plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

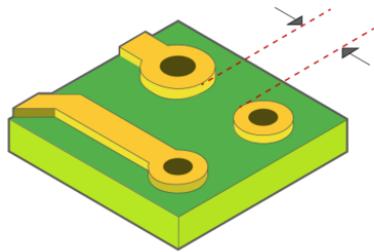
**Attribute Name:** DFF\_CS\_PSLTHL\_TO\_PMNTHL

## Plated Slot Hole to Plated Slot Hole

Checks the spacing between copper object plated slot hole and plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

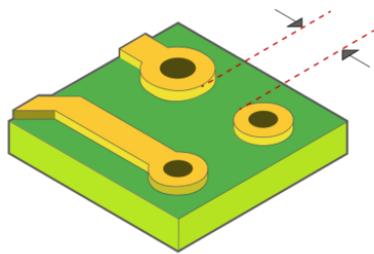
**Attribute Name:** DFF\_CS\_PSLTHL\_TO\_PSLTHL

## Plated Slot Hole to Plated Tooling Hole

Checks the spacing between copper object plated slot hole and plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

**Attribute Name:** DFF\_CS\_PSLTHL\_TO\_PTOOLHL

## Plated Slot Hole to Text

Checks the spacing between copper object plated slot hole and text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** dg

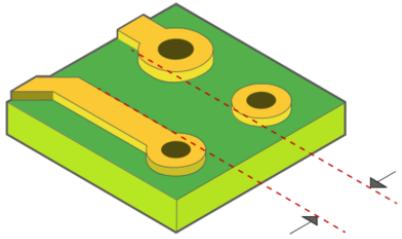
**Attribute Name:** DFF\_CS\_PSLTHL\_TO\_TEXT

## Plated Tooling Hole to Line

Checks the spacing between copper object plated tooling hole and line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

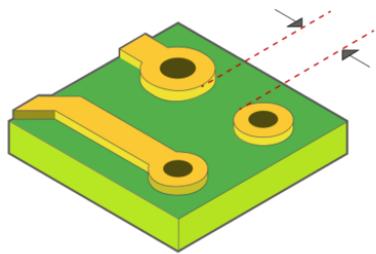
**Attribute Name:** DFF\_CS\_PTOOLHL\_TO\_LINE

## Plated Tooling Hole to Non-plated Mounting Hole

Checks the spacing between copper object plated tooling hole and non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

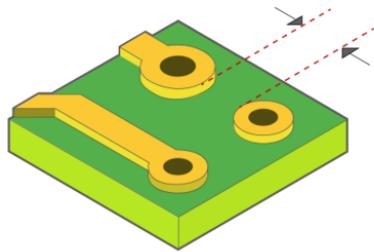
**Attribute Name:** DFF\_CS\_PTOOLHL\_TO\_NPMNTHL

## Plated Tooling Hole to Non-plated Tooling Hole

Checks the spacing between copper object plated tooling hole and non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

**Attribute Name:** DFF\_CS\_PTLHL\_TO\_NPTLHL

## Plated Tooling Hole to Non-signal Geometry

Checks the spacing between copper object plated tooling hole and non-signal geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** dg

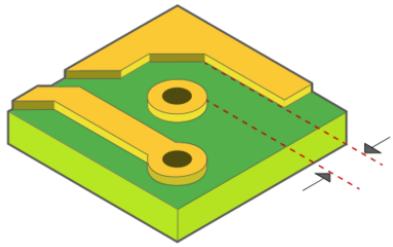
**Attribute Name:** DFF\_CS\_PTOOLHL\_TO\_NSG

## Plated Tooling Hole to Non-signal shape

Checks the spacing between copper object plated tooling hole and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

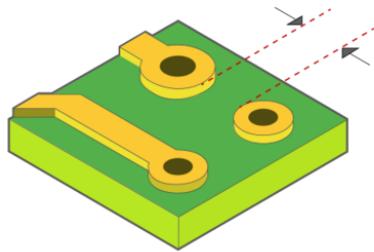
**Attribute Name:** DFF\_CS\_PTOOLHL\_TO\_NSS

## Plated Tooling Hole to Plated Mounting Hole

Checks the spacing between copper object plated tooling hole and plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

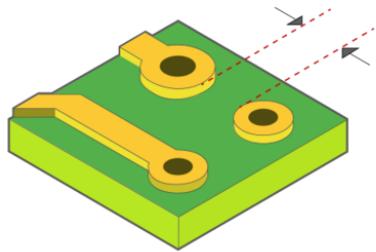
**Attribute Name:** DFF\_CS\_PTOOLHL\_TO\_PMNTHL

## Plated Tooling Hole to Plated Tooling Hole

Checks the spacing between copper object plated tooling hole and plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

**Attribute Name:** DFF\_CS\_PTOOLHL\_TO\_PTOOLHL

## Plated Tooling Hole to Text

Checks the spacing between copper object plated tooling hole and text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** dg

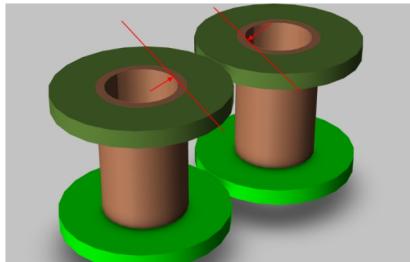
**Attribute Name:** DFF\_CS\_PTOOLHL\_TO\_TEXT

## Same net BB via hole to micro via hole

Checks the minimum permissible spacing between copper objects BB via hole and BB via hole. The two BB vias should be connected to same net and should have same start and end layers.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** HH

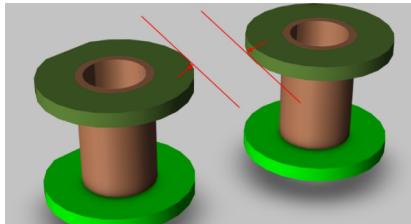
**Attribute Name:** DFF\_CS\_SNET\_BBVIAHL\_BBVIAHL

## Same net BB via pad to BB via pad

Checks the minimum permissible spacing between copper objects BB via pad and BB via pad. The two BB vias should be connected to same net and should have same start and end layers.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** PP

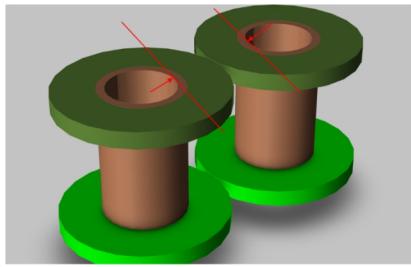
**Attribute Name:** DFF\_CS\_SNET\_BBVIA\_BBVIA

## Same net micro via hole to micro via hole

Checks the minimum permissible spacing between copper objects micro via hole and micro via hole. The two micro vias should be connected to same net and should have same start and end layers.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** hh

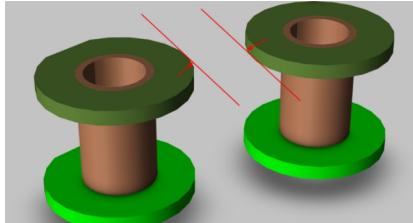
**Attribute Name:** DFF\_CS\_SNET\_UVIAHL\_UVIAHL

## Same net micro via pad to micro via pad

Checks the minimum permissible spacing between copper objects micro via pad and micro via pad. The two micro vias should be connected to same net and should have same start and end layers.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pp

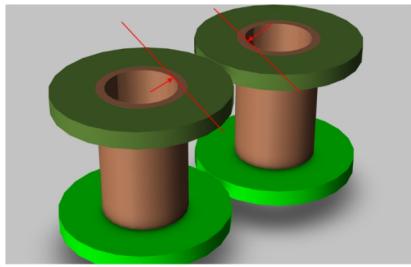
**Attribute Name:** DFF\_CS\_SNET\_UVIA\_UVIA

## Same net through via hole to through via hole

Checks the minimum permissible spacing between copper objects through via hole and through via hole. The two through vias should be connected to same net and should have same start and end layers.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** HH

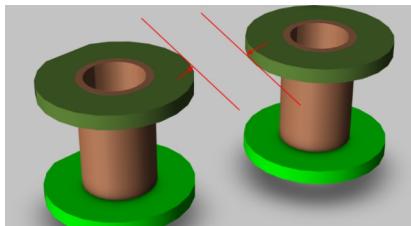
**Attribute Name:** DFF\_CS\_SNET\_THVIAHL\_THVIAHL

## Same net through via pad to through via pad

Checks the minimum permissible spacing between copper objects through via pad and through via pad. The two through vias should be connected to same net and should have same start and end layers.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** PP

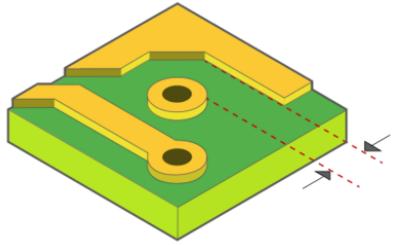
**Attribute Name:** DFF\_CS\_SNET\_THVIA\_THVIA

## Shape to Blind/Buried Via Hole

Checks the spacing between copper object shape and blind/buried via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sd

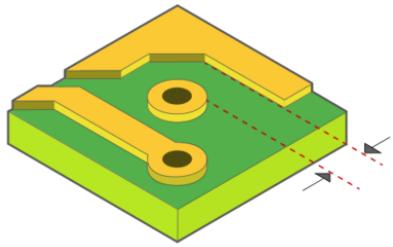
**Attribute Name:** DFF\_CS\_SHP\_TO\_BBVIAHL

## Shape to Blind/Buried Via Pad

Checks the spacing between copper object shape and blind/buried via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sv

**Attribute Name:** DFF\_CS\_SHP\_TO\_BBVIAPD

## Shape to Fiducial Pad

Checks the spacing between copper object shape and fiducial pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** sp

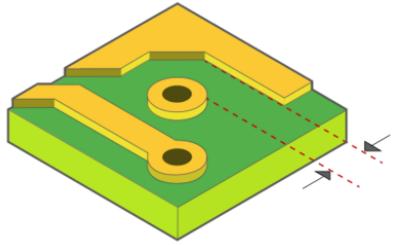
**Attribute Name:** DFF\_CS\_SHP\_TO\_FDCLPD

## Shape to Mechanical Hole Pad

Checks the spacing between copper object shape and mechanical hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sp

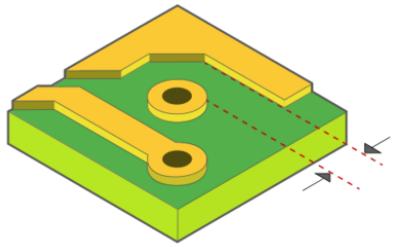
**Attribute Name:** DFF\_CS\_SHP\_TO\_MECHHLPD

## Shape to Micro Via Hole

Checks the spacing between copper object shape and micro via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sd

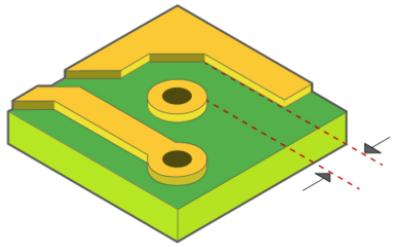
**Attribute Name:** DFF\_CS\_SHP\_TO\_UVIAHL

## Shape to Micro Via Pad

Checks the spacing between copper object shape and micro via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sv

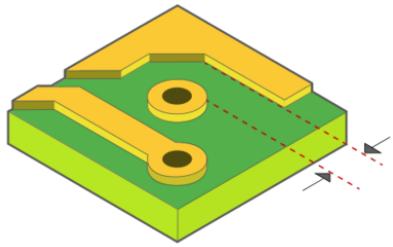
**Attribute Name:** DFF\_CS\_SHP\_TO\_UVIAPD

## Shape to Mounting Hole Pad

Checks the spacing between copper object shape and mounting hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sp

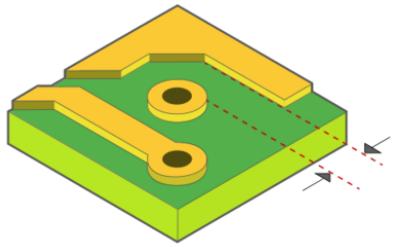
**Attribute Name:** DFF\_CS\_SHP\_TO\_MNTHLPD

## Shape to Non-plated Hole

Checks the spacing between copper-object shape and non-plated hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sd

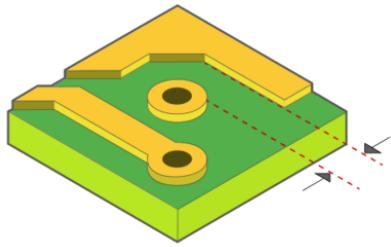
**Attribute Name:** DFF\_CS\_SHP\_TO\_NONPLHL

## Shape to Non-plated Mechanical Hole

Checks the spacing between copper object shape to non-plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sd

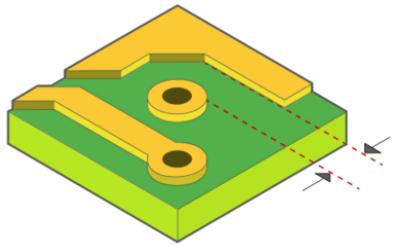
**Attribute Name:** DFF\_CS\_SHP\_TO\_NPMECHHL

## Shape to Non-plated Mounting Hole

Check the spacing between copper object shape to non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sd

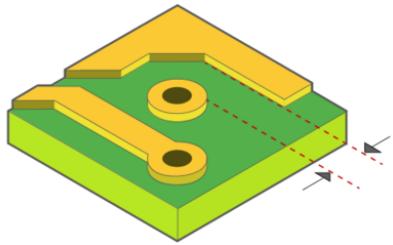
**Attribute Name:** DFF\_CS\_SHP\_TO\_NPMNTHL

## Shape to Non Plated Slot Hole

Checks the spacing between copper object shape and non-plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sd

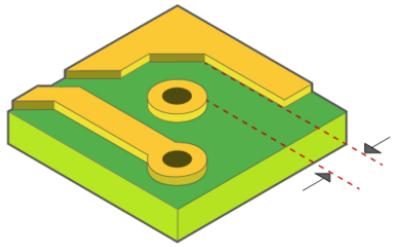
**Attribute Name:** DFF\_CS\_SHP\_TO\_NPSLTHL

## Shape to Non-plated Tooling Hole

Checks the spacing between copper object shape and non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sd

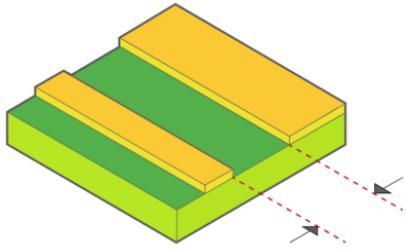
**Attribute Name:** DFF\_CS\_SHP\_TO\_NPTOOLHL

## Shape to Non-signal Geometry

Checks the spacing between copper-object shape and non-signal geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sg

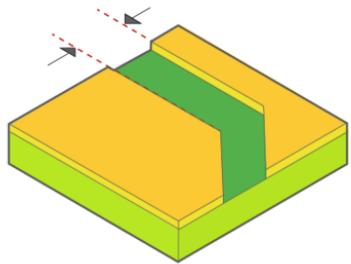
**Attribute Name:** DFF\_CS\_SHP\_TO\_NSG

## Shape to Non-signal shape

Checks the spacing between copper object shape and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sg

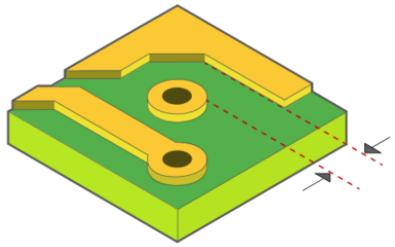
**Attribute Name:** DFF\_CS\_SHP\_TO\_NSS

## Shape to Pin Pad

Checks the spacing between copper-object shape and pin pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sp

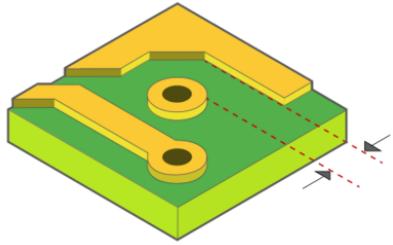
**Attribute Name:** DFF\_CS\_SHP\_TO\_PNPD

## Shape to Plated Mechanical Hole

Checks the spacing between copper object shape and plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sd

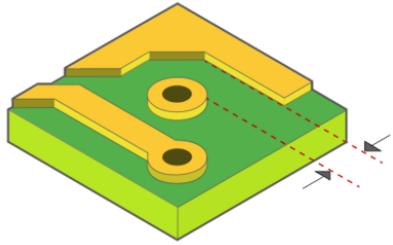
**Attribute Name:** DFF\_CS\_SHP\_TO\_PMECHHL

## Shape to Plated Mounting Hole

Checks the spacing between copper object shape and plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sd

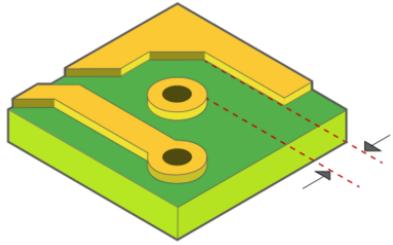
**Attribute Name:** DFF\_CS\_SHP\_TO\_PMNTHL

## Shape to Plated Slot Hole

Checks the spacing between copper object shape and plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sd

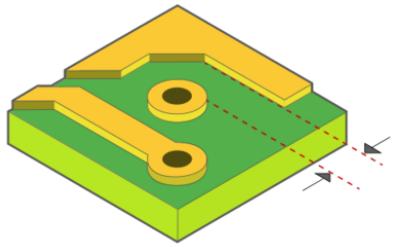
**Attribute Name:** DFF\_CS\_SHP\_TO\_PSLTHL

## Shape to Plated Tooling Hole

Checks the spacing between copper object shape and plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sd

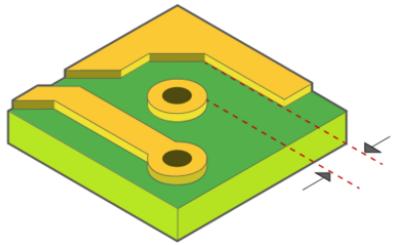
**Attribute Name:** DFF\_CS\_SHP\_TO\_PTOOLHL

## Shape to Slot Pad

Checks the spacing between copper object shape and slot pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sp

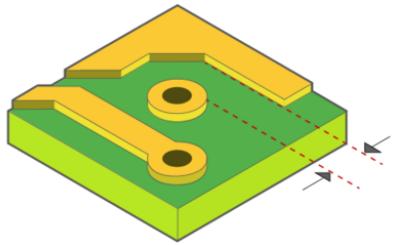
**Attribute Name:** DFF\_CS\_SHP\_TO\_SLTPD

## Shape to SMD Pin Pad

Checks the spacing between copper object shape and SMD pin pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sp

**Attribute Name:** DFF\_CS\_SHP\_TO\_SMDPNPD

## Shape to Text

Checks the spacing between copper object shape and text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** sg

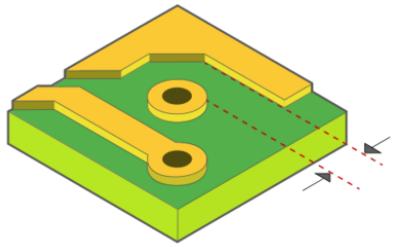
**Attribute Name:** DFF\_CS\_SHP\_TO\_TEXT

## Shape to Through Pin Hole

Checks the spacing between copper object shape and through pin hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sd

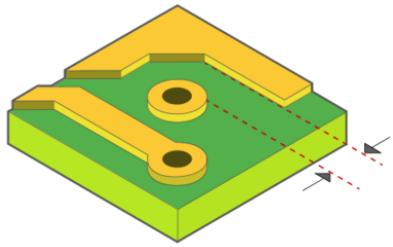
**Attribute Name:** DFF\_CS\_SHP\_TO\_THPNHL

## Shape to Through Pin Pad

Checks the spacing between copper object shape and through pin pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sp

