LAYOUT ERRORS RESULTS: ERRORS

===

Library name:

/evprj182/projects/TEAM_Chipathon2025/DRC/synopsys_custom/trackA.icv.drc/trackA.custom_

compiler.gds

Structure name: trackA

Generated by: IC Validator RHEL64 X-2025.06.11869009 2025/05/28

Runset name:

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180

mcu_drc.rs

User name: trng6tusr263

Time started: 2025/09/23 04:19:38PM Time ended: 2025/09/23 04:20:45PM

Called as: icv -f gdsii -i

/evprj182/projects/TEAM_Chipathon2025/DRC/synopsys_custom/trackA.icv.drc/trackA.custom_compiler.gds -c trackA -I

/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/ -oa_dm6 -vue /evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf 180mcu_drc.rs

ERROR SUMMARY

	oly2 gate over COMP is forbidden78 violations found.
Error limit exceed	act size : 0.22
CO.3 Poly2 overlap o	of contact : 0.0716 violations found.
CO.4 COMP overlap	of contact: 0.07

enclose 4 violations found.
CO.7 Space from COMP contact to Poly2 on COMP : 0.15 external2
CO.9 Contact on NCOMP to PCOMP butting edge is forbidden and edge
and_edge 4 violations lound.
COHVNESD.7_COHVPESD.7 : Recommended/max. salicided block edge to at least one or nearest contact (CA) <= 0.22
not_interacting 6 violations found.
CUP.3_Metal2 : Min space of Metal2 line used for bond pads = 1.0
external1 28 violations found.
CUP.3_Metal3 : Min space of Metal3 line used for bond pads = 1.0
external1 28 violations found.
CUP.3_Metal4 : Min space of Metal4 line used for bond pads = 1.0
external1 28 violations found.
CUP.5 : Top via (Via4) not allowed directly under pad opening
and
CUP.7_Via2 : CUP.7c Vias shall be in the form of cluster or arrays (<=3x3). Sea of via (> 3x3 array) is not allowed.
CUP.7d Min Via2 space in via arrays = 0.3
CUP.7e Min space between via arrays = 0.36
not_rectangle_spacing1
CUP.7_Via3 : CUP.7c Vias shall be in the form of cluster or arrays (<=3x3). Sea of via (> 3x3 array)
is not allowed.
CUP.7d Min Via3 space in via arrays = 0.3

CUP.7e Min space between via arrays = 0.36 not_rectangle_spacing1 168 violations found. Error limit exceeded. Details only available for first 100. CUP.7 Via4: CUP.7c Vias shall be in the form of cluster or arrays (<=3x3). Sea of via (> 3x3 array) is not allowed. CUP.7d Min Via4 space in via arrays = 0.3 CUP.7e Min space between via arrays = 0.36 not rectangle spacing1 168 violations found. Error limit exceeded. Details only available for first 100. CUP.8: Top Via-1 directly underneath the Pad mask is not Allowed Error limit exceeded. Details only available for first 100. Check was stopped early because error limit was reached. CUP.9: 1LM, 2LM and 3LM process not allowed to have CUP for wire bond case CUP.1a CUP is not allowed for Wedge-type Wire bond case and 58 violations found. Error limit exceeded. Details only available for first 100. Check was stopped early because error limit was reached. CUP.9 Wedge 4LM: 9.3 Wedge type wire-bond not allowed to have CUP and 31 violations found. and 101 violations found. Error limit exceeded. Details only available for first 100. Check was stopped early because error limit was reached. CUP.9 Wedge 5LM: 9.3 Wedge type wire-bond not allowed to have CUP and 3 violations found. and 101 violations found. Error limit exceeded. Details only available for first 100. Check was stopped early because error limit was reached.

DCF.1a : All area between active polygons (COMP) (with spacing greater than equal to this rule) >= 20.0

must be filled with 'Dummy COMP' except area marked by NDMY, RES_MK, Pad and IND_MK
as well as the region define by DCF.6a, 6b, 6c, 6d,
6e, 6f, 6g. or 102 violations found.
Error limit exceeded. Details only available for first 100.
DCF.1b_DCF.1d : Minimum global density for active layers (COMP+ Dummy COMP) = 25.0%
Maximum global density for active layers (COMP+ Dummy COMP) = 70.0%
density 1 violation found.
DF.11 : Min. Length of butting COMP edge : 0.30 length_edge
Error limit exceeded. Details only available for first 100. Check was stopped early because error limit was reached.
DF.12 : Max distance of Nwell tap (NCOMP inside Nwell) from (PCOMP inside Nwell) : 20
and
DF.13 : Max distance of substrate tap (PCOMP outside Nwell) from (NCOMP outside Nwell) : 20
and
DF.18_LV : Min DNWELL space to (PCOMP outside Nwell
and DNWELL) = 2.5 external2
DF.1a : Min. COMP Width : 0.22 internal1 4 violations found.
DF.3a_LV: Minimum COMP space. P-substrate tap (PCOMP outside DNWELL and NWELL) can be butted for different voltage device like Low voltage, Medium voltage and
High voltage as the potential is same outside 2 violations found.
DF.3a_MV : Minimum COMP space. P-substrate tap (PCOMP

outside DNWELL and NWELL) can be butted for different voltage device like Low voltage, Medium voltage and High voltage as the potential is same
external1 9 violations found.
DF.3b : Min/Max space from NCOMP to PCOMP in the same well for butted COMP = 0.0 and51 violations found.
DN.2 : Min. DNWELL Space : 5.42 external1 4 violations found.
DN.3 : Each DNWELL shall be directly surrounded by PCOMP guard ring tied to the P-substrate potential and
DV.1 : Min. Dualgate enclose DNWELL = 0.5 enclose
HRES.10 : Minimum/Maximum Pplus overlap of SAB = 0.1 interacting
HRES.12: P type Poly2 resistor (high sheet rho) shall be covered by RES_MK marking. RES_MK length shall be coincide with resistor length (Defined by Pplus space) and width covering the width of Poly2. If the size of single RES_MK mark layer is greater than 15000 um2 and both sides (X and Y) are greater than 80 um, then the minimum spacing to adjacent RES_MK layer >= 20 Checked in PRES.9 xor
HRES.2 : Min width of Poly2 resistor = 1.0 internal1