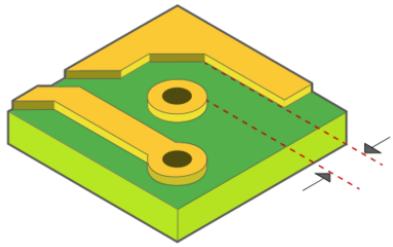
**Attribute Name:** DFF\_CS\_SHP\_TO\_THPNPD

## Shape to Through Via Hole

Checks the spacing between copper object shape and through via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sd

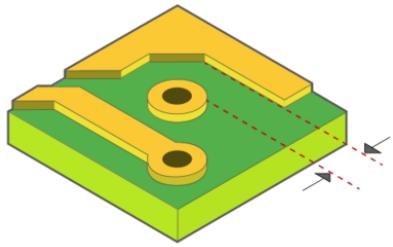
**Attribute Name:** DFF\_CS\_SHP\_TO\_THVIAHL

## Shape to Tooling hole Pad

Checks the spacing between copper object shape and tooling hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sp

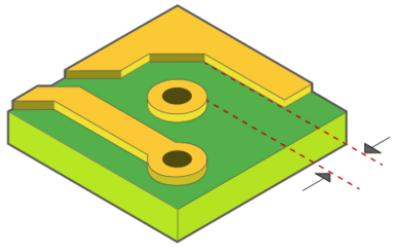
**Attribute Name:** DFF\_CS\_SHP\_TO\_TOOLHLPD

## Shape to Via Pad

Checks the spacing between copper-object shape and via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** sv

**Attribute Name:** DFF\_CS\_SHP\_TO\_VIAPDPRIM

## Silicon Microvia hole to Microvia hole below dielectric layer spacing

This rule defines the spacing constraint between micro via holes connecting the same layers. This is shown through the arrow in the image below. The rule is applicable between silicon vias having same start and end layers. The rule is actually in the dielectric layer below the start layer and that gets translated to the rule in the start layer. Hence the rule is termed as 'below dielectric'.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** sd

**Attribute Name:** DFF\_CS\_SI\_SAMELAYER\_UVIA

## Silicon Microvia hole to Microvia hole staggered layer spacing

This rule defines the spacing constraint between micro via holes connecting different layers. This is shown through the arrows in the image below. Such vias are placed in a staggered manner, i.e. start layer on one micro via is the end layer of another. Hence this rule is termed as staggered layer. The rule is not applicable if the vias do not share a common layer.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** ed

**Attribute Name:** DFF\_CS\_SI\_CROSSLAYER\_UVIA

## Silicon wide metal to standard metal spacing

This rule defines the spacing constraint between a wide metal and a standard metal. One of the two objects must be a wide metal and other must not qualify as wide metal for this rule to be applicable. The specification for this rule is described in the documentation for this group of rules. Currently this rule is supported only for traces. The rule can have different values for different constraint regions.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** ws

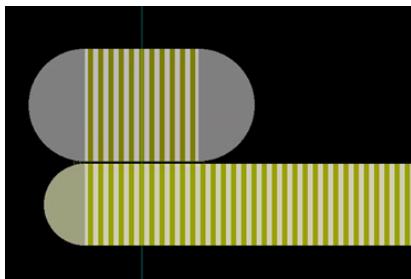
**Attribute Name:** DFF\_CS\_WIDE\_METAL\_TO\_STANDARD

## Silicon wide metal to wide metal spacing

This rule defines the spacing constraint between a wide metal and a wide metal. Both the objects must be a wide metal for this rule to be applicable. The specification for this rule is described in the documentation for this group of rules. Currently this rule is supported only for traces. The rule can have different values for different constraint regions.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** ww

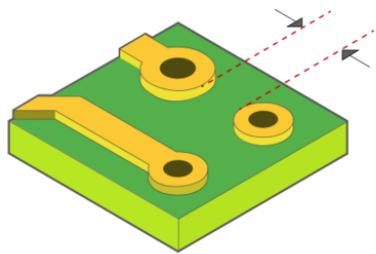
**Attribute Name:** DFF\_CS\_WIDE\_METAL\_TO\_WIDE

## Slot Pad to Blind/Buried Via Hole

Checks the spacing between copper object slot pad and blind/buried via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

**Attribute Name:** DFF\_CS\_SLTPD\_TO\_BBVIAHL

## Slot Pad to Fiducial Pad

Checks the spacing between copper object slot pad and fiducial pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pp

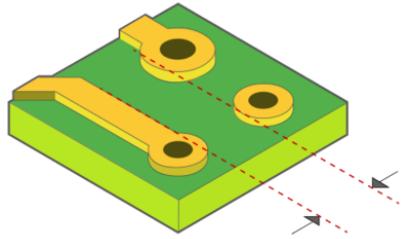
**Attribute Name:** DFF\_CS\_SLTPD\_TO\_FDCLPD

## Slot Pad to Line

Checks the spacing between copper object slot pad to line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pg

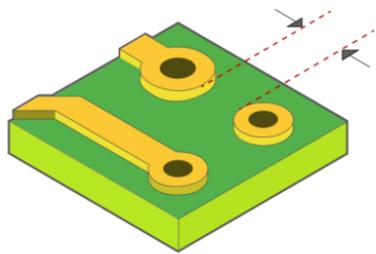
**Attribute Name:** DFF\_CS\_SLTPD\_TO\_LINE

## Slot Pad to Mechanical Hole Pad

Checks the spacing between copper object slot pad and mechanical hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pp

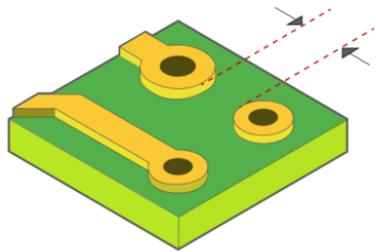
**Attribute Name:** DFF\_CS\_SLTPD\_TO\_MECHHLPD

## Slot Pad to Micro Via Hole

Checks the spacing between copper object slot pad and micro via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

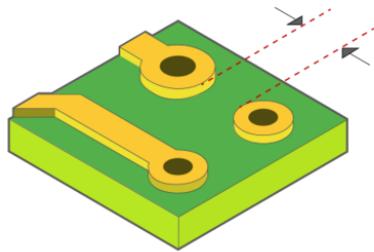
**Attribute Name:** DFF\_CS\_SLTPD\_TO\_UVIAHL

## Slot Pad to Mounting Hole Pad

Checks the spacing between copper object slot pad and mounting hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pp

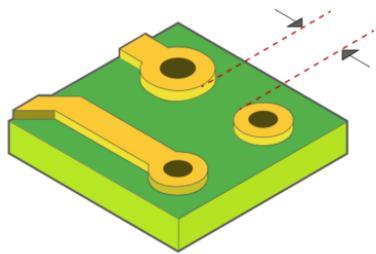
**Attribute Name:** DFF\_CS\_SLTPD\_TO\_MNTHLPD

## Slot Pad to Non-plated Mechanical Hole

Checks the spacing between copper object slot pad and non-plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

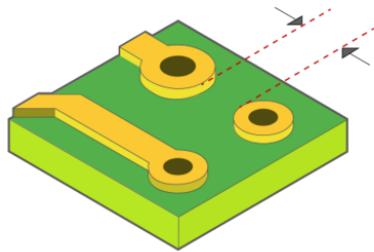
**Attribute Name:** DFF\_CS\_SLTPD\_TO\_NPMECHHL

## Slot Pad to Non-plated Mounting Hole

Checks the spacing between copper object slot pad and non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

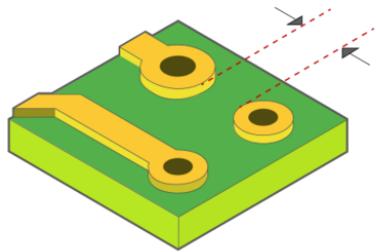
**Attribute Name:** DFF\_CS\_SLTPD\_TO\_NPMNTHL

## Slot Pad to Non-plated Slot Hole

Checks the spacing between copper object slot pad and non-plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

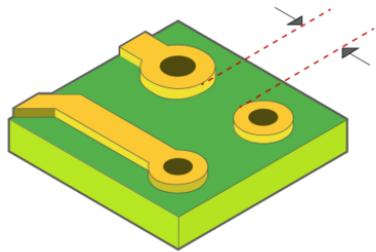
**Attribute Name:** DFF\_CS\_SLTPD\_TO\_NPSLTHL

## Slot Pad to Non-plated Tooling Hole

Checks the spacing between copper object slot pad and non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

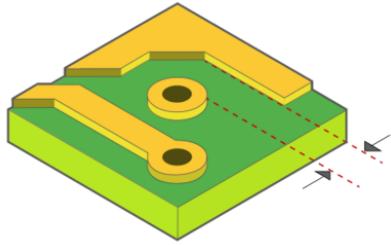
**Attribute Name:** DFF\_CS\_SLTPD\_TO\_NPTOOLHL

## Slot Pad to Non-signal Shape

Checks the spacing between copper object slot pad and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pg

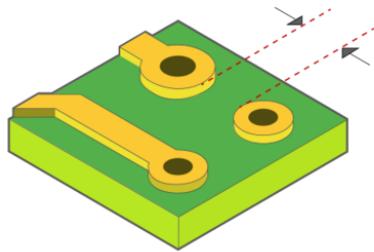
**Attribute Name:** DFF\_CS\_SLT\_PAD\_TO\_NSS

## Slot Pad to Plated Mechanical Hole

Checks the spacing between copper object slot pad and plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

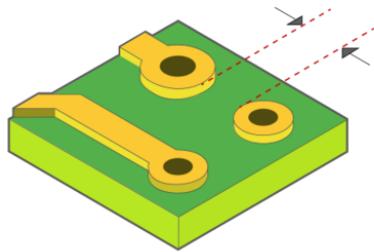
**Attribute Name:** DFF\_CS\_SLTPD\_TO\_PMECHHL

## Slot Pad to Plated Mounting Hole

Checks the spacing between copper object slot pad and plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

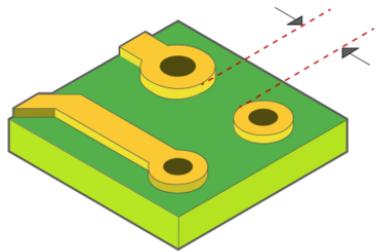
**Attribute Name:** DFF\_CS\_SLTPD\_TO\_PMNTHL

## Slot Pad to Plated Slot Hole

Checks the spacing between copper object slot pad and plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

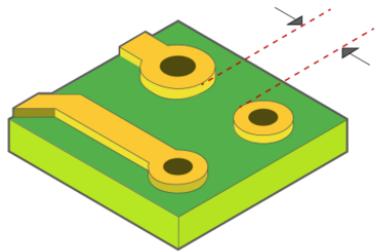
**Attribute Name:** DFF\_CS\_SLTPD\_TO\_PSLTHL

## Slot Pad to Plated Tooling Hole

Checks the spacing between copper object slot pad and plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

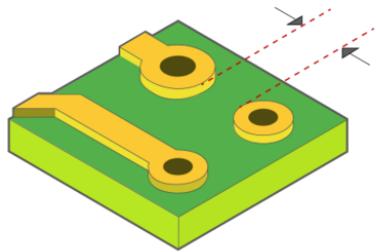
**Attribute Name:** DFF\_CS\_SLTPD\_TO\_PTOOLHL

## Slot Pad to Slot Pad

Checks the spacing between copper object slot pad and slot pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pp

**Attribute Name:** DFF\_CS\_SLTPD\_TO\_SLTPD

## Slot Pad to Text

Checks the spacing between copper object slot pad and text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pg

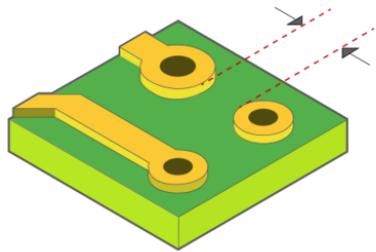
**Attribute Name:** DFF\_CS\_SLT\_PAD\_TO\_TEXT

## Slot Pad to Through Pin Hole

Checks the spacing between copper object slot pad and through pin hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

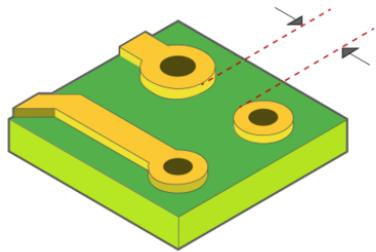
**Attribute Name:** DFF\_CS\_SLTPD\_TO\_THPNHL

## Slot Pad to Tooling Hole Pad

Checks the spacing between copper object slot pad and tooling hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pp

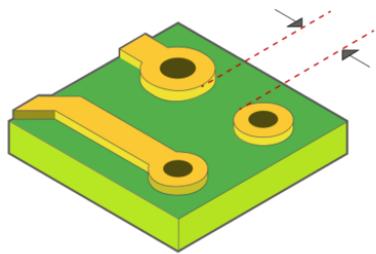
**Attribute Name:** DFF\_CS\_SLTPD\_TO\_TOOLHLPD

## Slot Pad to Via Hole

Checks the spacing between copper object slot pad and via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

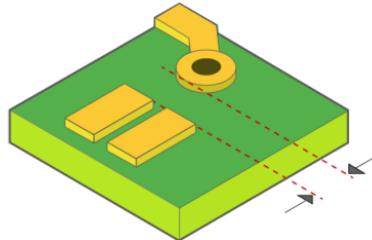
**Attribute Name:** DFF\_CS\_SLTPD\_TO\_VIAHL

## SMD Pin Pad to Blind/Buried Via Hole

Checks the spacing between copper object SMD pin pad and blind/buried via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

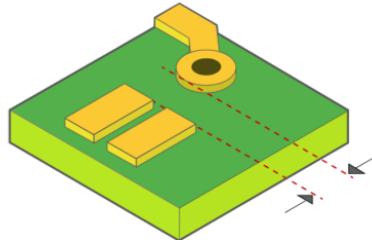
**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_BBVIAHL

## SMD Pin Pad to Blind/Buried Via Pad

Checks the spacing between copper object SMD pin pad and blind/buried via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pv

**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_BBVIAPD

## **SMD Pin Pad to Fiducial Pad**

Checks the spacing between copper object SMD pin pad and fiducial pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pp

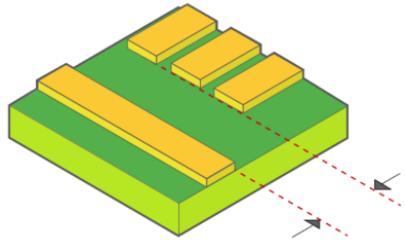
**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_FDCLPD

## SMD Pin Pad to Line

Checks the spacing between copper object SMD pin pad and line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pg

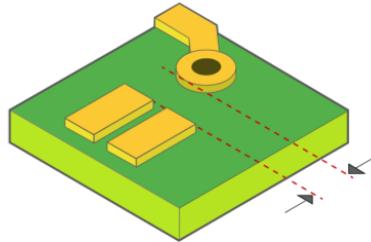
**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_LINE

## SMD Pin Pad to Micro Via Hole

Checks the spacing between copper object SMD pin pad and micro via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

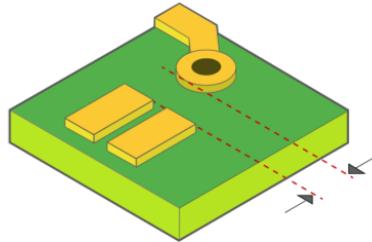
**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_UVIAHL

## SMDpin Pad to Micro Via Pad

Checks the spacing between copper object SMD pin pad and micro via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pv

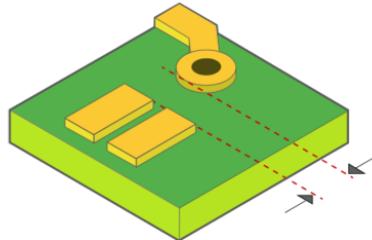
**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_UVIAPD

## SMD Pin Pad to Mounting Hole Pad

Checks the spacing between copper object SMD pin pad and mounting hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pp

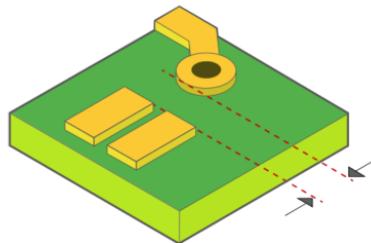
**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_MNTHLPD

## SMD Pin Pad to Non-plated Mechanical Hole

Checks the spacing between copper object SMD pin pad and non-plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

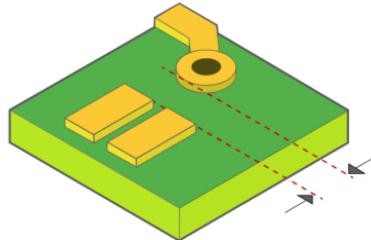
**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_NPMECHL

## SMD Pin Pad to Non-plated Mounting Hole

Checks the spacing between copper object SMD pin pad and non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

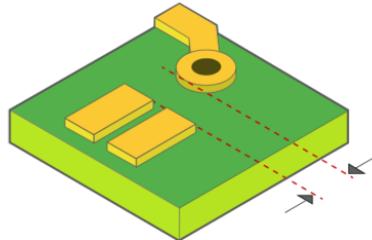
**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_NPMNTHL

## SMD Pin Pad to Non-plated Slot Hole

Checks the spacing between copper object SMD pin pad and non-plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

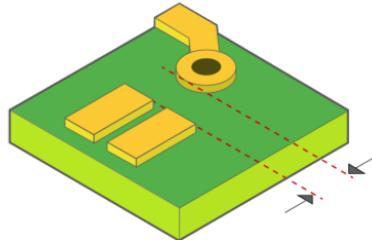
**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_NPSLTHL

## SMD Pin Pad to Non-plated Tooling Hole

Checks the spacing between copper object SMD pin pad and non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

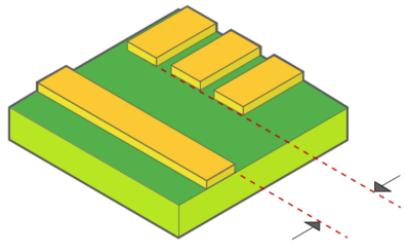
**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_NPTLHL

## SMD Pin Pad to Non-signal shape

Checks the spacing between copper object SMD pin pad and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pg

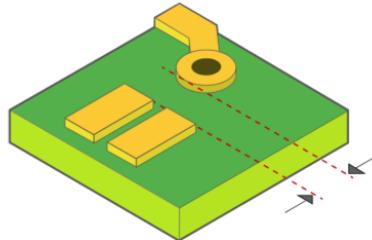
**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_NSS

## SMD Pin Pad to Plated Mechanical Hole

Checks the spacing between copper object SMD pin pad and plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

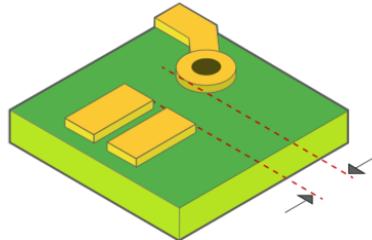
**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_PMECHHL

## SMD Pin Pad to Plated Mounting Hole

Checks the spacing between copper object SMD pin pad and plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

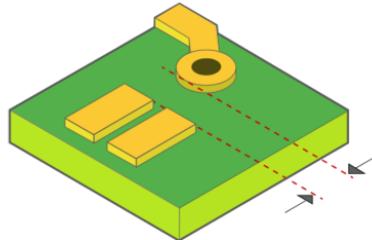
**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_PMNTHL

## SMD Pin Pad to Plated Slot Hole

Checks the spacing between copper object SMD pin pad and plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet



**DRC Code:** pd

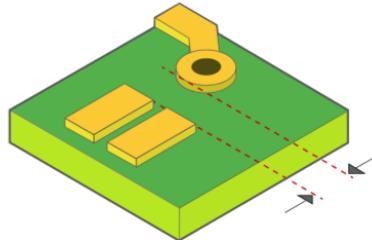
**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_PSLTHL

## SMD Pin Pad to Plated Tooling Hole

Checks the spacing between copper object SMD pin pad and plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

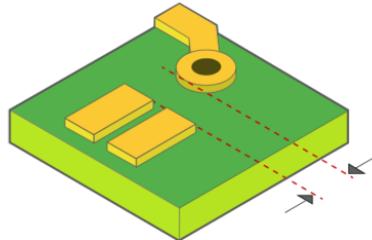
**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_PTOOLHL

## SMDpin Pad to Slot Pad

Checks the spacing between copper object SMD pin pad and micro pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pp

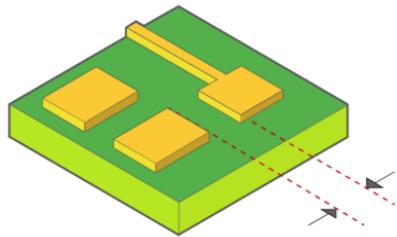
**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_SLTPD

## SMD Pin Pad to SMD Pin Pad

Checks the spacing between copper object SMD pin pad and SMD pin pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pp

**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_SMDPNPD

## SMD Pin Pad to Text

Checks the spacing between copper object SMD pin pad and text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pg

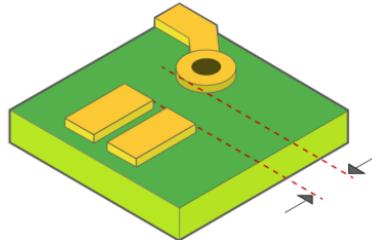
**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_TEXT

## SMD Pin Pad to Through Pin Hole

Checks the spacing between copper object SMD pin pad and through pin hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

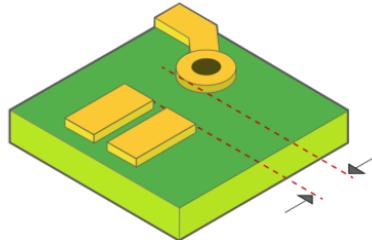
**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_THPNHL

## SMD Pin Pad to Tooling Hole Pad

Checks the spacing between copper object SMD pin pad and tooling hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pp

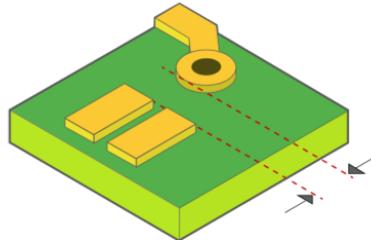
**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_TLHLPD

## SMD Pin Pad to Via Hole

Checks the spacing between copper object SMD pin pad and via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

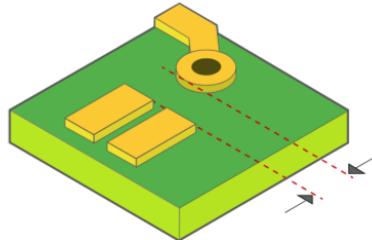
**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_VIAHL

## SMD Pin Pad to Via Pad

Checks the spacing between copper object SMD pin pad and via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pv

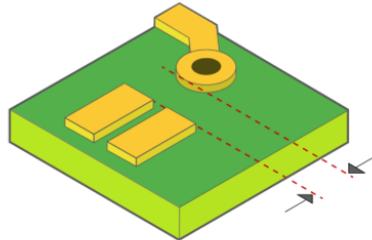
**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_VIAPD

## SMDPin Pad to Mechanical Hole Pad

Checks the spacing between copper object SMD pin pad and mechanical hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pp

**Attribute Name:** DFF\_CS\_SMDPNPD\_TO\_MECHLPD

## **Text to non signal shape**

Checks the spacing between copper object text and non signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** gg

**Attribute Name:** DFF\_CS\_TEXT\_TO\_NSS

## Text to Text

Checks the spacing between copper object text and text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** gg

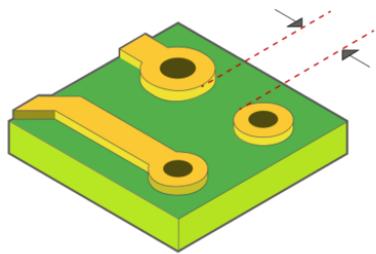
**Attribute Name:** DFF\_CS\_TEXT\_TO\_TEXT

## Through Pin Hole to Blind/Buried Via Hole

Checks the spacing between copper object through pin hole and blind/buried via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

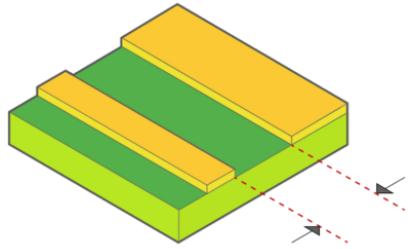
**Attribute Name:** DFF\_CS\_THPNHL\_TO\_BBVIAHL

## Through Pin Hole to Line

Checks the spacing between copper object through pin hole and line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

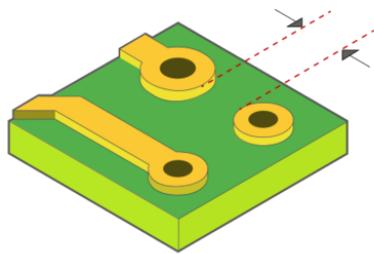
**Attribute Name:** DFF\_CS\_THPNHL\_TO\_LINE

## Through Pin Hole to Micro Via Hole

Checks the spacing between copper object through pin hole and micro via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

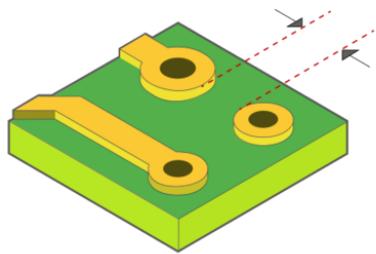
**Attribute Name:** DFF\_CS\_THPNHL\_TO\_UVIAHL

## Through Pin Hole to Non-plated Mechanical Hole

Checks the spacing between copper object through pin hole and non-plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

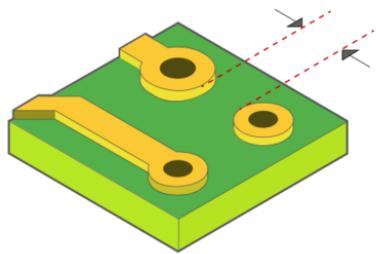
**Attribute Name:** DFF\_CS\_THPNHL\_TO\_NPMECHHL

## Throughpin Hole to Non-plated Mounting Hole

Checks the spacing between copper object through pin hole and non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

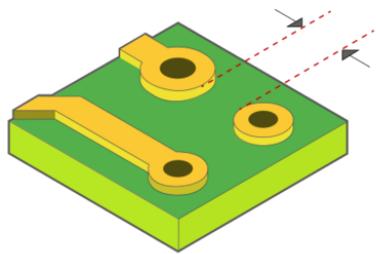
**Attribute Name:** DFF\_CS\_THPNHL\_TO\_NPMNTHL

## Through Pin Hole to Non-plated Slot Hole

Checks the spacing between copper object through pin hole and non-plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

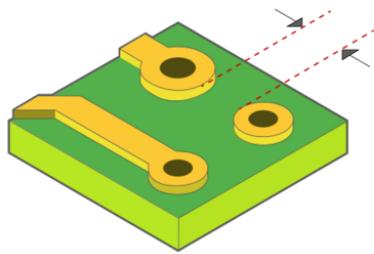
**Attribute Name:** DFF\_CS\_THPNHL\_TO\_NPSLTHL

## Through Pin Hole to Non-plated Tooling Hole

Checks the spacing between copper object through pin hole and non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

**Attribute Name:** DFF\_CS\_THPNHL\_TO\_NPTOOLHL

## Through Pin Hole to Non-signal Geometry

Checks the spacing between copper object through pin hole and non-signal geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** dg

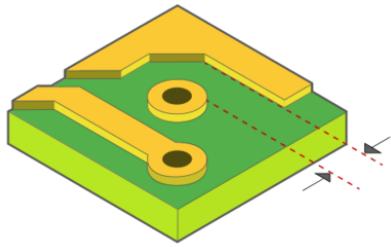
**Attribute Name:** DFF\_CS\_THPNHL\_TO\_NSG

## Through Pin Hole to Non-signal shape

Checks the spacing between copper object through pin hole and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

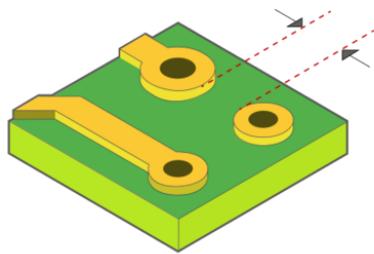
**Attribute Name:** DFF\_CS\_THPNHL\_TO\_NSS

## Through Pin Hole to Plated Mechanical Hole

Checks the spacing between copper object through pin hole and plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

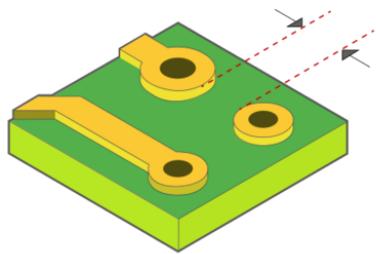
**Attribute Name:** DFF\_CS\_THPNHL\_TO\_PMECHHL

## Through Pin Hole to Plated Mounting Hole

Checks the spacing between copper object through pin hole and plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

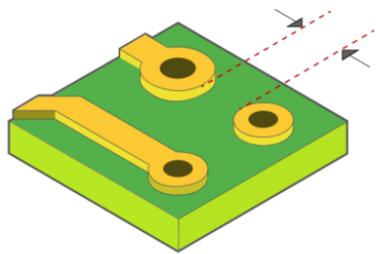
**Attribute Name:** DFF\_CS\_THPNHL\_TO\_PMNTHL

## Through Pin Hole to Plated Slot Hole

Checks the spacing between copper object through pin hole and plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

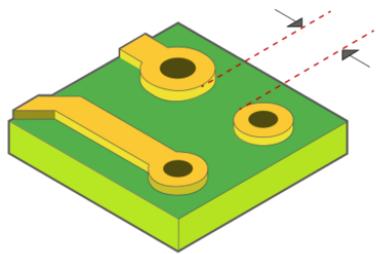
**Attribute Name:** DFF\_CS\_THPNHL\_TO\_PSLTHL

## Through Pin Hole to Plated Tooling Hole

Checks the spacing between copper object through pin hole and plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

**Attribute Name:** DFF\_CS\_THPNHL\_TO\_PTOOLHL

## Through Pin Hole to Text

Checks the spacing between copper object through pin hole and text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** dg

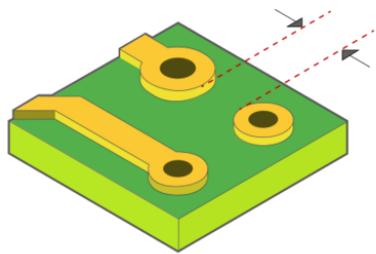
**Attribute Name:** DFF\_CS\_THPNHL\_TO\_TEXT

## Through Pin Hole to Through Pin Hole

Checks the spacing between copper object through pin hole and through pin hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

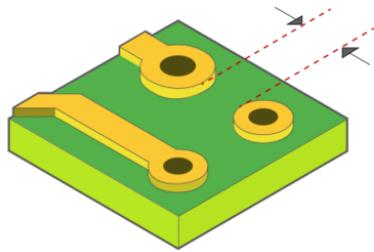
**Attribute Name:** DFF\_CS\_THPNHL\_TO\_THPNHL

## Through Pin Hole to Via Hole

Checks the spacing between copper object through pin hole and via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

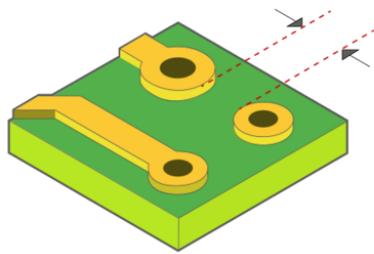
**Attribute Name:** DFF\_CS\_THPNHL\_TO\_VIAHL

## Through Pin Pad to Blind/Buried Via Hole

Checks the spacing between copper object through pin pad and blind/buried via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

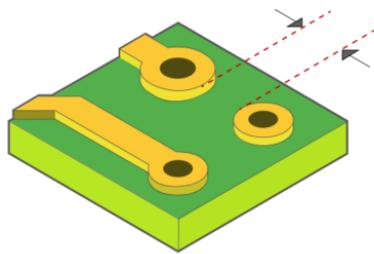
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_BBVIAHL

## Through Pin Pad to Blind/Buried Via Pad

Checks the spacing between copper object through pin pad and blind/buried via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pv

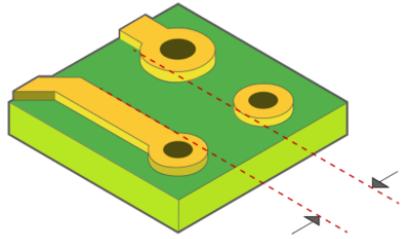
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_BBVIAPD

## Through Pin Pad to Line

Checks the spacing between copper object through pin pad and line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pg

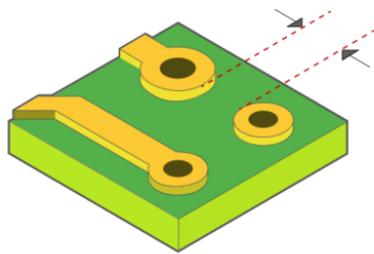
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_LINE

## Through Pin Pad to Mechanical Hole Pad

Checks the spacing between copper object through pin pad and mechanical hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pp

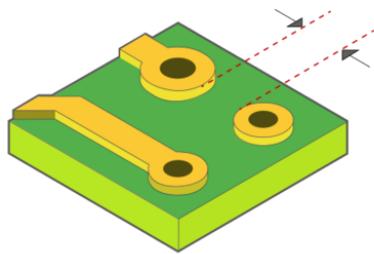
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_MECHHLPD

## Through Pin Pad to Micro Via Hole

Checks the spacing between copper object through pin pad and micro via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

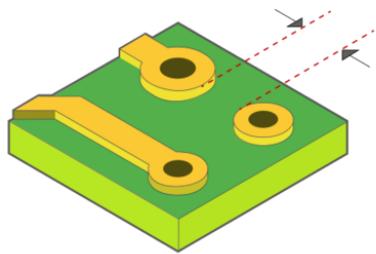
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_UVIAHL

## Through Pin Pad to Micro Via Pad

Checks the spacing between copper object through pin pad and micro via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pv

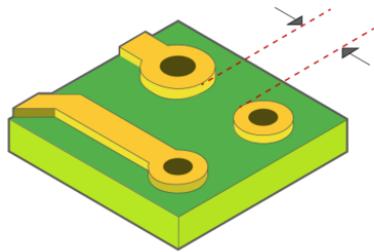
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_UVIAPD

## Through Pin Pad to Mounting Hole Pad

Checks the spacing between copper object through pin pad and mounting hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pp

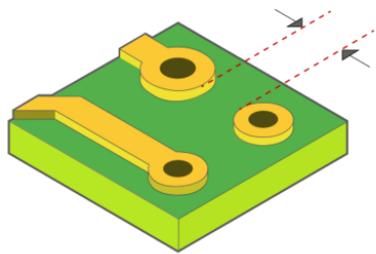
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_MNTHLPD

## Through Pin Pad to Non-plated Mechanical Hole

Checks the spacing between copper object through pin pad and non-plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

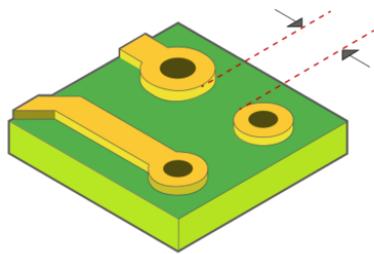
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_NPMECHHL

## Through Pin Pad to Non-plated Mounting Hole

Checks the spacing between copper object throughpin pad and non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

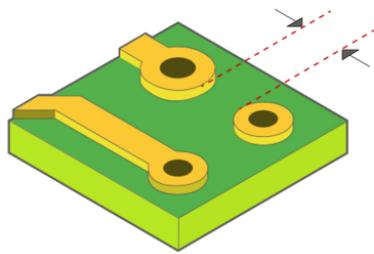
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_NPMNTHL

## Through Pin Pad to Non-plated Slot Hole

Checks the spacing between copper object through pin pad and non-plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

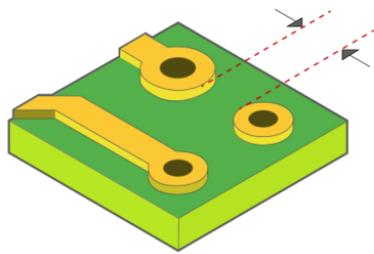
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_NPSLTHL

## Through Pin Pad to Non-plated Tooling Hole

Checks the spacing between copper object through pin pad and non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

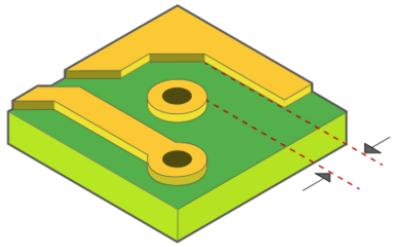
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_NPTOOLHL

## Through Pin Pad to Non-signal shape

Checks the spacing between copper object through pin pad and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet



**DRC Code:** pg

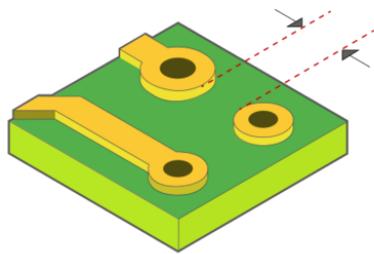
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_NSS

## Through Pin Pad to Plated Mechanical Hole

Checks the spacing between copper object through pin pad and plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

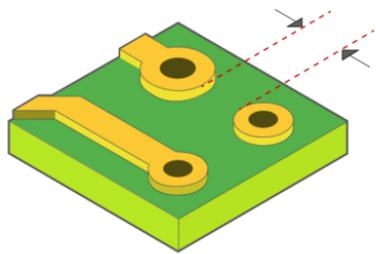
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_PMECHHL

## Through Pin Pad to Plated Mounting Hole

Checks the spacing between copper object through pin pad and plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

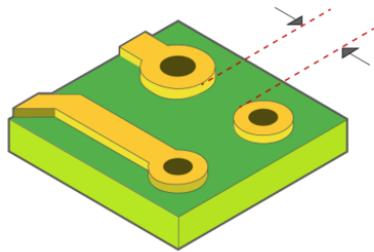
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_PMNTHL

## Through Pin Pad to Plated Slot Hole

Checks the spacing between copper object throughpin pad and plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

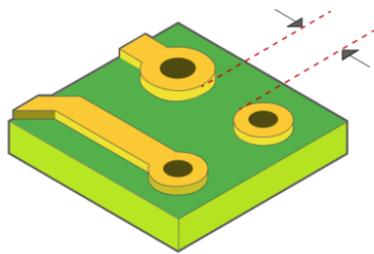
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_PSLTHL

## Through Pin Pad to Plated Tooling Hole

Checks the spacing between copper object through pin pad and plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

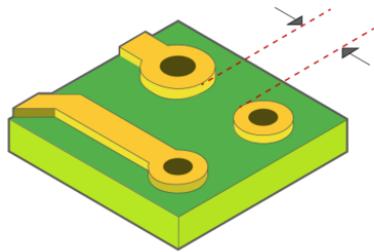
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_PTOOLHL

## Through Pin Pad to Slot Pad

Checks the spacing between copper object through pin pad and slot pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pp

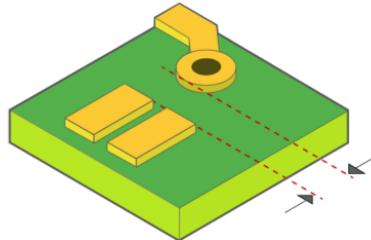
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_SLTPD

## Through Pin Pad to SMD Pin Pad

Checks the spacing between copper object through pin pad and SMD pin pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pp

**Attribute Name:** DFF\_CS\_THPNPD\_TO\_SMDPNPD

## Through Pin Pad to Text

Checks the spacing between copper object through pin pad and text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pg