HRES.4 : Minimum RESISTOR overlap of Poly2 resistor = 0.4

enclose
HRES.7 : Minimum Pplus overlap of contact on Poly2 resistor = 0.2
enclose
HVNESD.13(b): Max. at least one or nearest source contact to gate edge space (SCGS) <= 1 not_interacting
HVNESD.8(c): Max. at least one or nearest drain contact to gate edge space (DCGS) <= 4 not_interacting
HVPESD.11 : Source COMP must enclose by LVS_Source not
IO.0 : Guidelines : To flag I/O latch-up related violation: (a) Non well tap COMP directly connected to PAD is recommended to be marked by 'Latchup_MK' layer (b) Min/max Latchup_MK layer overlap of COMP (directly connected to Pad) = 0.0 xor
IO.1_a2: For LV and MV It should also be directly surrounded by an Nwell guard ring (Non broken NCOMP ring inside Nwell!). Nwell guard ring shall be connected to the most positive supply. Max space of Nwell guard ring to the NCOMP in Psub directly connected to I/O pad = 15 edge_size
IO.1_b: Within 15um from the edge of the NCOMP connected to I/O pad (marked by Latchup_MK): Max Nwell tap distance to PCOMP inside Nwell <= 2 (irrespective of its direct connection to Pad) wide
IO.3_a2 : For LV and MV It should also be directly surrounded by PCOMP guard

ring outside Nwell. PCOMP guardring shall be connected to the lowest potential. Max space of guard ring PCOMP to the PCOMP in Nwell directly connected to the I/O pad = 15 edge_size
IO.3_b : For LV and MV Within 10um from the edge of the PCOMP connected to I/O Pad (marked by Latchup_MK): Max P substrate tap distance to NCOMP outside Nwell <= 5.0 (irrespective of its direct connection to Pad) wide
LPW.12 : LVPWELL cannot overlap with Nwell and 2 violations found.
LU.3a_MV_LU.3b_MV_LU.3c_MV : Max. Psub tap outside (DNWELL and YMTP_MK) space to any point in the boundary of Ncomp outside Nwell/DNWELL = 15 (MV) coincident_edge
LU.4a_LV: Max. Nwell tap outside DNWELL space to any point in the boundary of Pcomp inside Nwell = 50 (LV) For Nwell to Ncomp space outside DNWELL >= 2.0um coincident_edge
LU.4a_MV_LU.4b_MV_LU.4c_MV : Max. Nwell tap outside DNWELL space to any point in the boundary of Pcomp inside Nwell = 15 (MV) coincident_edge
M1.1 : Metal1 minimum width : 0.23 internal1
M1.2a : Metal1 minimum space : 0.23 external1
M2.1 : Metal2 minimum width : 0.28 internal1 12 violations found.

M2.2a: Metal2 minimum space: 0.28 external1
MIMTM.10: (a) There cannot be any Via3 touching MIM bottom plate Metal4 (b) MIM bottom plate Metal4 can only be connected through the higher Via (Via4) and
MSLOT.1_Metal1 : Maximum Metal1 width without slotting = 30.0 or
MSLOT.1_Metal2 : Maximum Metal2 width without slotting = 30.0 or
MSLOT.1_Metal3 : Maximum Metal3 width without slotting = 30.0 or
Mn.4_Metal1 : Metal1 coverage over the entire die shall be > 30% density
Mn.4_Metal2 : Metal2 coverage over the entire die shall be > 30% density
NP.11 : Butting Nplus and PCOMP is forbidden within 0.43 of well (Nwell and LVPWELL) edge (for inside DNWELL case) and
NP.3a : Nplus space to PCOMP (1) inside Nwell (2) outside LVPWELL but inside DNWELL : 0.16 external2
NP.4a : Nplus space to related P-channel gate at a butting edge parallel to gate : 0.32 external2

PL.12 : V5_Xtor enclose 5V CO not	
PL.3 : Min. Poly2 Spacing : 0.24 external1	
PL.3b_MV : Min Poly2 space on sheet resistivity (guideline)	COMP for low active
outside	3 violations found.
PL.4 : Min. Poly2 Extension bey cap : 0.22	ond COMP to form end
internal1	24 violations found.
PL.6: (Poly2 gate not touching 'degree bends are not allowed.	YMTP_MK) with 90
external1_errorinternal1_error	
PL.8 : Poly2 coverage over the e	entire die shall be
density	1 violation found.
PP.11 : Butting Pplus and NCON 0.43um of Nwell edge (for outsid LVPWELL edge (for inside DNW and	de DNWELL) and of /ELL case)
PP.12 : Pplus overlap with N-cha extension is forbidden within 0.3 gate	, ,
and	42 violations found.
PP.2 : Min. Pplus Space : 0.4 external1	
	·
PP.3c(ii): Pplus space to NCON NCOMP space to Nwell < 0.43:	0.16
external2 Error limit exceeded. Details	