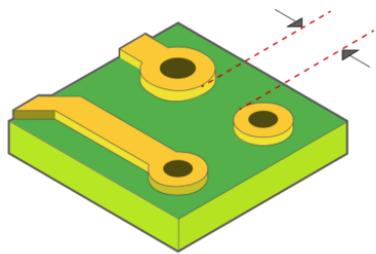
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_TEXT

## Through Pin Pad to Through Pin Hole

Checks the spacing between copper object through pin pad and through pin hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

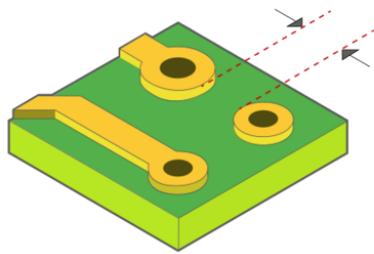
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_THPNHL

## Through Pin Pad to Through Pin Pad

Checks the spacing between copper object through pin pad and through pin pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pp

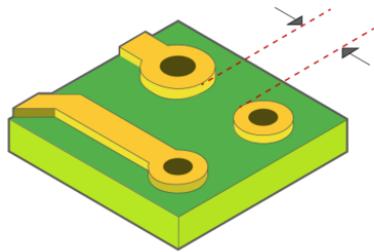
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_THPNPD

## Through Pin Pad to Tooling Hole Pad

Checks the spacing between copper object through pin pad and tooling hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pp

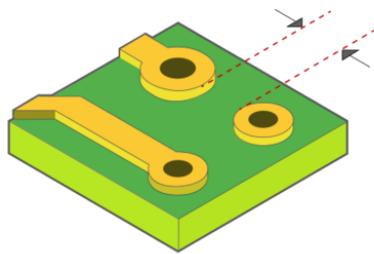
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_TOOLHLPD

## Through Pin Pad to Via Hole

Checks the spacing between copper object through pin pad and via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

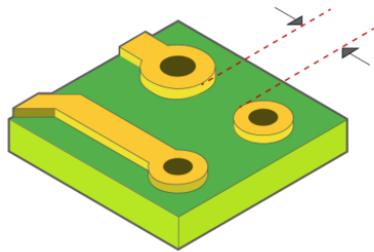
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_VIAHL

## Through Pin Pad to Via Pad

Checks the spacing between copper object through pin pad and via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pv

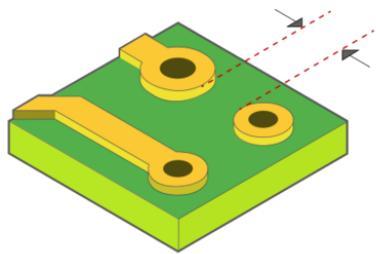
**Attribute Name:** DFF\_CS\_THPNPD\_TO\_VIAPD

## Tooling Hole Pad to Blind/Buried Via Hole

Checks the spacing between copper object tooling hole pad and blind/buried via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

**Attribute Name:** DFF\_CS\_TLHLPD\_TO\_BBVIAHL

## Tooling Hole Pad to Fiducial Pad

Checks the spacing between copper object tooling hole pad and fiducial pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pp

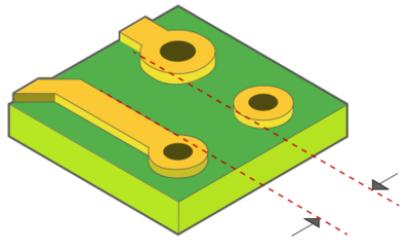
**Attribute Name:** DFF\_CS\_TOOLHLPD\_TO\_FDCLPD

## Tooling Hole Pad to Line

Checks the spacing between copper object tooling hole pad and line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pg

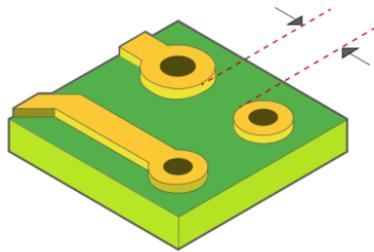
**Attribute Name:** DFF\_CS\_TOOLHLPD\_TO\_LINE

## Tooling Hole Pad to Micro Via Hole

Checks the spacing between copper object tooling hole pad and micro via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

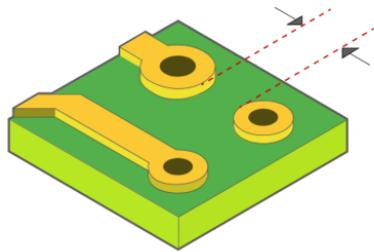
**Attribute Name:** DFF\_CS\_TOOLHLPD\_TO\_UVIAHL

## Tooling Hole Pad to Mounting Hole Pad

Checks the spacing between copper object tooling hole pad and mounting hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pp

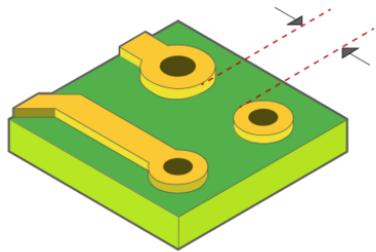
**Attribute Name:** DFF\_CS\_TLHLPD\_TO\_MNTHLPD

## Tooling Hole Pad to Non-plated Mechanical Hole

Checks the spacing between copper object tooling hole pad and non-plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

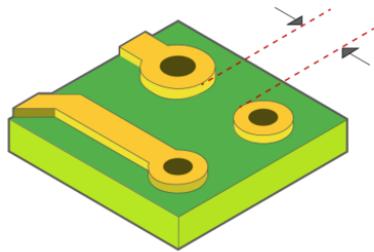
**Attribute Name:** DFF\_CS\_TLHLPD\_TO\_NPMECHL

## Tooling Hole Pad to Non-plated Mounting Hole

Checks the spacing between copper object tooling hole pad and non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

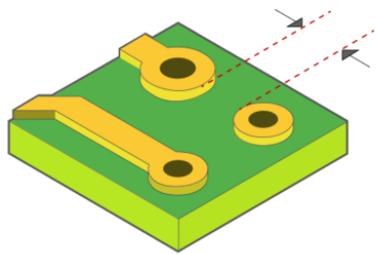
**Attribute Name:** DFF\_CS\_TLHLPD\_TO\_NPMNTHL

## Tooling Hole Pad to Non-plated Slot Hole

Checks the spacing between copper object tooling hole pad and non-plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

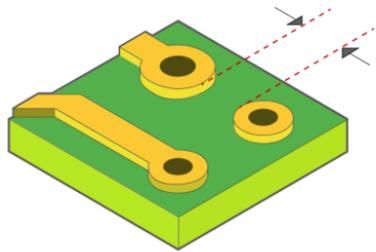
**Attribute Name:** DFF\_CS\_TLHLPD\_TO\_NPSLTHL

## Tooling Hole Pad to Non-plated Tooling Hole

Checks the spacing between copper object tooling hole pad and non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

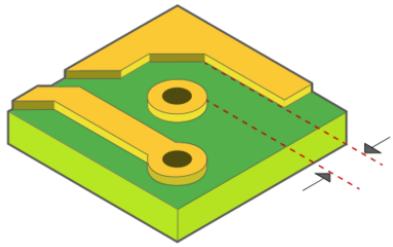
**Attribute Name:** DFF\_CS\_TLHLPD\_TO\_NPTLHL

## Tooling Hole Pad to Non-signal shape

Checks the spacing between copper object tooling hole pad and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pg

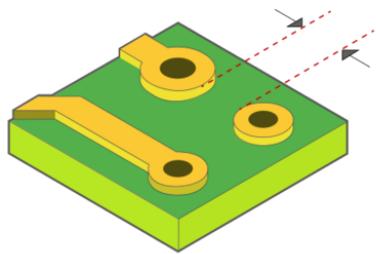
**Attribute Name:** DFF\_CS\_TOOLHLPD\_TO\_NSS

## Tooling Hole Pad to Plated Mechanical Hole

Checks the spacing between copper object tooling hole pad and plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

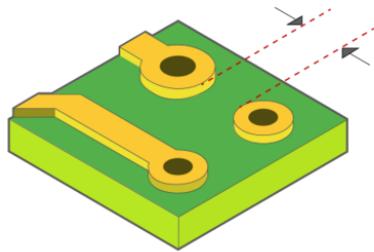
**Attribute Name:** DFF\_CS\_TLHLPD\_TO\_PMECHL

## Tooling Hole Pad to Plated Mounting Hole

Checks the spacing between copper object tooling hole pad and plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

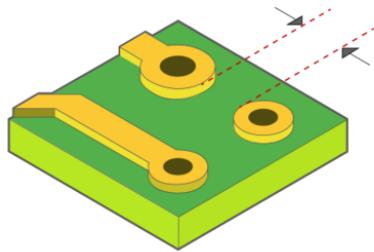
**Attribute Name:** DFF\_CS\_TOOLHLPD\_TO\_PMNTHL

## Tooling Hole Pad to Plated Slot Hole

Checks the spacing between copper object tooling hole pad and plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

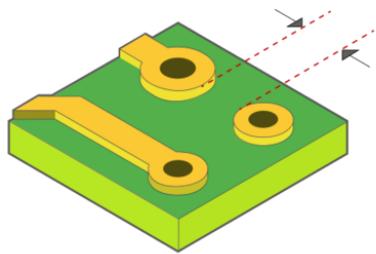
**Attribute Name:** DFF\_CS\_TOOLHLPD\_TO\_PSLTHL

## Tooling Hole Pad to Plated Tooling Hole

Checks the spacing between copper object tooling hole pad and plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

**Attribute Name:** DFF\_CS\_TLHLPD\_TO\_PTLHL

## Tooling Hole Pad to Text

Checks the spacing between copper object tooling hole pad and text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** pg

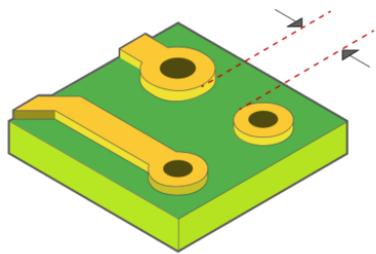
**Attribute Name:** DFF\_CS\_TOOLHLPD\_TO\_TEXT

## Tooling Hole Pad to Through Pin Hole

Checks the spacing between copper object tooling hole pad and through pin hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

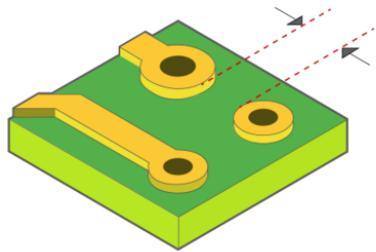
**Attribute Name:** DFF\_CS\_TOOLHLPD\_TO\_THPNHL

## Tooling Hole Pad to Tooling Hole Pad

Checks the spacing between copper object tooling hole pad and tooling hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pp

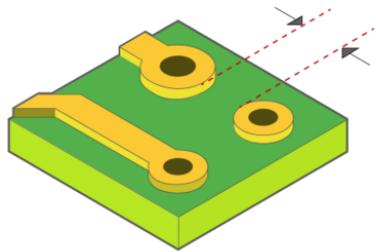
**Attribute Name:** DFF\_CS\_TLHLPD\_TO\_TLHLPD

## Tooling Hole Pad to Via Hole

Checks the spacing between copper object tooling hole pad and via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** pd

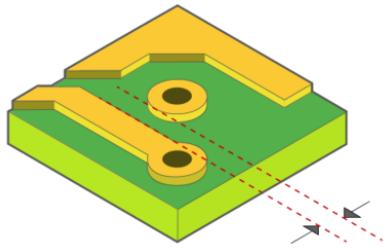
**Attribute Name:** DFF\_CS\_TOOLHLPD\_TO\_VIAHL

## Trace to Blind/Buried Via Hole

Checks the spacing between copper object trace and blind/buried via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** td

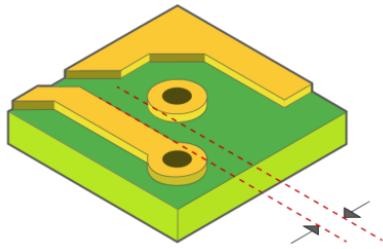
**Attribute Name:** DFF\_CS\_TRCTO\_BBVIAHL

## Trace to Blind/Buried Via Pad

Checks the spacing between copper object trace and blind/buried via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** tv

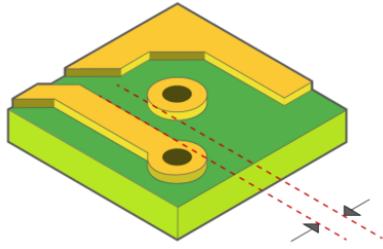
**Attribute Name:** DFF\_CS\_TRCTO\_BBVIAPD

## Trace to Fiducial Pad

Checks the spacing between copper object trace and fiducial pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** tp

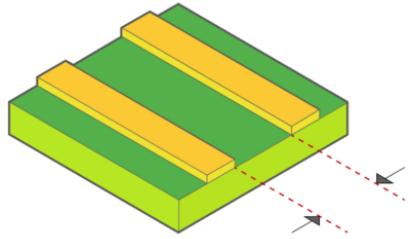
**Attribute Name:** DFF\_CS\_TRCTO\_FDCLPD

## Trace to Line Spacing

Checks the spacing between copper object trace and line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** tg

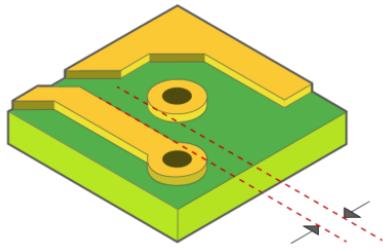
**Attribute Name:** DFF\_CS\_TRCTO\_LINE

## Trace to Mechanical Hole Pad

Checks the spacing between copper object trace and mechanical hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** tp

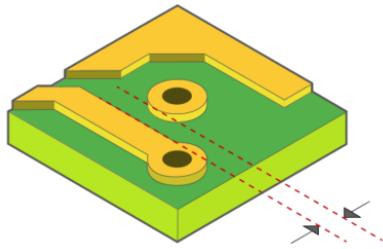
**Attribute Name:** DFF\_CS\_TRCTO\_MECHHLPD

## Trace to Micro Via Hole

Checks the spacing between copper object trace and micro via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** td

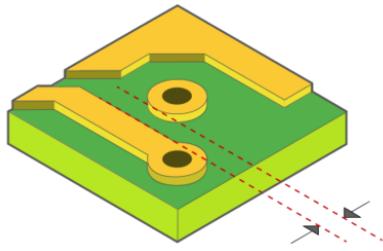
**Attribute Name:** DFF\_CS\_TRCTO\_UVIAHL

## Trace to Micro Via Pad

Checks the spacing between copper object trace and micro via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** tv

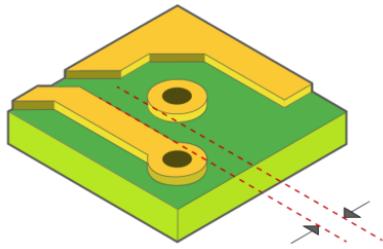
**Attribute Name:** DFF\_CS\_TRCTO\_UVIAPD

## Trace to Mounting Hole Pad

Checks the spacing between copper object trace and mounting hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** tp

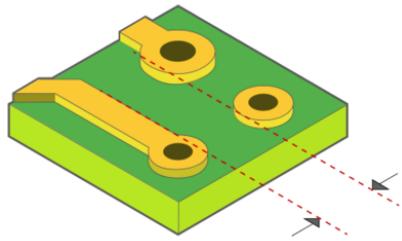
**Attribute Name:** DFF\_CS\_TRCTO\_MNTHLPD

## Trace to Non-plated Hole

Checks the spacing between copper-object trace and non-plated hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** td

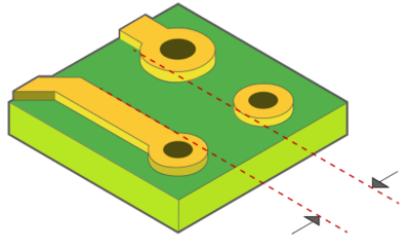
**Attribute Name:** DFF\_CS\_TRCTO\_NONPLHL

## Trace to Non-plated Mechanical Hole

Checks the spacing between copper object trace and non-plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** td

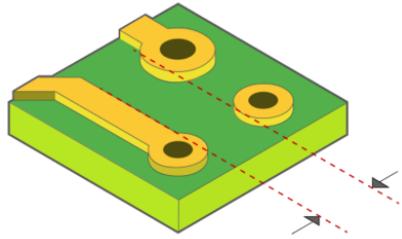
**Attribute Name:** DFF\_CS\_TRCTO\_NPMECHHL

## Trace to Non-plated Mounting Hole

Checks the spacing between copper object trace and non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** td

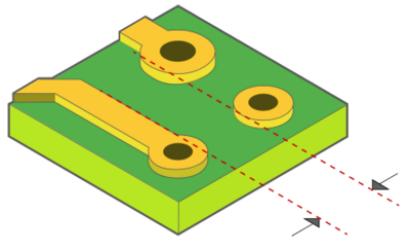
**Attribute Name:** DFF\_CS\_TRCTO\_NPMNTHL

## Trace to Non-plated Slot Hole

Checks the spacing between copper object trace and non-plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** td

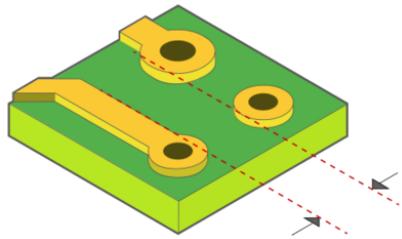
**Attribute Name:** DFF\_CS\_TRCTO\_NPSLTHL

## Trace to Non-plated Tooling Hole

Checks the spacing between copper object trace and non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** td

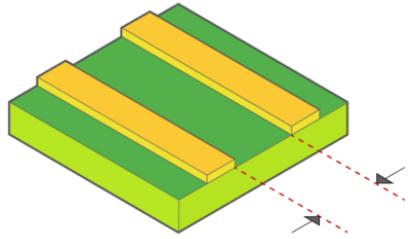
**Attribute Name:** DFF\_CS\_TRCTO\_NPTOOLHL

## Trace to Non-signal Geometry

Checks the spacing between copper-object trace and non-signal geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** tg

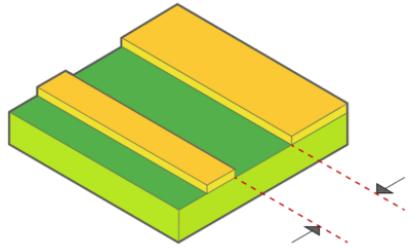
**Attribute Name:** DFF\_CS\_TRCTO\_NS<sub>G</sub>

## Trace to Non-signal shape

Checks the spacing between copper object trace and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** tg

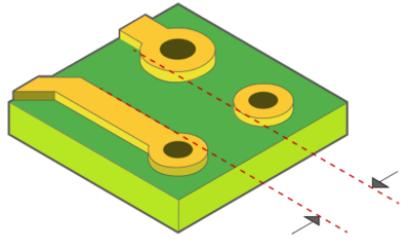
**Attribute Name:** DFF\_CS\_TRCTO\_NSS

## Trace to Pin Pad

Checks the spacing between copper-object trace and pin pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** tp

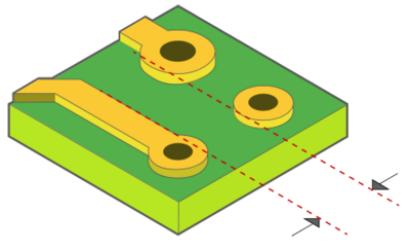
**Attribute Name:** DFF\_CS\_TRCTO\_PNPD

## Trace to Plated Mechanical Hole

Checks the spacing between copper object trace and plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** td

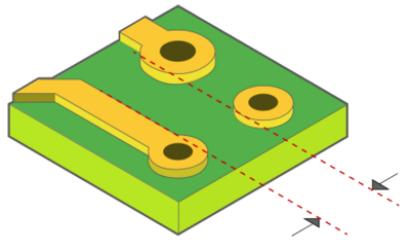
**Attribute Name:** DFF\_CS\_TRCTO\_PMECHHL

## Trace to Plated Mounting Hole

Checks the spacing between copper object trace and plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** td

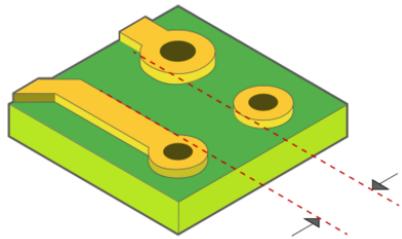
**Attribute Name:** DFF\_CS\_TRCTO\_PMNTHL

## Trace to Plated Slot Hole

Checks the spacing between copper object trace and plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** td

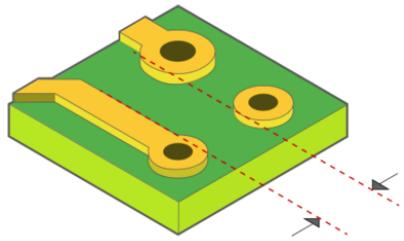
**Attribute Name:** DFF\_CS\_TRCTO\_PSLTHL

## Trace to Plated Tooling Hole

Checks the spacing between copper object trace and plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** td

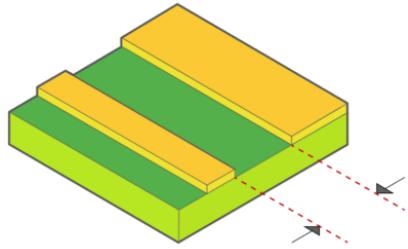
**Attribute Name:** DFF\_CS\_TRCTO\_PTOOLHL

## Trace to Shape

Checks the spacing between copper-object trace and shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** ts

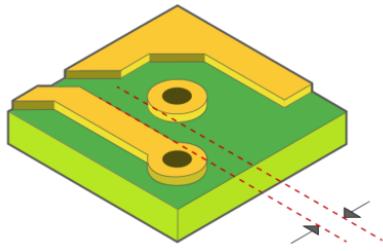
**Attribute Name:** DFF\_CS\_TRCTO\_SHP

## Trace to Slot Pad

Checks the spacing between copper object trace and slot pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** tp

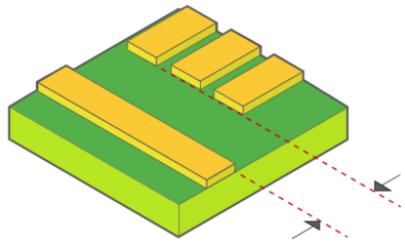
**Attribute Name:** DFF\_CS\_TRCTO\_SLTPD

## Trace to SMD Pin Pad

Checks the spacing between copper object trace and SMD pin pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** tp

**Attribute Name:** DFF\_CS\_TRCTO\_SMDPNPD

## Trace to Text

Checks the spacing between copper object trace and text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** tg

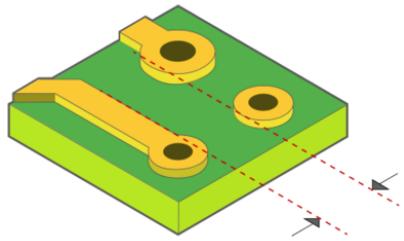
**Attribute Name:** DFF\_CS\_TRCTO\_TEXT

## Trace to Through Pin Hole

Checks the spacing between copper object trace and through pin hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** td

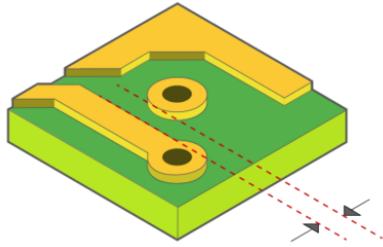
**Attribute Name:** DFF\_CS\_TRCTO\_THPNHL

## Trace to Through Pin Pad

Checks the spacing between copper object trace and through pin pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** tp

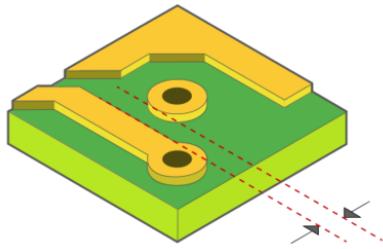
**Attribute Name:** DFF\_CS\_TRCTO\_THPNPD

## Trace to Tooling Hole Pad

Checks the spacing between copper object trace and tooling hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** tp

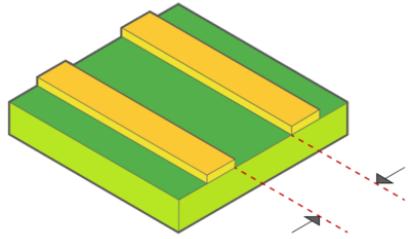
**Attribute Name:** DFF\_CS\_TRCTO\_TOOLHLPD

## Trace to Trace

Checks the spacing between copper-object trace and trace.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** tt

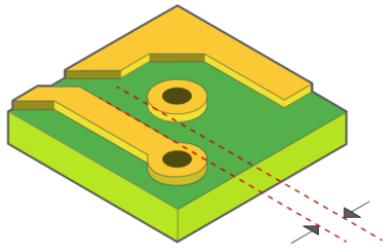
**Attribute Name:** DFF\_CS\_TRCTO\_TRACE

## Trace to Via Hole

Checks the spacing between copper object trace and via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** td

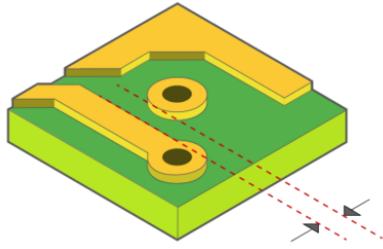
**Attribute Name:** DFF\_CS\_TRCTO\_VIAHL

## Trace to Via Pad

Checks the spacing between copper-object trace to via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** tv

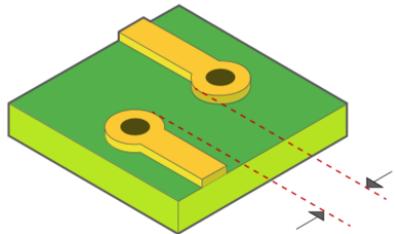
**Attribute Name:** DFF\_CS\_TRCTO\_VIAPDPRIM

## Via Hole to Blind/Buried Via Hole

Checks the spacing between copper object via hole and blind/buried via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

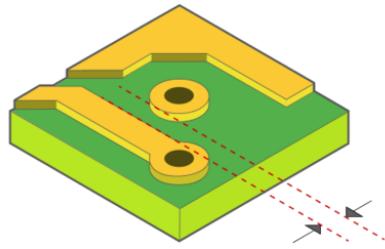
**Attribute Name:** DFF\_CS\_VIAHL\_TO\_BBVIAHL

## Via Hole to Line

Checks the spacing between copper object via hole and line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

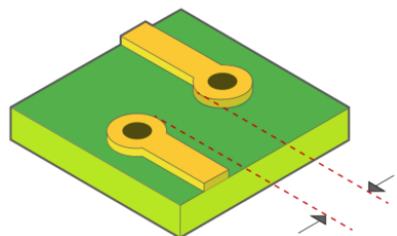
**Attribute Name:** DFF\_CS\_VIAHL\_TO\_LINE

## Via Hole to Micro Via Hole

Checks the spacing between copper object via hole and micro via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

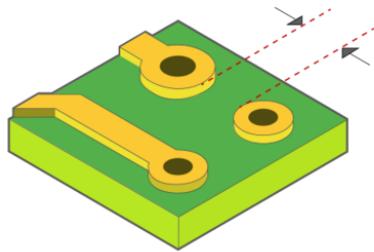
**Attribute Name:** DFF\_CS\_VIAHL\_TO\_UVIAHL

## Via Hole to Non-plated Mechanical Hole

Checks the spacing between copper object via hole and non-plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

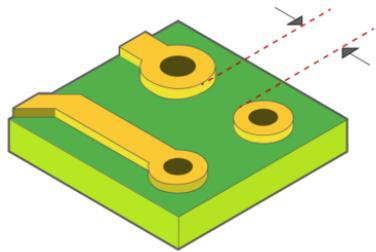
**Attribute Name:** DFF\_CS\_VIAHL\_TO\_NPMECHHL

## Via Hole to Non-plated Mounting Hole

Checks the spacing between copper object via hole and non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

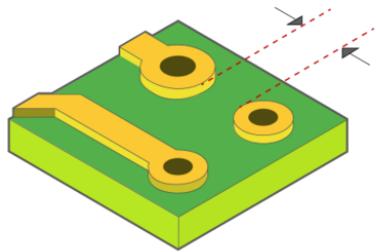
**Attribute Name:** DFF\_CS\_VIAHL\_TO\_NPMNTHL

## Via Hole to Non-plated Slot Hole

Checks the spacing between copper object via hole and non-plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

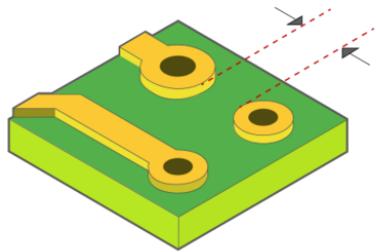
**Attribute Name:** DFF\_CS\_VIAHL\_TO\_NPSLTHL

## Via Hole to Non-plated Tooling Hole

Checks the spacing between copper object via hole and non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

**Attribute Name:** DFF\_CS\_VIAHL\_TO\_NPTOOLHL

## Via Hole to Non-signal Geometry

Checks the spacing between copper object via hole and non-signal geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** dg

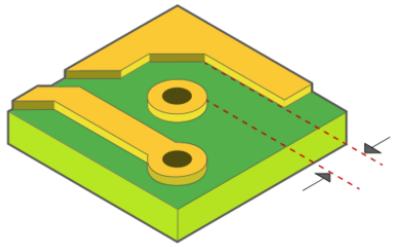
**Attribute Name:** DFF\_CS\_VIAHL\_TO\_NSG

## Via Hole to Non-signal shape

Checks the spacing between copper object via hole and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dg

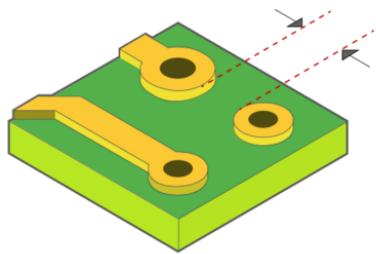
**Attribute Name:** DFF\_CS\_VIAHL\_TO\_NSS

## Via Hole to Plated Mechanical Hole

Checks the spacing between copper object via hole and plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

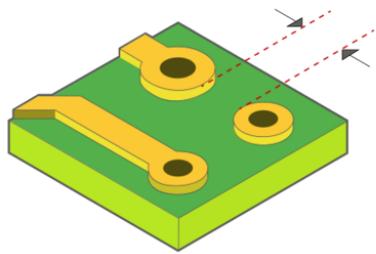
**Attribute Name:** DFF\_CS\_VIAHL\_TO\_PMECHHL

## Via Hole to Plated Mounting Hole

Checks the spacing between copper object via hole and plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

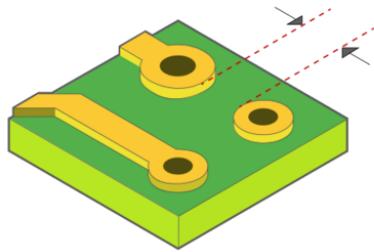
**Attribute Name:** DFF\_CS\_VIAHL\_TO\_PMNTHL

## Via Hole to Plated Slot Hole

Checks the spacing between copper object via hole and plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

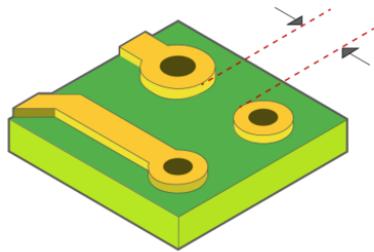
**Attribute Name:** DFF\_CS\_VIAHL\_TO\_PSLTHL

## Via Hole to Plated Tooling Hole

Checks the spacing between copper object via hole and plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

**Attribute Name:** DFF\_CS\_VIAHL\_TO\_PTOOLHL

## Via Hole to Text

Checks the spacing between copper object via hole and text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** dg

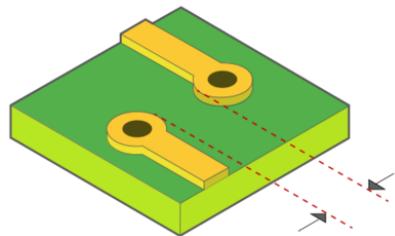
**Attribute Name:** DFF\_CS\_VIAHL\_TO\_TEXT

## Via Hole to Via Hole

Checks the spacing between copper object via hole and via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** dd

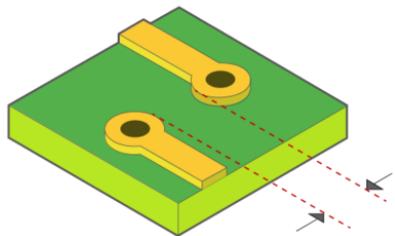
**Attribute Name:** DFF\_CS\_VIAHL\_TO\_VIAHL

## Via Pad to Blind/Buried Via Hole

Checks the spacing between copper object via pad and blind/buried via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

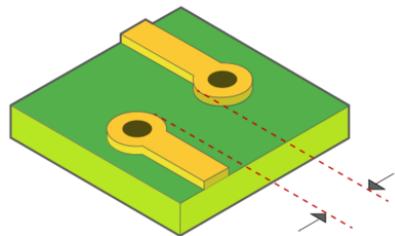
**Attribute Name:** DFF\_CS\_VIAPD\_TO\_BBVIAHL

## Via Pad to Blind/Buried Via Pad

Checks the spacing between copper object via pad and blind/buried via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** VV

**Attribute Name:** DFF\_CS\_VIAPD\_TO\_BBVIAPD

## Via Pad to Fiducial Pad

Checks the spacing between copper object via pad and fiducial pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** vp

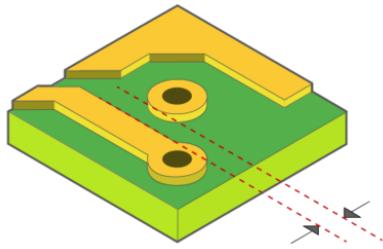
**Attribute Name:** DFF\_CS\_VIAPD\_TO\_FDCLPD

## Via Pad to Line

Checks the spacing between copper object via pad and line.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vg

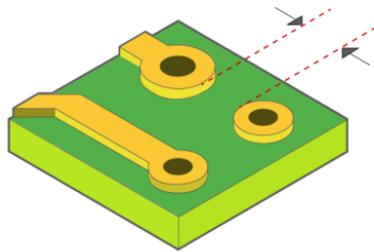
**Attribute Name:** DFF\_CS\_VIAPD\_TO\_LINE

## Via Pad to Mechanical Hole Pad

Checks the spacing between copper object via pad and mechanical hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vp

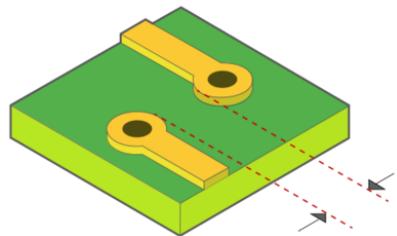
**Attribute Name:** DFF\_CS\_VIAPD\_TO\_MECHHLPD

## Via Pad to Micro Via Hole

Checks the spacing between copper object via pad and micro via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

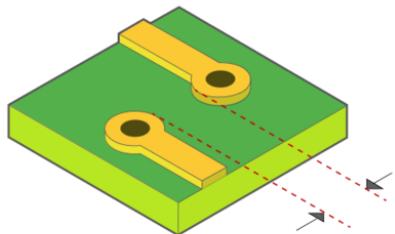
**Attribute Name:** DFF\_CS\_VIAPD\_TO\_UVIAHL

## Via Pad to Micro Via Pad

Checks the spacing between copper object via pad and micro via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** VV

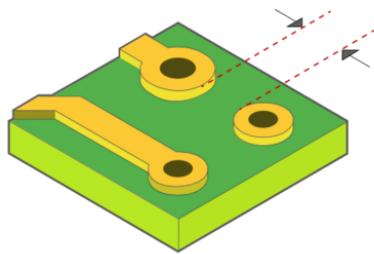
**Attribute Name:** DFF\_CS\_VIAPD\_TO\_UVIAPD

## Via Pad to Mounting Hole Pad

Checks the spacing between copper object via pad and mounting hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vp

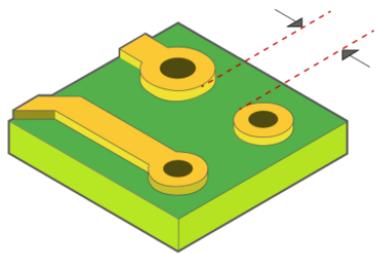
**Attribute Name:** DFF\_CS\_VIAPD\_TO\_MNTHLPD

## Via Pad to Non-plated Mechanical Hole

Checks the spacing between copper object via pad and non-plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

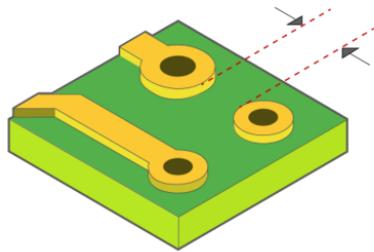
**Attribute Name:** DFF\_CS\_VIAPD\_TO\_NPMECHHL

## Via Pad to Non-plated Mounting Hole

Checks the spacing between copper object via pad and non-plated mounting hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

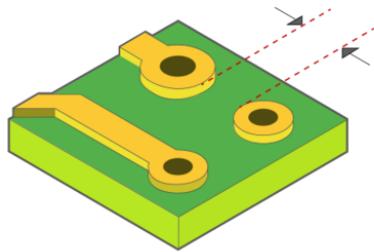
**Attribute Name:** DFF\_CS\_VIAPD\_TO\_PMNTHL

## Via Pad to Non-plated Slot Hole

Checks the spacing between copper object via pad and non-plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

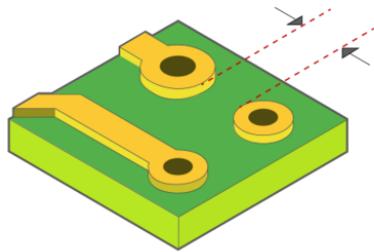
**Attribute Name:** DFF\_CS\_VIAPD\_TO\_NPSLTHL

## Via Pad to Non-plated Tooling Hole

Checks the spacing between copper object via pad and non-plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

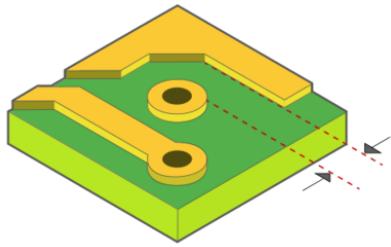
**Attribute Name:** DFF\_CS\_VIAPD\_TO\_NPTOOLHL

## Via Pad to Non-signal shape

Checks the spacing between copper object via pad and non-signal shape.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vg

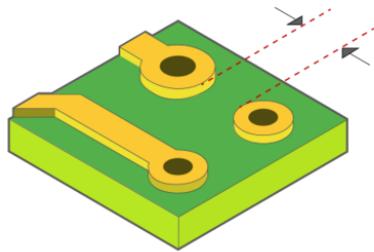
**Attribute Name:** DFF\_CS\_VIAPD\_TO\_NSS

## Via Pad to Plated Mechanical Hole

Checks the spacing between copper object via pad and plated mechanical hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

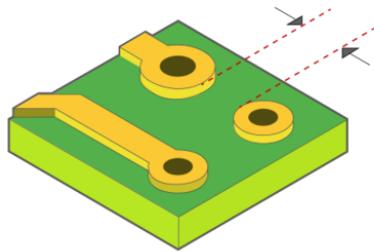
**Attribute Name:** DFF\_CS\_VIAPD\_TO\_PMECHHL

## Via Pad to Plated Slot Hole

Checks the spacing between copper object via pad and plated slot hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

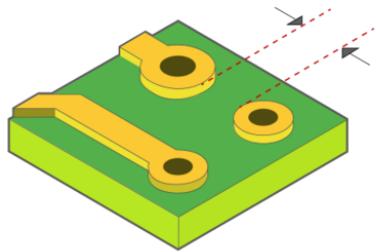
**Attribute Name:** DFF\_CS\_VIAPD\_TO\_PSLTHL