PP.4a : Pplus space to related N-channel gate at

a butting edge parallel to gate: 0.32 external2
PP.5a : Pplus overlap of P-channel gate : 0.23 enclose
PP.5b : Pplus extension beyond COMP for the COMP (1) inside NWELL (2) outside LVPWELL but inside DNWELL : 0.16 enclose
PP.5c(ii): Pplus extension beyond COMP inside DNWELL for LVPWELL overlap of Pplus < 0.43: 0.16 enclose
PP.5d(ii): Pplus extension beyond COMP outside DNWELL for Pplus space to Nwell < 0.43: 0.16 enclose
PP.6 : Pplus overlap with PCOMP butted to NCOMP : 0.22 internal1
V1.1: Min/max Via1 size : 0.26 not_length_edge
V2.1: Min/max Via2 size : 0.26 not_length_edge
ERROR DETAILS
CO.10 Contact on Poly2 gate over COMP is forbidden

```
Structure (lower left x, y) (upper right x, y)
   . - - - - - - - - - - - - - - - - - -
trackA (1349.3300, 2367.1500) (1349.5500, 2367.3700)
trackA
        (1356.7300, 2367.1600) (1356.9500, 2367.3800)
trackA
        (1358.4100, 2367.1850) (1358.6300, 2367.4050)
trackA
        (1367.7200, 2367.1850) (1367.9400, 2367.4050)
trackA
        (1377.0300, 2367.1850) (1377.2500, 2367.4050)
trackA
        (1386.3400, 2367.1850) (1386.5600, 2367.4050)
trackA
        (1349.3300, 2372.9750) (1349.5500, 2372.9800)
trackA
        (1349.3300, 2373.2700) (1349.5500, 2373.4750)
        (1356.7300, 2372.9750) (1356.9500, 2372.9900)
trackA
trackA
        (1356.7300, 2373.2800) (1356.9500, 2373.4750)
trackA
        (1349.3300, 2378.8800) (1349.5500, 2379.1000)
trackA
        (1356.7300, 2378.8900) (1356.9500, 2379.1100)
trackA
        (1349.3300, 2384.6750) (1349.5500, 2384.7100)
trackA
        (1349.3300, 2385.0000) (1349.5500, 2385.1750)
trackA
        (1356.7300, 2384.6750) (1356.9500, 2384.7200)
trackA
        (1356.7300, 2385.0100) (1356.9500, 2385.1750)
trackA
        (1349.3300, 2390.6100) (1349.5500, 2390.8300)
trackA
        (1356.7300, 2390.6200) (1356.9500, 2390.8400)
trackA
        (1359.1000, 2390.4650) (1359.3200, 2390.6850)
trackA
        (1368.4100, 2390.4650) (1368.6300, 2390.6850)
trackA
        (1377.7200, 2390.4650) (1377.9400, 2390.6850)
trackA
        (1387.0300, 2390.4650) (1387.2500, 2390.6850)
trackA
        (1454.8300, 2418.5650) (1455.0500, 2418.7050)
trackA
        (1454.8300, 2418.9950) (1455.0500, 2419.0650)
trackA
        (1462.9250, 2418.5850) (1463.1450, 2418.8050)
trackA
        (1468.0700, 2418.7050) (1468.2900, 2418.9250)
trackA
        (1487.7500, 2418.7050) (1487.9700, 2418.9250)
trackA
        (1477.9100, 2418.7050) (1478.1300, 2418.9250)
        (1454.8300, 2410.9550) (1455.0500, 2411.0550)
trackA
trackA
        (1454.8300, 2411.3450) (1455.0500, 2411.4550)
trackA
        (1462.9250, 2410.9550) (1463.1450, 2411.1550)
trackA
        (1462.9250, 2411.4450) (1463.1450, 2411.4550)
trackA
        (1496.6100, 2411.3700) (1496.8300, 2411.4550)
trackA
        (1468.0700, 2411.0950) (1468.2900, 2411.3150)
trackA
        (1477.9100, 2411.0950) (1478.1300, 2411.3150)
trackA
        (1487.7500, 2411.0950) (1487.9700, 2411.3150)
trackA
        (1454.8300, 2403.3450) (1455.0500, 2403.4050)
trackA
        (1454.8300, 2403.6950) (1455.0500, 2403.8450)
        (1462.9250, 2403.3450) (1463.1450, 2403.5050)
trackA
```

```
(1462.9250, 2403.7950) (1463.1450, 2403.8450)
trackA
trackA
        (1496.6100, 2403.3700) (1496.8300, 2403.5900)
trackA
        (1468.0700, 2403.4850) (1468.2900, 2403.7050)
trackA
        (1477.9100, 2403.4850) (1478.1300, 2403.7050)
        (1487.7500, 2403.4850) (1487.9700, 2403.7050)
trackA
trackA
        (1454.8300, 2395.7350) (1455.0500, 2395.7550)
trackA
        (1454.8300, 2396.0450) (1455.0500, 2396.2350)
trackA
        (1462.9250, 2395.7350) (1463.1450, 2395.8550)
trackA
        (1462.9250, 2396.1450) (1463.1450, 2396.2350)
trackA
        (1496.6100, 2396.1700) (1496.8300, 2396.2350)
trackA
        (1468.0700, 2395.8750) (1468.2900, 2396.0950)
trackA
        (1477.9100, 2395.8750) (1478.1300, 2396.0950)
trackA
        (1487.7500, 2395.8750) (1487.9700, 2396.0950)
trackA
        (1454.8300, 2388.3950) (1455.0500, 2388.6150)
trackA
        (1462.9250, 2388.1250) (1463.1450, 2388.2050)
trackA
        (1462.9250, 2388.4950) (1463.1450, 2388.6250)
trackA
        (1496.6100, 2388.1700) (1496.8300, 2388.3900)
trackA
        (1468.0700, 2388.2650) (1468.2900, 2388.4850)
trackA
        (1477.9100, 2388.2650) (1478.1300, 2388.4850)
trackA
        (1487.7500, 2388.2650) (1487.9700, 2388.4850)
trackA
        (1454.8300, 2380.7450) (1455.0500, 2380.9650)
trackA
        (1462.9250, 2380.5150) (1463.1450, 2380.5550)
trackA
        (1462.9250, 2380.8450) (1463.1450, 2381.0150)
trackA
        (1496.6100, 2380.9700) (1496.8300, 2381.0150)
trackA
        (1468.0700, 2380.6550) (1468.2900, 2380.8750)
trackA
        (1477.9100, 2380.6550) (1478.1300, 2380.8750)
trackA
        (1487.7500, 2380.6550) (1487.9700, 2380.8750)
trackA
        (1454.8300, 2373.0950) (1455.0500, 2373.3150)
trackA
        (1462.9250, 2373.1950) (1463.1450, 2373.4050)
trackA
        (1496.6100, 2372.9700) (1496.8300, 2373.1900)
trackA
        (1468.0700, 2373.0450) (1468.2900, 2373.2650)
trackA
        (1477.9100, 2373.0450) (1478.1300, 2373.2650)
trackA
        (1487.7500, 2373.0450) (1487.9700, 2373.2650)
trackA
        (1454.8300, 2365.4450) (1455.0500, 2365.6650)
trackA
        (1462.9250, 2365.5450) (1463.1450, 2365.7650)
trackA
        (1496.6100, 2365.7700) (1496.8300, 2365.7950)
trackA
        (1468.0700, 2365.4350) (1468.2900, 2365.6550)
        (1477.9100, 2365.4350) (1478.1300, 2365.6550)
trackA
trackA
       (1487.7500, 2365.4350) (1487.9700, 2365.6550)
```

CO.1: Min/max contact size: 0.22

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:2661:not_length_edge

WARNING: The error count of 102 for this check exceeds the limit set in the runset. Details only available for the first 100.

Check was stopped early because error limit was reached.

Structure (lower left x, y) (upper right x, y) Distance

______ Unnamed 02d9ae27 (-10.5300, 10.8950) (-10.5300, 11.1200) 0.2250 Unnamed 02d9ae27 (-10.3100, 10.8950) (-10.3100, 11.1200) 0.2250 Unnamed_02d9ae27 (-10.5300, 11.3950) (-10.5300, 11.6200) 0.2250 Unnamed 02d9ae27 (-10.3100, 11.3950) (-10.3100, 11.6200) 0.2250 Unnamed 02d9ae27 (-10.5300, 11.8950) (-10.5300, 12.1200) 0.2250 Unnamed 02d9ae27 (-10.3100, 11.8950) (-10.3100, 12.1200) 0.2250 Unnamed 02d9ae27 (-10.5300, 12.3950) (-10.5300, 12.6200) 0.2250 Unnamed 02d9ae27 (-10.3100, 12.3950) (-10.3100, 12.6200) 0.2250 Unnamed 02d9ae27 (10.3100, 10.8950) (10.3100, 11.1200) 0.2250 Unnamed 02d9ae27 (10.5300, 10.8950) (10.5300, 11.1200) 0.2250 Unnamed_02d9ae27 (10.3100, 11.3950) (10.3100, 11.6200) 0.2250 Unnamed 02d9ae27 (10.5300, 11.3950) (10.5300, 11.6200) 0.2250 Unnamed 02d9ae27 (10.3100, 11.8950) (10.3100, 12.1200) 0.2250 Unnamed 02d9ae27 (10.5300, 11.8950) (10.5300, 12.1200) 0.2250 Unnamed 02d9ae27 (10.3100, 12.3950) (10.3100, 12.6200) 0.2250 Unnamed 02d9ae27 (10.5300, 12.3950) (10.5300, 12.6200) 0.2250 Unnamed 02d9ae27 (-10.5300, 12.8950) (-10.5300, 13.1200) 0.2250 Unnamed 02d9ae27 (-10.3100, 12.8950) (-10.3100, 13.1200) 0.2250 Unnamed_02d9ae27 (-10.5300, 13.3950) (-10.5300, 13.6200) 0.2250 Unnamed 02d9ae27 (-10.3100, 13.3950) (-10.3100, 13.6200) 0.2250 Unnamed 02d9ae27 (-9.3100, 14.1450) (-9.3100, 14.3700) 0.2250 Unnamed 02d9ae27 (-9.0900, 14.1450) (-9.0900, 14.3700) 0.2250 Unnamed 02d9ae27 (-8.5100, 14.1450) (-8.5100, 14.3700) 0.2250 Unnamed 02d9ae27 (-8.2900, 14.1450) (-8.2900, 14.3700) 0.2250 Unnamed 02d9ae27 (-7.7100, 14.1450) (-7.7100, 14.3700) 0.2250 Unnamed 02d9ae27 (-7.4900, 14.1450) (-7.4900, 14.3700) 0.2250 Unnamed 02d9ae27 (-6.9100, 14.1450) (-6.9100, 14.3700) 0.2250 Unnamed_02d9ae27 (-6.6900, 14.1450) (-6.6900, 14.3700) 0.2250 Unnamed 02d9ae27 (-6.1100, 14.1450) (-6.1100, 14.3700) 0.2250 Unnamed 02d9ae27 (-5.8900, 14.1450) (-5.8900, 14.3700) 0.2250 Unnamed 02d9ae27 (-5.3100, 14.1450) (-5.3100, 14.3700) 0.2250 Unnamed 02d9ae27 (-5.0900, 14.1450) (-5.0900, 14.3700) 0.2250 Unnamed 02d9ae27 (-4.5100, 14.1450) (-4.5100, 14.3700) 0.2250

```
Unnamed 02d9ae27 (-4.2900, 14.1450) (-4.2900, 14.3700) 0.2250
Unnamed_02d9ae27 (-3.7100, 14.1450) (-3.7100, 14.3700) 0.2250
Unnamed 02d9ae27 (-3.4900, 14.1450) (-3.4900, 14.3700) 0.2250
Unnamed 02d9ae27 (-2.9100, 14.1450) (-2.9100, 14.3700) 0.2250
Unnamed 02d9ae27 (-2.6900, 14.1450) (-2.6900, 14.3700) 0.2250
Unnamed 02d9ae27 (-2.1100, 14.1450) (-2.1100, 14.3700) 0.2250
Unnamed 02d9ae27 (-1.8900, 14.1450) (-1.8900, 14.3700) 0.2250
Unnamed 02d9ae27 (-1.3100, 14.1450) (-1.3100, 14.3700) 0.2250
Unnamed 02d9ae27 (-1.0900, 14.1450) (-1.0900, 14.3700) 0.2250
Unnamed 02d9ae27 (-0.5100, 14.1450) (-0.5100, 14.3700) 0.2250
Unnamed 02d9ae27 (-0.2900, 14.1450) (-0.2900, 14.3700) 0.2250
Unnamed 02d9ae27 (0.2900, 14.1450) (0.2900, 14.3700) 0.2250
Unnamed 02d9ae27 (0.5100, 14.1450) (0.5100, 14.3700) 0.2250
Unnamed 02d9ae27 (1.0900, 14.1450) (1.0900, 14.3700) 0.2250