## Via Pad to Plated Tooling Hole

Checks the spacing between copper object via pad and plated tooling hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

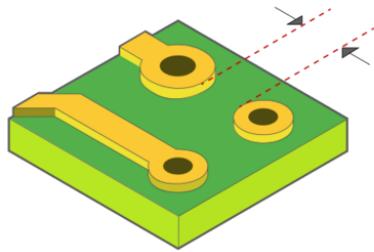
**Attribute Name:** DFF\_CS\_VIAPD\_TO\_PTOOLHL

## Via Pad to Slot Pad

Checks the spacing between copper object via pad and slot pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vp

**Attribute Name:** DFF\_CS\_VIAPD\_TO\_SLTPD

## Via Pad to Text

Checks the spacing between copper object via pad and text.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet

**DRC Code:** vg

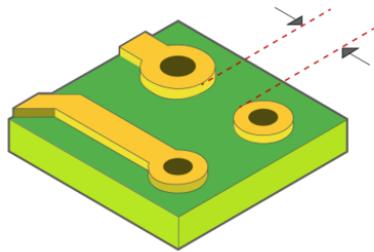
**Attribute Name:** DFF\_CS\_VIAPD\_TO\_TEXT

## Via Pad to Through Pin Hole

Checks the spacing between copper object via pad and through pin hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

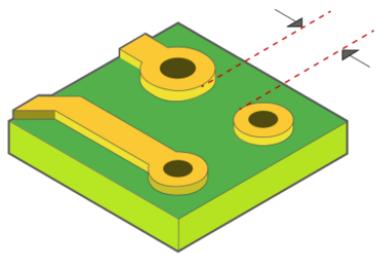
**Attribute Name:** DFF\_CS\_VIAPD\_TO\_THPNHL

## Via Pad to Tooling Hole Pad

Checks the spacing between copper object via pad and tooling hole pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vp

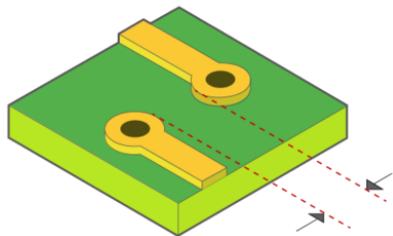
**Attribute Name:** DFF\_CS\_VIAPD\_TO\_TOOLHLPD

## Via Pad to Via Hole

Checks the spacing between copper object via pad and via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** vd

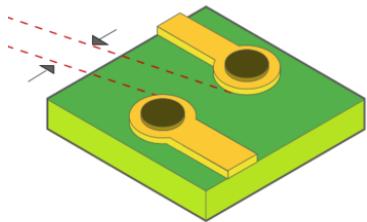
**Attribute Name:** DFF\_CS\_VIAPD\_TO\_VIAHL

## Via Pad to Via Pad

Checks the spacing between copper-object via pad and via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFCopperSpacingCSet, DFFCopperSpacingAcceptableCSet



**DRC Code:** VV

**Attribute Name:** DFF\_CS\_VIAPRIM\_TO\_VIAPRIM

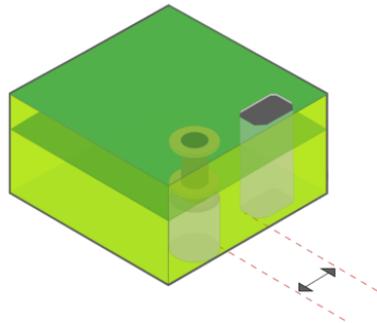
# Cutout

## CutOut to backdrilled pin hole

This rule defines the minimum allowable distance between a cutout to a pin hole that is backdrilled.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



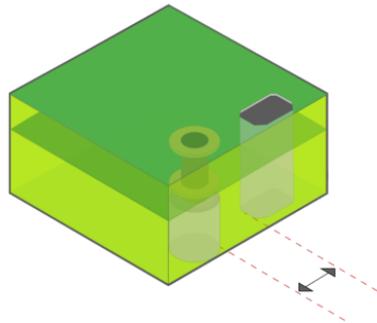
**DRC Code:** on

**Attribute Name:** DFF\_OLN\_CO\_BDLPINHL

## CutOut to backdrilled via hole

This rule defines the minimum allowable distance between a cutout to a via hole that is backdrilled. **Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** on

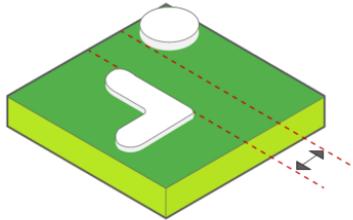
**Attribute Name:** DFF\_OLN\_CO\_BDLVIAHL

## Cutout to Blind/Buried via Hole Spacing

Checks the minimum required clearance between blind/buried via hole edges and cutout geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** od

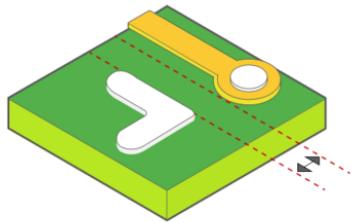
**Attribute Name:** DFF\_OLN\_TO\_CO\_BBVIA\_HOLE

## Cutout to Blind/Buried Via Pad Spacing

Checks the minimum required clearance between blind/buried via pad edges and cutout geometries.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** ov

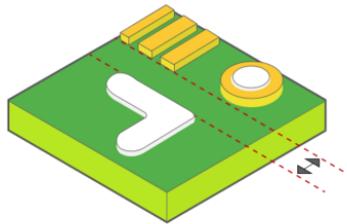
**Attribute Name:** DFF\_OLN\_CO\_TO\_BBVIA

## Cutout to Fiducial Spacing

Checks the minimum required clearance between fiducial pad edges and cutout geometries.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** of

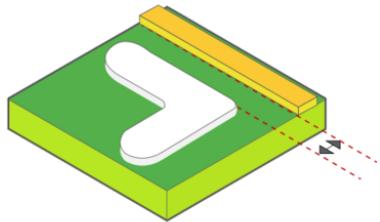
**Attribute Name:** DFF\_OLN\_CO\_TO\_FDCL

## Cutout to line Spacing

Checks the minimum required clearance between the edges of lines that are not part of any net and cutout geometries.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** os

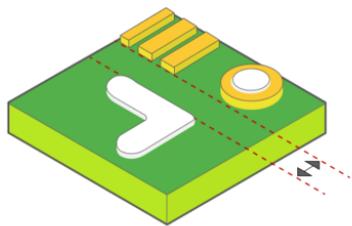
**Attribute Name:** DFF\_OLN\_CO\_TO\_LINE

## Cutout to Mechanical Hole Pad Spacing

Checks the minimum required clearance between mechanical hole pad edges and cutout geometries.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** om

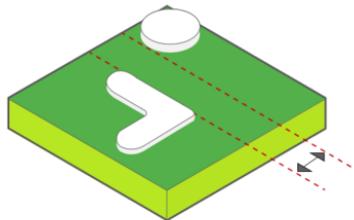
**Attribute Name:** DFF\_OLN\_CO\_TO\_MECHLPD

## Cutout to micro via Hole Spacing

Checks the minimum required clearance between micro via hole edges and cutout geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** od

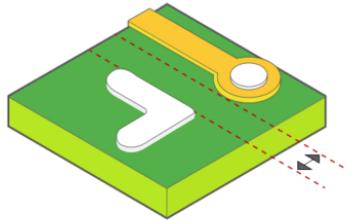
**Attribute Name:** DFF\_OLN\_TO\_CO\_MICROVIA\_HOLE

## Cutout to Micro Via Pad Spacing

Checks the minimum required clearance between micro pad edge and cutout geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** ov

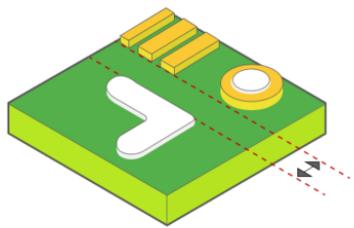
**Attribute Name:** DFF\_OLN\_CO\_TO\_UVIAPD

## Cutout to Mounting Hole Pad Spacing

Checks the minimum required clearance between non-plated mounting hole pad edges and cutout geometries.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** oM

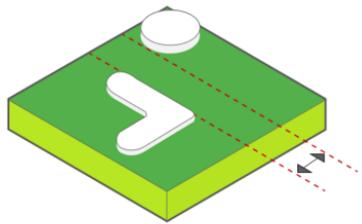
**Attribute Name:** DFF\_OLN\_CO\_TO\_MNTHLPD

## Cutout to Non-plated Mechanical Hole Spacing

Checks the minimum required clearance between non-plated mechanical hole edges and cutout geometries.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** on

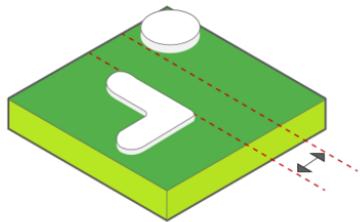
**Attribute Name:** DFF\_OLN\_CO\_TO\_NPMECHHL

## Cutout to Non-plated Mounting Hole Spacing

Checks the minimum required clearance between non-plated mounting hole edges and cutout geometries.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** on

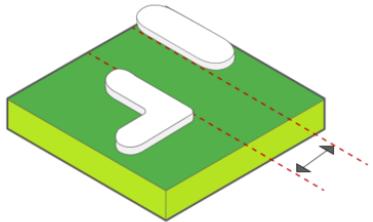
**Attribute Name:** DFF\_OLN\_CO\_TO\_NPMNTHL

## Cutout to Non-plated Slot Hole Spacing

Checks the minimum required clearance between non-plated slot hole edges and cutout geometries.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** on

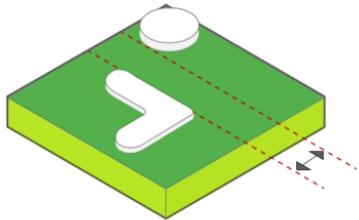
**Attribute Name:** DFF\_OLN\_CO\_TO\_NPSLTHL

## Cutout to Non-plated Tooling Hole Spacing

Checks the minimum required clearance between non-plated tooling hole edges and cutout geometries.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** on

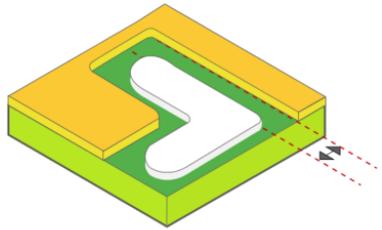
**Attribute Name:** DFF\_OLN\_CO\_TO\_NPTOOLHL

## Cutout to Non-signal Shape Spacing

Checks the minimum required clearance between a shape that is not part of any net edge to cutout geometries.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** on

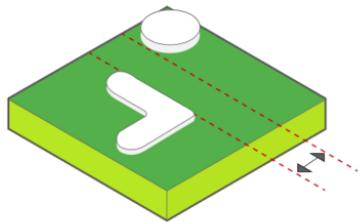
**Attribute Name:** DFF\_OLN\_CO\_TO\_NSS

## Cutout to plated mechanical hole Spacing

Checks the minimum required clearance between plated mechanical hole edges and cutout geometries.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** od

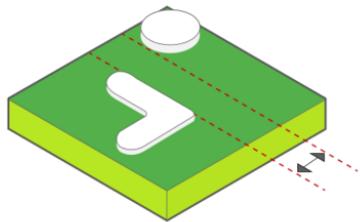
**Attribute Name:** DFF\_OLN\_TO\_CO\_PMECHHL

## Cutout to plated mounting hole Spacing

Checks the minimum required clearance between plated mounting hole edges and cutout geometries.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** od

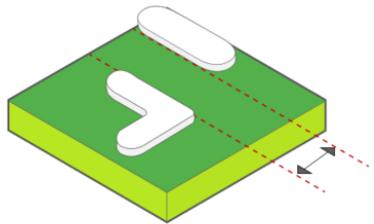
**Attribute Name:** DFF\_OLN\_TO\_CO\_PMNTHL

## Cutout to plated slot hole Spacing

Checks the minimum required clearance between plated slot hole edges and cutout geometries.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** od

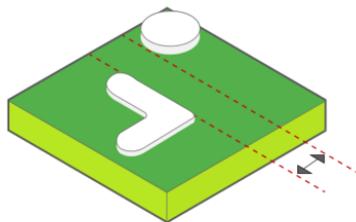
**Attribute Name:** DFF\_OLN\_TO\_CO\_PSLTHL

## Cutout to plated tooling hole Spacing

Checks the minimum required clearance between plated tooling hole edges and cutout geometries.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** od

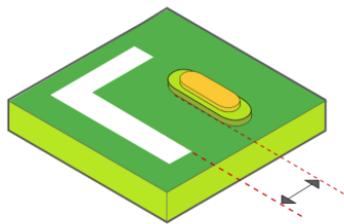
**Attribute Name:** DFF\_OLN\_TO\_CO\_PTOOLHL

## Cutout to Slot Pad Spacing

Checks the minimum required clearance between slot pad edge and cutout geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** os

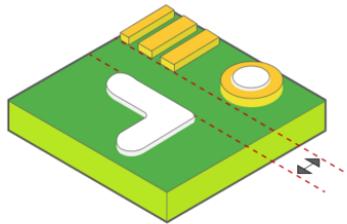
**Attribute Name:** DFF\_OLN\_CO\_TO\_SLTPD

## Cutout to SMD Pin Spacing

Checks the minimum required clearance between SMD pin pad edge and cutout geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** ot

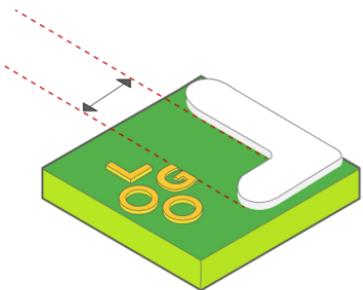
**Attribute Name:** DFF\_OLN\_CO\_TO\_SMDPN

## Cutout to Text Spacing

Checks the minimum required clearance between text and cutout geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** ox

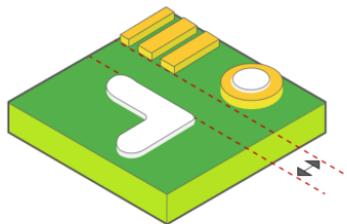
**Attribute Name:** DFF\_OLN\_CO\_TO\_TEXT

## Cutout to Through Pin Pad Spacing

Checks the minimum required clearance between thru pin pad edge and cutout geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** ot

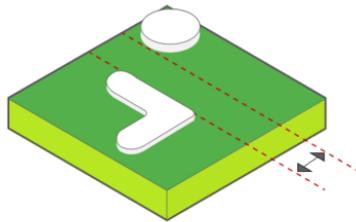
**Attribute Name:** DFF\_OLN\_CO\_TO\_TPINPD

## Cutout to Thru pin Hole Spacing

Checks the minimum required clearance between thru pin hole edge and cutout geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** od

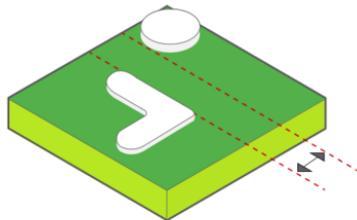
**Attribute Name:** DFF\_OLN\_CO\_TO\_THRPIN\_HOLE

## Cutout to Thru via Hole Spacing

Checks the minimum required clearance between thru via edge and cutout geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** od

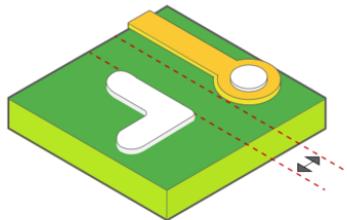
**Attribute Name:** DFF\_OLN\_CO\_TO\_THRVIA\_HOLE

## Cutout to Thruvia Pad Spacing

Checks the minimum required clearance between thru via pad edge and cutout geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** os

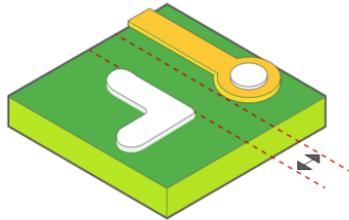
**Attribute Name:** DFF\_OLN\_CO\_TO\_THVIAPAD

## Cutout to Tooling Hole Pad Spacing

Checks the minimum required clearance between tooling hole pad edge and cutout geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** ot

**Attribute Name:** DFF\_OLN\_CO\_TO\_TOOLHLPD

# General

## Allow overlapping pad/shape on the same net

This is an option to specify that overlapping pad with shape or pad with pad should not be treated as violation in case they are on the same net. The pads can be from via or pin.

In copper spacing checks, if two pads of the same net overlap, or if a pad overlaps with a shape on the same net in case of static shape, fabrication DRC violations are reported with actual value as OVERLAP. This may be perfectly valid case from manufacturing perspective. If this option is set, those DRCs will not be reported.

## Bottom Tented via list

Bottom Tented vias are the vias that do not have solder mask opening on their bottom side. This attribute captures the vias that need to be treated as bottom tented via. The missing mask check on the bottom layer will not be performed on the vias mentioned in this attribute.

## Manufacturing Tolerance Allowance

This attribute specifies the tolerance allowance to be considered during evaluation of some DFF spacing rules. In case the difference between constraint and actual spacing value is less than allowance value then DRC will not be shown. This allowance is always positive. The tolerance value needs to be captured per worksheets even if intention is to provide same tolerance. The tolerance capability is now honored for a subset of DFF mask and copper spacing rules. Following are the rules for which tolerance capability is enabled.

### DFF mask rules

- Mask Slivers
- Mask to traces
- Mask to Shape

### DFF Copper spacing rules

- Trace to trace
- Trace to shape
- Trace to all types of pin pads
- Trace to all types of via pads
- Trace to fiducials
- Trace to all types of holes
- Trace to all types of non signal geometries
- Trace to text
- Shape to shape
- Shape to all types of pin pads
- Shape to all types of via pads
- Shape to fiducials
- Shape to all types of holes
- Shape to non-signal geometries
- Shape to text

- All types of pin pads to non-signal geometries
- All types of pin pads to text
- Fiducials to non-signal geometries
- Fiducials to Text
- All types of holes to non-signal geometries
- All types of holes to Text
- All Non-signal geometries to all types of non-signal geometries
- All Non-signal geometries to text

## Maximum Micro Via Alignment Tolerance

This attribute specifies the tolerance limit for alignment of micro vias that can be vertically stacked.

## Minimum shape area for mask opening check

The check for ensuring minimum void opening(Mask opening on shapes) reduces potential bubbling during manufacturing process. But this check is not relevant for small shapes. This attribute is for capturing minimum area of shapes that qualify for mask opening. If any value is specified here, the minimum mask opening check will run only for those shapes whose area is larger than this value. Otherwise, the check will run for all the shapes if turned on. This attribute assumes area value in design units( say, sq mil or sq nm).

## **Tented via list**

Tented vias are the vias that do not have solder mask opening. This attribute captures the vias that need to be treated as tented via. The missing mask check will not be performed on the vias mentioned in this attribute.

## **Top Tented via list**

Top Tented vias are the vias that do not have solder mask opening on their top side. This attribute captures the vias that need to be treated as top tented via. The missing mask check on the top layer will not be performed on the vias mentioned in this attribute.

## Zero line width

This attribute specifies the line width to be considered during evaluation of fabrication checks with lines whose width is zero. By default, this field will show the maximum value specified for undefined line width over all the Film records mentioned in the artwork parameter record. Set new values to override the artwork parameter value for evaluation of fabrication checks. This value is also applicable for text line if photo plot width is zero. For texts, the DRC engine looks for photo plot width specified in the text block and if that is zero, this value will be assumed.

# Holes

## Checks Alignment of Micro Via On Core Via

This rule defines the alignment of micro vias that can be vertically stacked over core via.

**DRC Code:** ha

**Attribute Name:** DFF\_HL\_UVIASCORE\_ALGN

**Applicable Objects:** DffHoleCSet

## Checks Alignment of Micro Vias

This rule defines the alignment of micro vias that can be vertically stacked.