Unnamed 02d9ae27 (1.3100, 14.1450) (1.3100, 14.3700) 0.2250
Unnamed 02d9ae27 (1.8900, 14.1450) (1.8900, 14.3700) 0.2250
Unnamed 02d9ae27 (2.1100, 14.1450) (2.1100, 14.3700) 0.2250
Unnamed 02d9ae27 (2.6900, 14.1450) (2.6900, 14.3700) 0.2250
Unnamed 02d9ae27 (2.9100, 14.1450) (2.9100, 14.3700) 0.2250
Unnamed 02d9ae27 (3.4900, 14.1450) (3.4900, 14.3700) 0.2250
Unnamed 02d9ae27 (3.7100, 14.1450) (3.7100, 14.3700) 0.2250
Unnamed 02d9ae27 (4.2900, 14.1450) (4.2900, 14.3700) 0.2250
Unnamed 02d9ae27 (4.5100, 14.1450) (4.5100, 14.3700) 0.2250
Unnamed 02d9ae27 (5.0900, 14.1450) (5.0900, 14.3700) 0.2250
Unnamed 02d9ae27 (5.3100, 14.1450) (5.3100, 14.3700) 0.2250
Unnamed 02d9ae27 (5.8900, 14.1450) (5.8900, 14.3700) 0.2250
Unnamed 02d9ae27 (6.1100, 14.1450) (6.1100, 14.3700) 0.2250
Unnamed 02d9ae27 (6.6900, 14.1450) (6.6900, 14.3700) 0.2250
Unnamed 02d9ae27 (6.9100, 14.1450) (6.9100, 14.3700) 0.2250
Unnamed_02d9ae27 (7.4900, 14.1450) (7.4900, 14.3700) 0.2250
Unnamed 02d9ae27 (7.7100, 14.1450) (7.7100, 14.3700) 0.2250
Unnamed 02d9ae27 (8.2900, 14.1450) (8.2900, 14.3700) 0.2250
Unnamed 02d9ae27 (8.5100, 14.1450) (8.5100, 14.3700) 0.2250
Unnamed 02d9ae27 (9.0900, 14.1450) (9.0900, 14.3700) 0.2250
Unnamed 02d9ae27 (9.3100, 14.1450) (9.3100, 14.3700) 0.2250
Unnamed 02d9ae27 (10.3100, 12.8950) (10.3100, 13.1200) 0.2250
Unnamed 02d9ae27 (10.5300, 12.8950) (10.5300, 13.1200) 0.2250
Unnamed 02d9ae27 (10.3100, 13.3950) (10.3100, 13.6200) 0.2250
Unnamed_02d9ae27 (10.5300, 13.3950) (10.5300, 13.6200) 0.2250
Unnamed 02d9ae27 (-9.3600, 19.0900) (-9.3600, 19.3150) 0.2250
Unnamed 02d9ae27 (-9.1400, 19.0900) (-9.1400, 19.3150) 0.2250
Unnamed 02d9ae27 (-8.2200, 19.0900) (-8.2200, 19.3150) 0.2250
Unnamed 02d9ae27 (-8.0000, 19.0900) (-8.0000, 19.3150) 0.2250
Unnamed 02d9ae27 (-6.7400, 19.0900) (-6.7400, 19.3150) 0.2250
```

```
Unnamed 02d9ae27 (-6.5200, 19.0900) (-6.5200, 19.3150) 0.2250
Unnamed_02d9ae27 (-5.6000, 19.0900) (-5.6000, 19.3150) 0.2250
Unnamed 02d9ae27 (-5.3800, 19.0900) (-5.3800, 19.3150) 0.2250
Unnamed 02d9ae27 (-4.4600, 19.0900) (-4.4600, 19.3150) 0.2250
Unnamed 02d9ae27 (-4.2400, 19.0900) (-4.2400, 19.3150) 0.2250
Unnamed 02d9ae27 (-3.0800, 19.0900) (-3.0800, 19.3150) 0.2250
Unnamed 02d9ae27 (-2.8600, 19.0900) (-2.8600, 19.3150) 0.2250
Unnamed 02d9ae27 (-1.9400, 19.0900) (-1.9400, 19.3150) 0.2250
Unnamed 02d9ae27 (-1.7200, 19.0900) (-1.7200, 19.3150) 0.2250
Unnamed 02d9ae27 (-0.8000, 19.0900) (-0.8000, 19.3150) 0.2250
Unnamed 02d9ae27 (-0.5800, 19.0900) (-0.5800, 19.3150) 0.2250
Unnamed 02d9ae27 (0.5800, 19.0900) (0.5800, 19.3150) 0.2250
Unnamed 02d9ae27 (0.8000, 19.0900) (0.8000, 19.3150) 0.2250
Unnamed 02d9ae27 (1.7200, 19.0900) (1.7200, 19.3150) 0.2250
Unnamed 02d9ae27 (1.9400, 19.0900) (1.9400, 19.3150) 0.2250
Unnamed 02d9ae27 (2.8600, 19.0900) (2.8600, 19.3150) 0.2250
Unnamed 02d9ae27 (3.0800, 19.0900) (3.0800, 19.3150) 0.2250
Unnamed 02d9ae27 (4.2400, 19.0900) (4.2400, 19.3150) 0.2250
Unnamed 02d9ae27 (4.4600, 19.0900) (4.4600, 19.3150) 0.2250
Unnamed 02d9ae27 (5.3800, 19.0900) (5.3800, 19.3150) 0.2250
Unnamed 02d9ae27 (5.6000, 19.0900) (5.6000, 19.3150) 0.2250
Unnamed 02d9ae27 (6.5200, 19.0900) (6.5200, 19.3150) 0.2250
Unnamed 02d9ae27 (6.7400, 19.0900) (6.7400, 19.3150) 0.2250
```

```
CO.3 Poly2 overlap of contact : 0.07
```