**DRC Code:** ha

**Attribute Name:** DFF\_HL\_UVIAS\_ALGN

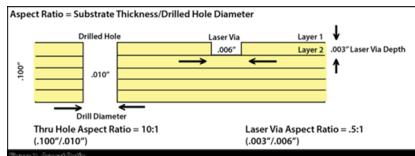
**Applicable Objects:** DffHoleCSet

## Hole Micro Via Aspect Ratio

Checks the maximum aspect ratio for micro via.

**Legal Values:** Percentage Units

**Applicable Objects:** DffHoleCSet



**DRC Code:** hv

**Attribute Name:** DFFHLS\_MICROVIA\_ASPECT\_RATIO

## Hole Plated Through Hole Aspect Ratio

Checks the maximum aspect ratio for thru hole pin.

**Legal Values:** Percentage Units

**Applicable Objects:** DffHoleCSet

**DRC Code:** ht

**Attribute Name:** DFFHLS\_PTH\_ASPECT\_RATIO

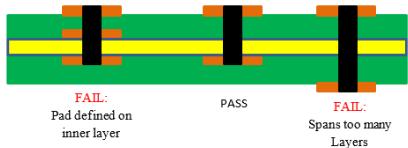
## Hole Skip Via

Skip vias span more than two layers to make a connection. The layer(s) contained between the start and end layer should not contain a pad definition. There is also a limit as to the number of layers a skip via can pass through.

- Maximum number of layers for a skip via
- A skip via that has a pad defined and not flagged, will be removed as an unused internal pad definition

**DRC Code:** hs

**Attribute Name:** DFFHLS\_SKIP\_VIA



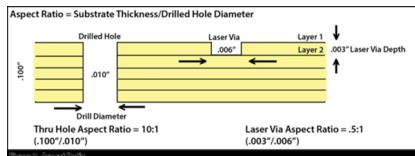
**Applicable Objects:** DffHoleCSet

## Hole Via Aspect Ratio

Checks the maximum aspect ratio for any type of via, excluding micro via.

**Legal Values:** Percentage Units

**Applicable Objects:** DffHoleCSet



**DRC Code:** hv

**Attribute Name:** DFFHLS\_VIA\_ASPECT\_RATIO

## Max Micro Via Stack Count

This rule defines the maximum number of micro vias that can be vertically stacked together.

**DRC Code:** hs

**Attribute Name:** DFF\_HL\_MXSTKUVIA\_CNT

**Applicable Objects:** DffHoleCSet

## Max Micro Via Stacked on Core Via

This rule defines the maximum number of micro vias that can be vertically stacked over core via.

**DRC Code:** hs

**Attribute Name:** DFF\_HL\_MXSTKUVIACORE\_CNT

**Applicable Objects:** DffHoleCSet

## Max Via Stack Count

This rule defines the maximum number of micro vias or blind/buried vias that can be vertically stacked together.

**DRC Code:** hs

**Attribute Name:** DFF\_HL\_MAXSTACKED\_COUNT

**Applicable Objects:** DffHoleCSet

# Mask

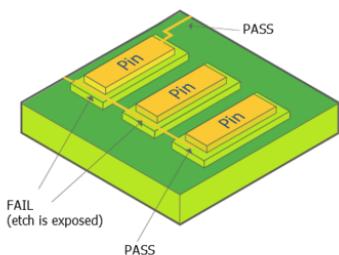
## Mask Exposed Etch

Checks if the mask is larger than the pin. If the mask is the same size or smaller, no check is performed.

**Legal Values:** Design Units

**Applicable Objects:** DFFMaskCSet

4 mil line width:  
0 mil Exposed Etch



**DRC Code:** mE

**Attribute Name:** DFF\_MSK\_EXPOSEDETCH

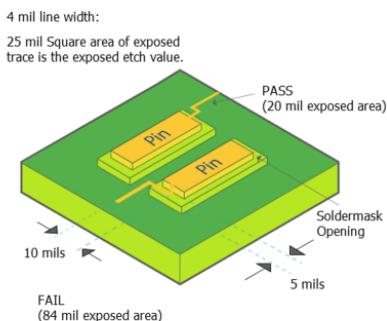
## Mask Exposed Etch Area

This is a Same net as pin check. When a trace enters a pin, a certain amount of the trace is exposed in the soldermask opening if the mask is larger than the pin. If the mask is the same size or smaller, check is not required.

The maximum area that can be exposed is the constraint value.

**Legal Values:** Design Units Area

**Applicable Objects:** DFFMaskCSet



**DRC Code:** Me

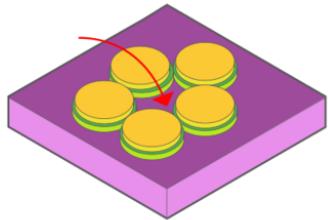
**Attribute Name:** DFF\_MSK\_EXPOSEDETCH\_AREA

## Mask Islands

Checks the minimum square area of mask material. If the mask area is too small, may delaminate from the PCB. Checks are based on the mask layer being the standard negative image use model.

**Legal Values:** Design Units Area

**Applicable Objects:** DFFMaskCSet



**DRC Code:** mi

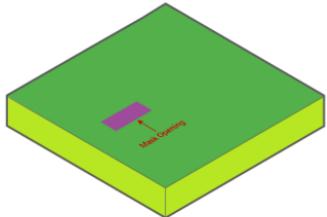
**Attribute Name:** DFF\_MSK\_ISLANDS

## Mask Opening on Shapes

Checks the minimum open area. When a solder mask or cover lay covers a large area of a design, more often a large copper area, air can be trapped between the mask and the PCB surface during fabrication. When heated, the expanding air pushes the mask away from the PCB and forms a bubbling appearance, as there is no relief hole for the air to escape. This is common in dry film solder mask processes, not commonly found in the Liquid Photo Imageable (LPI) masks. This constraint specifies the minimum area that must be open to reduce air bubbling. This check is valid for shapes with area larger than specified in the DFF options page.

**Legal Values:** Design Units Area

**Applicable Objects:** DFFMaskCSet



**DRC Code:** mo

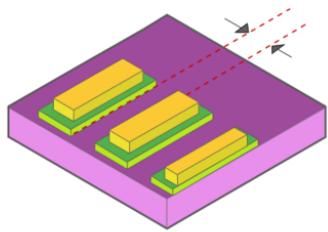
**Attribute Name:** DFF\_MSK\_SHPS

## Mask Slivers

Checks the minimum width of a mask. Mask material deposited may become delaminated from the PCB substrate. Checks are based on the mask layer being the standard negative image use model.

**Legal Values:** Design Units

**Applicable Objects:** DFFMaskCSet



**DRC Code:** ms

**Attribute Name:** DFF\_MSK\_SLIVERS

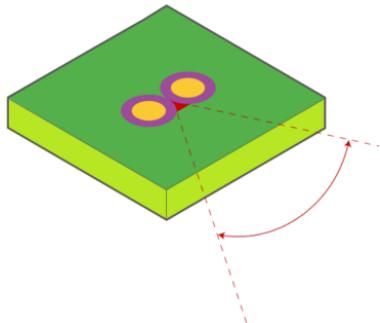
## Mask Slivers Angle

Checks the sliver angle.

Sliver angle specifies the minimum angle between two mask shapes. For angles less than this minimum, the mask material deposited may become delaminated from the PCB substrate. Checks are based on the mask layer being the standard negative image use model.

**Legal Values:** Angle Units

**Applicable Objects:** DFFMaskCSet



**DRC Code:** sa

**Attribute Name:** DFF\_MSK\_SLIVERS\_ANGLE

## Same Net Via and SMD Pin Mask Overlap

This check detects if there is a mask overlap between a via and the SMD pin which is connected to this via.

**DRC Code:** Sp

**Attribute Name:** DFF\_MSK\_SNVMSK\_SMDMSK\_OVRLP



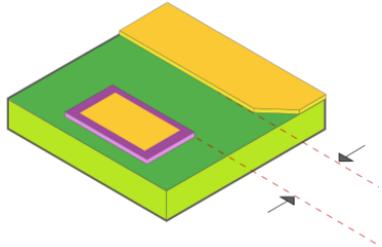
**Applicable Objects:** DFFMaskCSet

## Shape to Mask Opening

This check ensures that there is enough solder mask material to cover the shape and allow enough material to adhere to the board substrate.

**Legal Values:** Design Units

**Applicable Objects:** DFFMaskCSet



**DRC Code:** ms

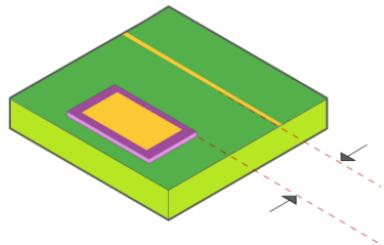
**Attribute Name:** DFF\_MASK\_TO\_SHAPE

## Trace to Mask Opening

This check ensures that there is enough solder mask material to cover the trace and allow enough material to adhere to the board substrate.

**Legal Values:** Design Units

**Applicable Objects:** DFFMaskCSet



**DRC Code:** ms

**Attribute Name:** DFF\_MASK\_TO\_TRACE

## Via in Pad Mask Overlap

This check detects if there is a mask overlap between a via and the SMD pin which subsumes this via.

**DRC Code:** vp

**Attribute Name:** DFF\_MSK\_VIPMSK\_SMDMSK\_OVRLP



**Applicable Objects:** DFFMaskCSet

# Outline

## **Outline to backdrilled pin hole**

This rule defines the minimum allowable distance between design outline to pin hole that is backdrilled.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet

**DRC Code:** ox

**Attribute Name:** DFF\_OLN\_BDLPNHL

## Outline to backdrilled via hole

This rule defines the minimum allowable distance between design outline to via hole that is backdrilled.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet

**DRC Code:** ox

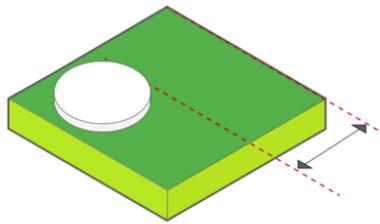
**Attribute Name:** DFF\_OLN\_BDLVIAHL

## Outline to Blind/Buried Via Hole Spacing

Checks the minimum required clearance between blind/buried via hole edges and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** od

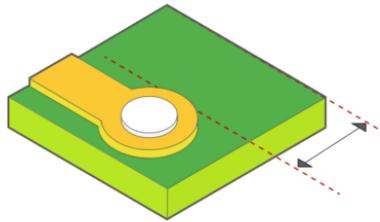
**Attribute Name:** DFF\_OLN\_TO\_BBVIA\_HOLE

## Outline to Blind/Buried Via Pad Spacing

Checks the minimum required clearance between blind/buried via pad edges and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** oV

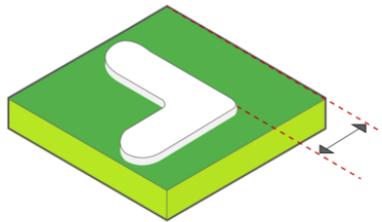
**Attribute Name:** DFF\_OLN\_TO\_BBVIAPD

## Outline to Cutout Spacing

Checks the clearance between cutout geometry edges and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** oo

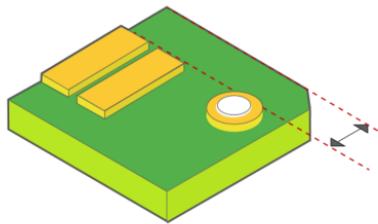
**Attribute Name:** DFF\_OLN\_TO\_CO

## Outline to Fiducial Spacing

Checks the minimum required clearance between fiducial pad edge and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** of

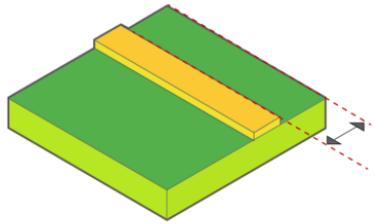
**Attribute Name:** DFF\_OLN\_TO\_FDCL

## Outline to Line Spacing

Checks the minimum required clearance between edges of lines that are not part of any net and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** oS

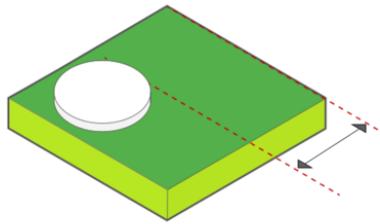
**Attribute Name:** DFF\_OLN\_TO\_LINE

## Outline to Mechanical Hole Pad Spacing

Checks the minimum required clearance between non-plated mechanical hole edges and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** om

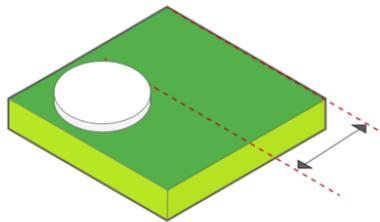
**Attribute Name:** DFF\_OLN\_TO\_MECHLPD

## Outline to Micro Via Hole Spacing

Checks the minimum required clearance between micro via hole edges and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** od

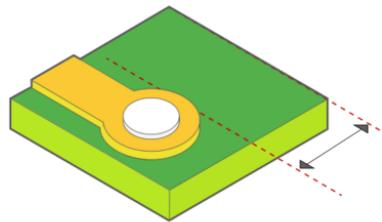
**Attribute Name:** DFF\_OLN\_TO\_MICROVIA\_HOLE

## Outline to Micro Via Pad Spacing

Checks the minimum required clearance between micro via pad edge and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** Ov

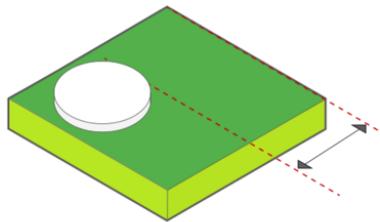
**Attribute Name:** DFF\_OLN\_TO\_UVIAPD

## Outline to Mounting Hole Pad Spacing

Checks the minimum required clearance between non-plated mounting hole edges to the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** oM

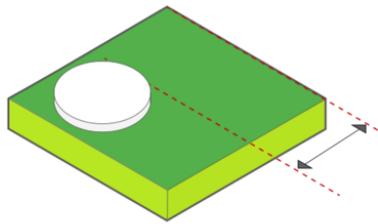
**Attribute Name:** DFF\_OLN\_TO\_MNTHLPD

## Outline to Non-plated Hole Spacing

Checks the clearance between the edges of non-plated holes and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** oS

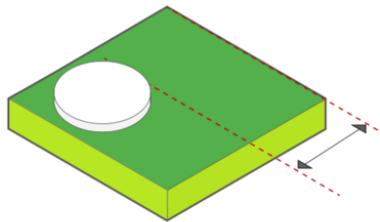
**Attribute Name:** DFF\_OLN\_TO\_NPH

## Outline to Non-plated Mechanical Hole Spacing

Checks the minimum required clearance between non-plated mechanical hole edges and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** Om

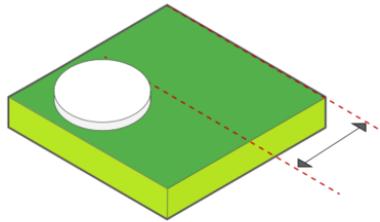
**Attribute Name:** DFF\_OLN\_TO\_NPMECHHL

## Outline to Non-plated Mounting Hole Spacing

Checks the minimum required clearance between non-plated mounting hole edges and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** OM

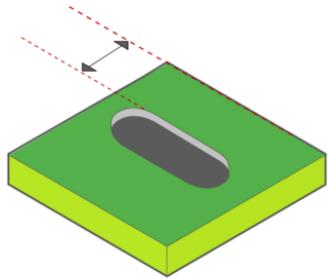
**Attribute Name:** DFF\_OLN\_TO\_NPMNTHL

## Outline to Non-plated Slot Hole Spacing

Checks the minimum required clearance between non-plated slot hole edges to the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** oH

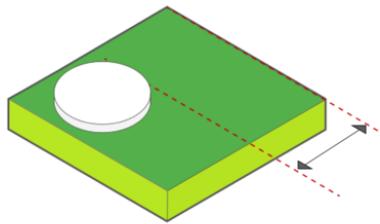
**Attribute Name:** DFF\_OLN\_TO\_NPSLTHL

## Outline to Non-plated Tooling Hole Spacing

Checks the minimum required clearance between non-plated tooling hole edges and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** OT

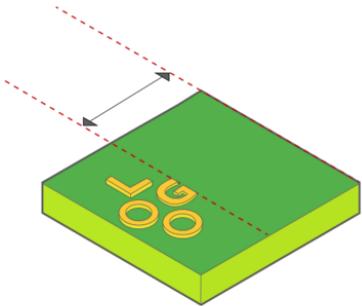
**Attribute Name:** DFF\_OLN\_TO\_NPTOOLHL

## Outline to Non Sig Geometry Spacing

Checks the clearance between etch geometry not associated with any net to the DESIGN\_OUTLINE Geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** og

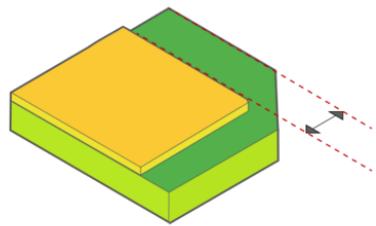
**Attribute Name:** DFF\_OLN\_TO\_NSIG

## Outline to Non-signal Shape Spacing

Checks the minimum required clearance between edges of shapes that are not part of any net and the DESIGN\_OUTLINE geometry..

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** ox

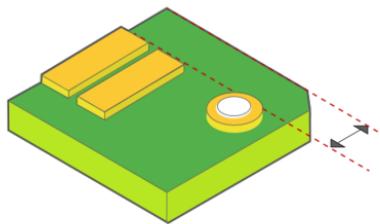
**Attribute Name:** DFF\_OLN\_TO\_NSS

## Outline to Pin Pad Spacing

Checks the minimum clearance between pin pad edges and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** oS

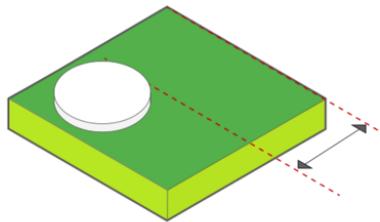
**Attribute Name:** DFF\_OLN\_TO\_PP

## Outline to Plated Mechanical Hole Spacing

Checks the minimum required clearance between plated mechanical hole edges and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** od

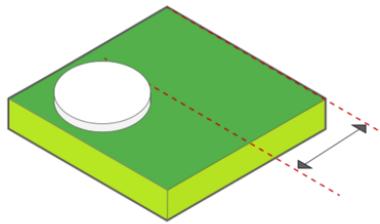
**Attribute Name:** DFF\_OLN\_TO\_PMECHHL

## Outline to Plated Mounting Hole Spacing

Checks the minimum required clearance between plated mounting hole edges and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** od

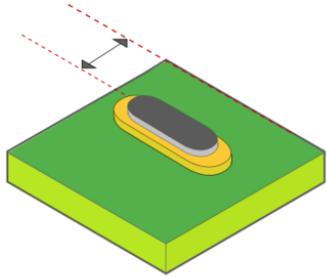
**Attribute Name:** DFF\_OLN\_TO\_PL\_MOUNTHL

## Outline to Plated Slot Hole Spacing

Checks the minimum required clearance between plated slot hole edges and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** od

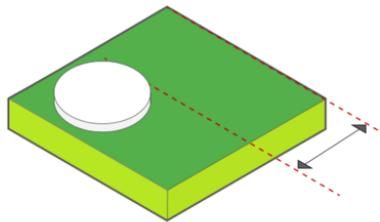
**Attribute Name:** DFF\_OLN\_TO\_PSLTHL

## Outline to Plated Tooling Hole Spacing

Checks the minimum required clearance between plated tooling hole edges and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** od

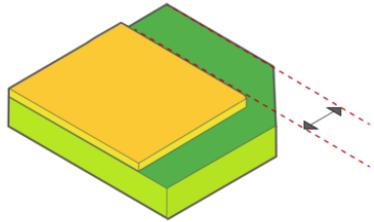
**Attribute Name:** DFF\_OLN\_TO\_PTOOLHL

## Outline to Shape Spacing

Checks the minimum clearance between shape edges and the DESIGN\_OUTLINE geometry..