 $/ evprj 182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180mcu_drc.rs: 2681: enclose$

```
-----
```

```
Structure ( lower left x, y ) ( upper right x, y) Distance
```

```
trackA (1462.9250, 2365.7650) (1463.1450, 2365.7950) 0.0300
trackA
       (1349.3300, 2367.1250) (1349.5500, 2367.1500) 0.0250
trackA
       (1356.7300, 2367.1250) (1356.9500, 2367.1600) 0.0350
       (1358.4100, 2367.1250) (1358.6300, 2367.1850) 0.0600
trackA
trackA
       (1367.7200, 2367.1250) (1367.9400, 2367.1850) 0.0600
       (1377.0300, 2367.1250) (1377.2500, 2367.1850) 0.0600
trackA
trackA
       (1386.3400, 2367.1250) (1386.5600, 2367.1850) 0.0600
trackA
       (1349.3300, 2378.8250) (1349.5500, 2378.8800) 0.0550
trackA
       (1356.7300, 2378.8250) (1356.9500, 2378.8900) 0.0650
       (1454.8300, 2380.9650) (1455.0500, 2381.0150) 0.0500
trackA
```

```
trackA
       (1496.6100, 2372.9050) (1496.8300, 2372.9700) 0.0650
trackA (1376.6300, 2383.2950) (1376.6550, 2383.5150) 0.0250
       (1454.8300, 2388.6150) (1455.0500, 2388.6250) 0.0100
trackA
trackA (1496.6100, 2388.1250) (1496.8300, 2388.1700) 0.0450
trackA (1462.9250, 2418.5650) (1463.1450, 2418.5850) 0.0200
trackA (1496.6100, 2403.3450) (1496.8300, 2403.3700) 0.0250
CO.4 COMP overlap of contact: 0.07
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:2686:enclose
Structure (lower left x, y) (upper right x, y) Distance
_____
trackA (1359.1000, 2383.1750) (1359.3200, 2383.2150) 0.0400
trackA (1368.4100, 2383.1750) (1368.6300, 2383.2150) 0.0400
trackA (1377.7200, 2383.1750) (1377.9400, 2383.2150) 0.0400
trackA (1387.0300, 2383.1750) (1387.2500, 2383.2150) 0.0400
CO.7 Space from COMP contact to Poly2 on COMP: 0.15
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:2733:external2
Structure (lower left x, y) (upper right x, y) Distance
-----
trackA (1349.3300, 2367.6250) (1349.5500, 2367.6600) 0.0350
trackA (1356.7300, 2367.6250) (1356.9500, 2367.6700) 0.0450
trackA (1349.3300, 2379.3250) (1349.5500, 2379.3900) 0.0650
trackA (1356.7300, 2379.3250) (1356.9500, 2379.4000) 0.0750
trackA
       (1349.3300, 2391.0250) (1349.5500, 2391.1200) 0.0950
trackA
       (1356.7300, 2391.0250) (1356.9500, 2391.1300) 0.1050
trackA
       (1462.9250, 2419.0650) (1463.1450, 2419.0950) 0.0300
trackA
       (1496.6100, 2395.5900) (1496.8300, 2395.7350) 0.1450
trackA
       (1454.8300, 2388.1050) (1455.0500, 2388.1250) 0.0200
trackA
       (1454.8300, 2380.4550) (1455.0500, 2380.5150) 0.0600
trackA
       (1496.6100, 2380.3900) (1496.8300, 2380.5150) 0.1250
trackA
       (1454.8300, 2372.8050) (1455.0500, 2372.9050) 0.1000
```

```
trackA (1454.8300, 2365.1550) (1455.0500, 2365.2950) 0.1400
trackA (1462.9250, 2365.2550) (1463.1450, 2365.2950) 0.0400
trackA (1496.6100, 2365.1900) (1496.8300, 2365.2950) 0.1050
trackA (1358.0050, 2383.2950) (1358.0100, 2383.5150) 0.0050
trackA (1367.1850, 2383.2950) (1367.3200, 2383.5150) 0.1350
trackA (1387.3200, 2383.2950) (1387.3650, 2383.5150) 0.0450
CO.9 Contact on NCOMP to PCOMP butting edge is forbidden
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu_drc.rs:2745:and_edge
-----
Structure (lower left x, y) (upper right x, y)
trackA (1356.7300, 2366.3550) (1356.9500, 2366.3550)
trackA (1356.7300, 2378.0550) (1356.9500, 2378.0550)
trackA (1356.7300, 2389.7550) (1356.9500, 2389.7550)
trackA (1496.6100, 2402.5750) (1496.8300, 2402.5750)
COHVNESD.7 COHVPESD.7: Recommended/max. salicided block edge to at
least one or nearest contact (CA) <= 0.22
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu_drc.rs:7062:not_interacting
-----
Structure
          (lower left x, y) (upper right x, y)
-----
comp018green out drv nleg 4T$1 (6.6200, 40.8800) (11.8300, 41.1000)
comp018green_out_drv_nleg_4T$1 (6.6200, 2.2200) (11.8300, 2.4400)
comp018green out drv nleg 4T$1 (0.7500, 40.8800) (5.9600, 41.1000)
comp018green_out_drv_nleg_4T$1 (0.7500, 2.2200) (5.9600, 2.4400)
pmos_6p0_esd_40$1 (1.1100, 40.8800) (4.8700, 41.1000)
pmos_6p0_esd_40$1
                     (1.1100, 0.2200) (4.8700, 0.4400)
CUP.3 Metal2: Min space of Metal2 line used for bond pads = 1.0
```

```
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:3001:external1
-----
Structure (lower left x, y) (upper right x, y) Distance
-----
Bondpad 5LM$1 (5.0400, 2.0000) (5.3400, 62.0000) 0.3000
Bondpad 5LM$1 (7.0400, 2.0000) (7.3400, 62.0000) 0.3000
Bondpad 5LM$1 (9.0400, 2.0000) (9.3400, 62.0000) 0.3000
Bondpad 5LM$1 (11.0400, 2.0000) (11.3400, 62.0000) 0.3000
Bondpad 5LM$1 (13.0400, 2.0000) (13.3400, 62.0000) 0.3000
Bondpad 5LM$1 (15.0400, 2.0000) (15.3400, 62.0000) 0.3000
Bondpad 5LM$1 (17.0400, 2.0000) (17.3400, 62.0000) 0.3000
Bondpad 5LM$1 (19.0400, 2.0000) (19.3400, 62.0000) 0.3000
Bondpad 5LM$1 (21.0400, 2.0000) (21.3400, 62.0000) 0.3000
Bondpad 5LM$1 (23.0400, 2.0000) (23.3400, 62.0000) 0.3000
Bondpad 5LM$1 (25.0400, 2.0000) (25.3400, 62.0000) 0.3000
Bondpad 5LM$1 (27.0400, 2.0000) (27.3400, 62.0000) 0.3000
Bondpad 5LM$1 (29.0400, 2.0000) (29.3400, 62.0000) 0.3000
Bondpad 5LM$1 (31.0400, 2.0000) (31.3400, 62.0000) 0.3000
Bondpad 5LM$1 (33.0400, 2.0000) (33.3400, 62.0000) 0.3000
Bondpad 5LM$1 (35.0400, 2.0000) (35.3400, 62.0000) 0.3000
Bondpad 5LM$1 (37.0400, 2.0000) (37.3400, 62.0000) 0.3000
Bondpad 5LM$1 (39.0400, 2.0000) (39.3400, 62.0000) 0.3000
Bondpad 5LM$1 (41.0400, 2.0000) (41.3400, 62.0000) 0.3000
Bondpad 5LM$1 (43.0400, 2.0000) (43.3400, 62.0000) 0.3000
Bondpad 5LM$1 (45.0400, 2.0000) (45.3400, 62.0000) 0.3000
Bondpad 5LM$1 (47.0400, 2.0000) (47.3400, 62.0000) 0.3000
Bondpad 5LM$1 (49.0400, 2.0000) (49.3400, 62.0000) 0.3000
Bondpad_5LM$1 (51.0400, 2.0000) (51.3400, 62.0000) 0.3000
Bondpad 5LM$1 (53.0400, 2.0000) (53.3400, 62.0000) 0.3000
Bondpad 5LM$1 (55.0400, 2.0000) (55.3400, 62.0000) 0.3000
Bondpad 5LM$1 (57.0400, 2.0000) (57.3400, 62.0000) 0.3000
Bondpad 5LM$1 (59.0400, 2.0000) (59.3400, 62.0000) 0.3000
CUP.3 Metal3: Min space of Metal3 line used for bond pads = 1.0
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:2998:external1
Structure (lower left x, y) (upper right x, y) Distance
```