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** oS

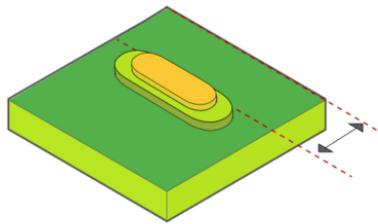
**Attribute Name:** DFF\_OLN\_TO\_SHP

## Outline to Slot Pad Spacing

Checks the minimum required clearance between slot pad edges and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** OS

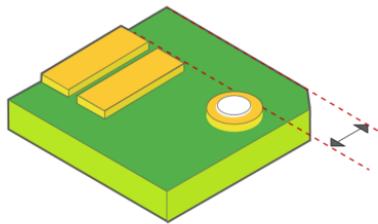
**Attribute Name:** DFF\_OLN\_TO\_SLTPD

## Outline to SMD Pin Spacing

Checks the minimum required clearance between SMD pin pad edges and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



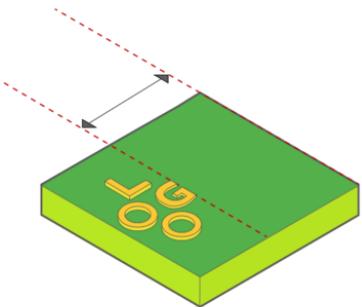
**DRC Code:** Os

**Attribute Name:** DFF\_OLN\_TO\_SMDPN

## Outline to Text Spacing

Checks the minimum required clearance between text and the DESIGN\_OUTLINE geometry  
**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** ox

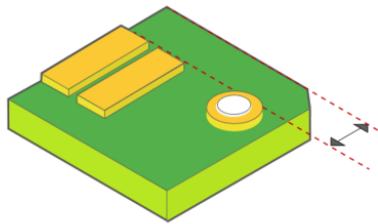
**Attribute Name:** DFF\_OLN\_TO\_TEXT

## Outline to Through Pin Pad Spacing

Checks the minimum required clearance between thru pin pad edges and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** oT

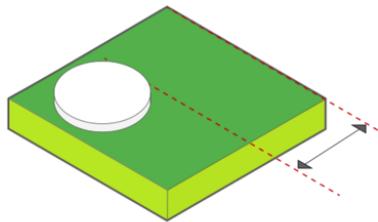
**Attribute Name:** DFF\_OLN\_TO\_THPNPD

## Outline to Thru pin Hole Spacing

Checks the minimum required clearance between thru pin hole edges and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** od

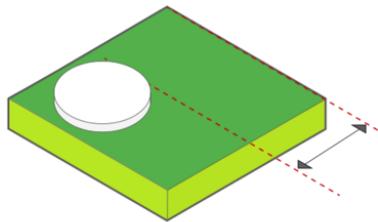
**Attribute Name:** DFF\_OLN\_TO\_THRPIN\_HOLE

## Outline to Thru via Hole Spacing

Checks the minimum required clearance between thru via hole edges and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** od

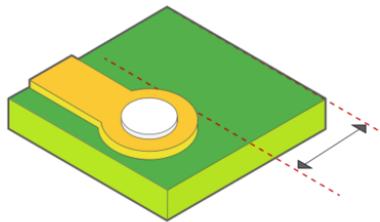
**Attribute Name:** DFF\_OLN\_TO\_THRVIA\_HOLE

## Outline to Thruvia Pad Spacing

Checks the minimum required clearance between thru via pad edges to the DESIGN\_OUTLINE geometry..

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** os

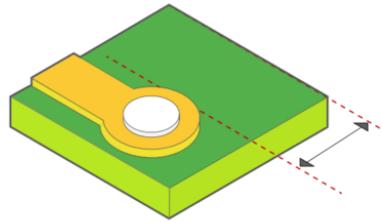
**Attribute Name:** DFF\_OLN\_TO\_THRUVIA\_PAD

## Outline to Tool Hole Pad Spacing

Checks the minimum required clearance between tooling hole edge and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** O<sub>t</sub>

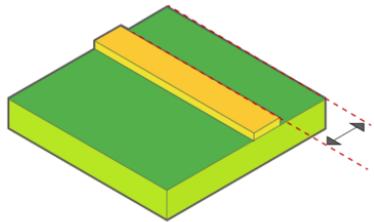
**Attribute Name:** DFF\_OLN\_TO\_TOOLHLPD

## Outline to Trace Spacing

Checks the minimum clearance between trace edges and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** ot

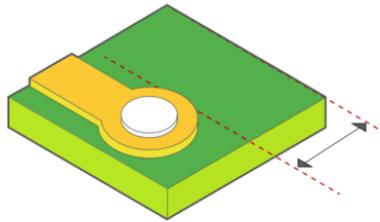
**Attribute Name:** DFF\_OLN\_TO\_TRACE

## Outline to Via Pad Spacing

Checks the minimum clearance between blind/buried via pad edges and the DESIGN\_OUTLINE geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFOutlineCSet



**DRC Code:** ov

**Attribute Name:** DFF\_OLN\_TO\_VIAPD

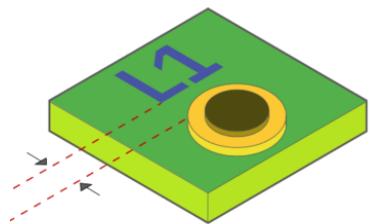
# Silkscreen

## Silkscreen Blind/Buried Via Hole

Checks silkscreen graphics/text to blind/buried via hole.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** sb

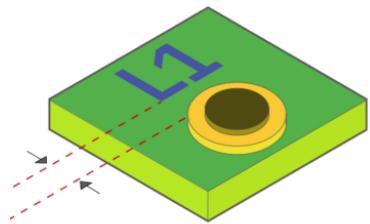
**Attribute Name:** DFF\_SLKSCR\_BBVIAHL

## Silkscreen Blind/Buried Via Pad

Checks the minimum allowable distance of silkscreen objects from any blind/buried via in the design.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** sV

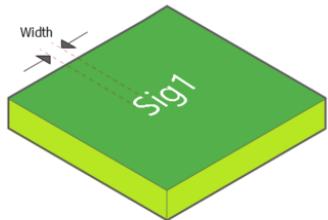
**Attribute Name:** DFF\_SLKSCR\_BBVIAPD

## Silkscreen Character Width

Checks the minimum allowable width of a character in silkscreen text.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** sc

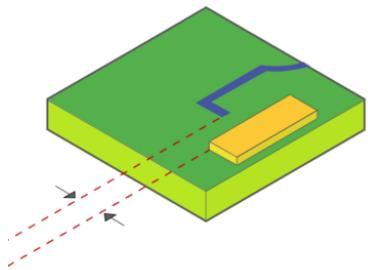
**Attribute Name:** DFF\_SLKSCR\_CHAR\_WDTH

## Silkscreen Fiducial Pad

Checks the minimum allowable distance of any silkscreen object from any fiducial pad in the design.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** sf

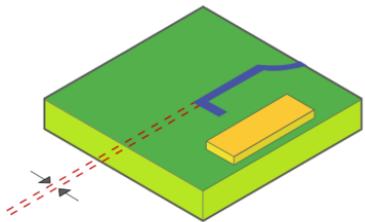
**Attribute Name:** DFF\_SLKSCR\_FDCLPD

## Silkscreen Line, Arc, Shape Width

Checks the minimum width of silkscreen geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** sl

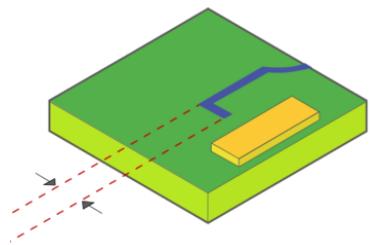
**Attribute Name:** DFF\_SLKSCR\_LNEARCSHPWDTH

## Silkscreen Line, Arc Length

Checks the minimum length of silkscreen geometry.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** sL

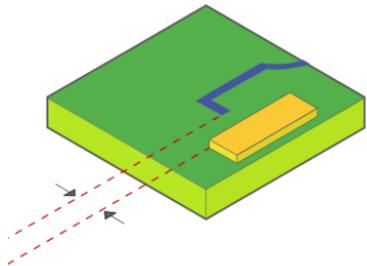
**Attribute Name:** DFF\_SLKSCR\_LNE\_ARC\_LEN

## Silkscreen Mask

Checks the minimum allowable distance of any silkscreen object from any mask shape in the design. The mask shape can be a mask opening on a pin or via.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** sm

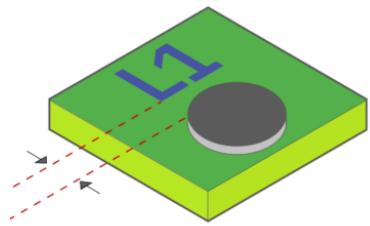
**Attribute Name:** DFF\_SLKSCR\_MSK

## Silkscreen Mechanical Hole

Checks the minimum allowable distance of any silkscreen object from any mechanical hole in the design.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** SM

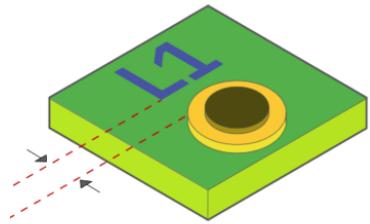
**Attribute Name:** DFF\_SLKSCR\_MECHHL

## Silkscreen Mechanical Hole Pad

Checks the minimum allowable distance of any silkscreen object from any mechanical hole pad in the design..

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** sM

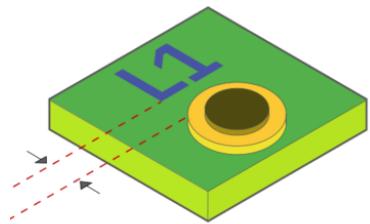
**Attribute Name:** DFF\_SLKSCR\_MECHHLPD

## Silkscreen Micro Via Hole

Checks the minimum allowable distance of any silkscreen geometry from the edge of the hole of a micro via.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** sH

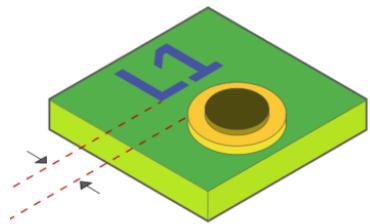
**Attribute Name:** DFF\_SLKSCR\_UVIAHL

## Silkscreen Micro Via Pad

Checks the minimum allowable distance of any silkscreen geometry from the edge of a micro via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** Sv

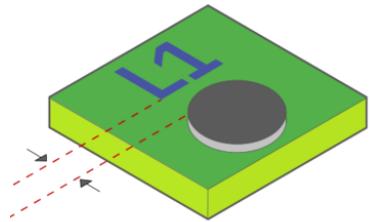
**Attribute Name:** DFF\_SLKSCR\_UVIAPD

## Silkscreen Mounting Hole

Checks the minimum allowable distance of any silkscreen object from any mounting hole in the design.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** SM

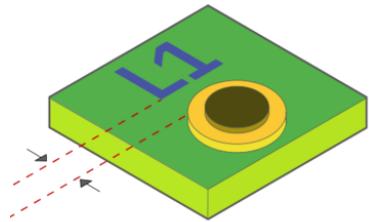
**Attribute Name:** DFF\_SLKSCR\_MNTHL

## Silkscreen Mounting Hole Pad

Checks the minimum allowable distance of any silkscreen object from any mounting hole pad in the design.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** Sm

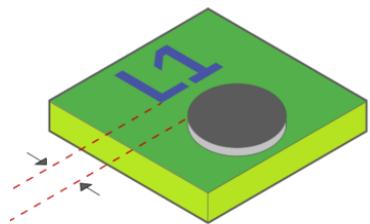
**Attribute Name:** DFF\_SLKSCR\_MNTHLPD

## Silkscreen Non Plated Hole

Checks the minimum distance of silkscreen geometry from the edge of non-plated holes.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** SM

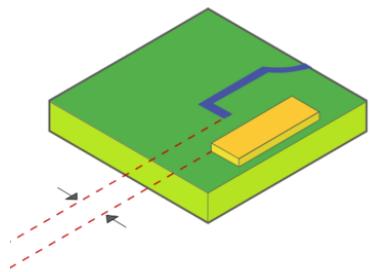
**Attribute Name:** DFF\_SLKSCR\_NPLHLE

## Silkscreen Pin Pad

Checks the minimum distance of silkscreen geometry from the edge of pin pads.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** SM

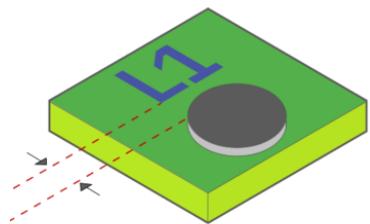
**Attribute Name:** DFF\_SLKSCR\_PNPD

## Silkscreen Slot Hole

Checks the minimum allowable distance of any silkscreen object from any slot hole in the design.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** Sh

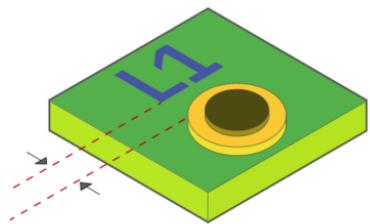
**Attribute Name:** DFF\_SLKSCR\_SLTHL

## Silkscreen Slot Pad

Checks the minimum allowable distance of any silkscreen object from any slot pad in the design.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** sT

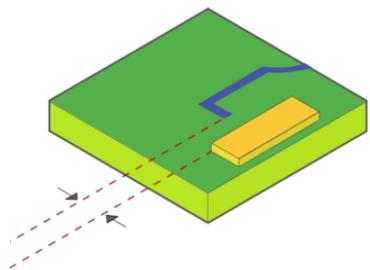
**Attribute Name:** DFF\_SLKSCR\_SLTPD

## Silkscreen SMD Pin Pad

Checks the minimum allowable distance of any silkscreen object from any SMD pad in the design.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** ss

**Attribute Name:** DFF\_SLKSCR\_SMDPNPD

## Silkscreen Text Overlap

Checks and reports overlap of silkscreen text.

**DRC Code:** sx

**Attribute Name:** DFF\_SLKSCR\_TEXT\_OVERLAP



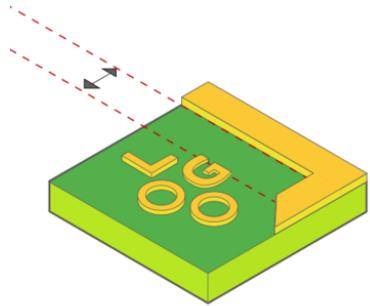
**Applicable Objects:** DFFSilkscreenCSet

## Silkscreen Text to Silkscreen Line

Checks the minimum allowable distance of any silkscreen text from any silkscreen line or arc in the subclass group.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** TI

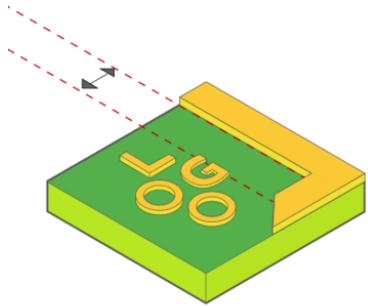
**Attribute Name:** DFF\_SLKSCR\_TXT\_TO\_LINE

## Silkscreen Text to Silkscreen Shape

This specifies the minimum allowable distance of any silkscreen text to any silkscreen shape in the subclass group.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** Ts

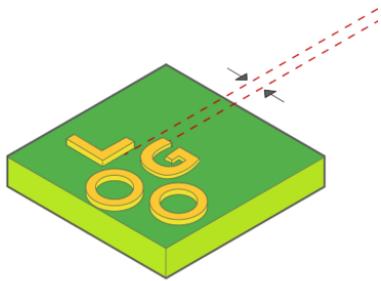
**Attribute Name:** DFF\_SLKSCR\_TXT\_TO\_SHAPE

## Silkscreen Text to Silkscreen Text

This specifies the minimum allowable distance of any silkscreen text to any other silkscreen text in the subclass group.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** Tt

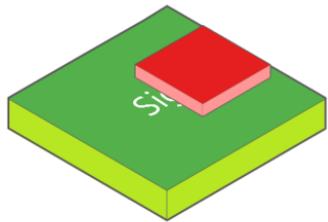
**Attribute Name:** DFF\_SLKSCR\_TXT\_TO\_TXT

## Silkscreen Text Under Component

Checks and reports text under a component.

**DRC Code:** sX

**Attribute Name:** DFF\_SLKSCR\_TXT\_UNDER\_COMP



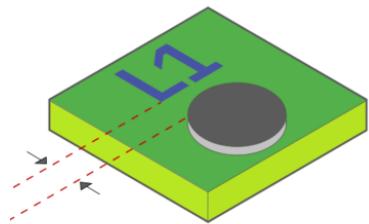
**Applicable Objects:** DFFSilkscreenCSet

## Silkscreen Through Pin Hole

Checks the minimum allowable distance of any silkscreen object from any thru-pin hole in the design.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** ST

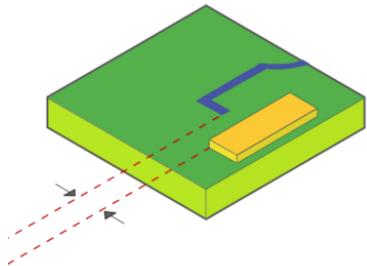
**Attribute Name:** DFF\_SLKSCR\_THPNHL

## Silkscreen Through Pin Pad

Checks the minimum allowable distance of any silkscreen object from any thru pin pad in the design.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** st

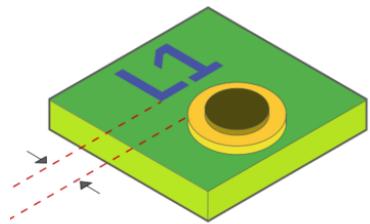
**Attribute Name:** DFF\_SLKSCR\_THPNPD

## Silkscreen Thru Via Pad

Checks the minimum allowable distance of any silkscreen object from any thru via pad in the design.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** SM

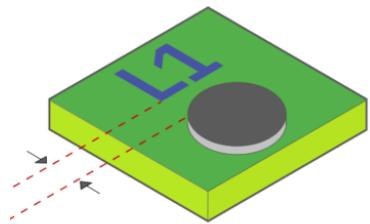
**Attribute Name:** DFF\_SLKSCR\_THVIAPD

## Silkscreen Tooling Hole

Checks the minimum allowable distance of any silkscreen object from any tooling hole in the design.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** SH

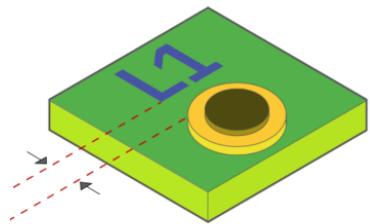
**Attribute Name:** DFF\_SLKSCR\_TOOLHL

## Silkscreen Tooling Hole Pad

Checks the minimum allowable distance of any silkscreen object from any tooling hole pad in a subclass group.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** St

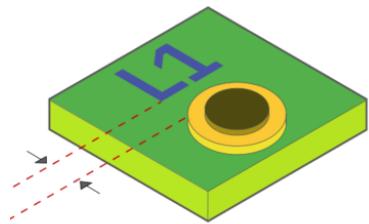
**Attribute Name:** DFF\_SLKSCR\_TOOLHLPD

## Silkscreen Via Hole

Checks the minimum allowable distance of any silkscreen geometry from the edge of the hole of a blind/buried via pad.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** SV

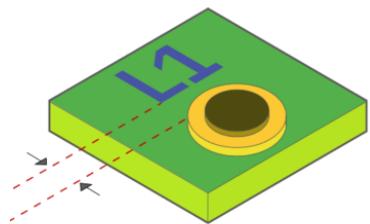
**Attribute Name:** DFF\_SLKSCR\_VIAHL

## Silkscreen Via Pad

Checks the minimum distance of silkscreen geometry from the edge of via pads.

**Legal Values:** Design Units

**Applicable Objects:** DFFSilkscreenCSet



**DRC Code:** sv

**Attribute Name:** DFF\_SLKSCR\_VIAPD

# Silkscreen Line

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