Bondpad_5LM\$1 (5.0400, 2.2900) (5.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (7.0400, 2.2900) (7.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (9.0400, 2.2900) (9.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (11.0400, 2.2900) (11.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (13.0400, 2.2900) (13.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (15.0400, 2.2900) (15.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (17.0400, 2.2900) (17.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (19.0400, 2.2900) (19.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (21.0400, 2.2900) (21.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (23.0400, 2.2900) (23.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (25.0400, 2.2900) (25.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (27.0400, 2.2900) (27.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (29.0400, 2.2900) (29.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (31.0400, 2.2900) (31.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (33.0400, 2.2900) (33.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (35.0400, 2.2900) (35.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (37.0400, 2.2900) (37.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (39.0400, 2.2900) (39.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (41.0400, 2.2900) (41.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (43.0400, 2.2900) (43.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (45.0400, 2.2900) (45.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (47.0400, 2.2900) (47.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (49.0400, 2.2900) (49.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (51.0400, 2.2900) (51.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (53.0400, 2.2900) (53.3400, 61.6000) 0.3000 Bondpad_5LM\$1 (55.0400, 2.2900) (55.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (57.0400, 2.2900) (57.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (59.0400, 2.2900) (59.3400, 61.6000) 0.3000 CUP.3 Metal4: Min space of Metal4 line used for bond pads = 1.0 /evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu drc.rs:2995:external1 Structure (lower left x, y) (upper right x, y) Distance Bondpad 5LM\$1 (5.0400, 2.2900) (5.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (7.0400, 2.2900) (7.3400, 61.6000) 0.3000 Bondpad 5LM\$1 (9.0400, 2.2900) (9.3400, 61.6000) 0.3000

Bondpad 5LM\$1 (11.0400, 2.2900) (11.3400, 61.6000) 0.3000

```
Bondpad 5LM$1 (13.0400, 2.2900) (13.3400, 61.6000) 0.3000
Bondpad_5LM$1 (15.0400, 2.2900) (15.3400, 61.6000) 0.3000
Bondpad 5LM$1 (17.0400, 2.2900) (17.3400, 61.6000) 0.3000
Bondpad 5LM$1 (19.0400, 2.2900) (19.3400, 61.6000) 0.3000
Bondpad 5LM$1 (21.0400, 2.2900) (21.3400, 61.6000) 0.3000
Bondpad 5LM$1 (23.0400, 2.2900) (23.3400, 61.6000) 0.3000
Bondpad 5LM$1 (25.0400, 2.2900) (25.3400, 61.6000) 0.3000
Bondpad 5LM$1 (27.0400, 2.2900) (27.3400, 61.6000) 0.3000
Bondpad 5LM$1 (29.0400, 2.2900) (29.3400, 61.6000) 0.3000
Bondpad 5LM$1 (31.0400, 2.2900) (31.3400, 61.6000) 0.3000
Bondpad 5LM$1 (33.0400, 2.2900) (33.3400, 61.6000) 0.3000
Bondpad 5LM$1 (35.0400, 2.2900) (35.3400, 61.6000) 0.3000
Bondpad 5LM$1 (37.0400, 2.2900) (37.3400, 61.6000) 0.3000
Bondpad 5LM$1 (39.0400, 2.2900) (39.3400, 61.6000) 0.3000
Bondpad 5LM$1 (41.0400, 2.2900) (41.3400, 61.6000) 0.3000
Bondpad 5LM$1 (43.0400, 2.2900) (43.3400, 61.6000) 0.3000
Bondpad 5LM$1 (45.0400, 2.2900) (45.3400, 61.6000) 0.3000
Bondpad 5LM$1 (47.0400, 2.2900) (47.3400, 61.6000) 0.3000
Bondpad 5LM$1 (49.0400, 2.2900) (49.3400, 61.6000) 0.3000
Bondpad 5LM$1 (51.0400, 2.2900) (51.3400, 61.6000) 0.3000
Bondpad 5LM$1 (53.0400, 2.2900) (53.3400, 61.6000) 0.3000
Bondpad 5LM$1 (55.0400, 2.2900) (55.3400, 61.6000) 0.3000
Bondpad 5LM$1 (57.0400, 2.2900) (57.3400, 61.6000) 0.3000
Bondpad 5LM$1 (59.0400, 2.2900) (59.3400, 61.6000) 0.3000
```

OUD 5 T ... A ... A ... A ... A ... A ...

CUP.5 : Top via (Via4) not allowed directly under pad opening

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:3016:and

WARNING: The error count of 101 for this check exceeds the limit set in the runset. Details only available for the first 100.

Check was stopped early because error limit was reached.

Structure (lower left x, y) (upper right x, y)

M5_M4_CDNS_4066195314556\$1 (-29.5950, -0.4850) (-29.3350, -0.2250)

M5_M4_CDNS_4066195314556\$1 (-29.5950, 0.2250) (-29.3350, 0.4850)

M5_M4_CDNS_4066195314556\$1 (-28.8850, -0.4850) (-28.6250, -0.2250)

M5_M4_CDNS_4066195314556\$1 (-28.8850, 0.2250) (-28.6250, 0.4850)

```
M5 M4 CDNS 4066195314556$1 (-28.1750, -0.4850) (-27.9150, -0.2250)
M5_M4_CDNS_4066195314556$1 (-28.1750, 0.2250) (-27.9150, 0.4850)
M5 M4 CDNS 4066195314556$1 (-27.4650, -0.4850) (-27.2050, -0.2250)
M5 M4 CDNS 4066195314556$1 (-27.4650, 0.2250) (-27.2050, 0.4850)
M5 M4 CDNS 4066195314556$1 (-26.7550, -0.4850) (-26.4950, -0.2250)
M5 M4 CDNS 4066195314556$1 (-26.7550, 0.2250) (-26.4950, 0.4850)
M5 M4 CDNS 4066195314556$1 (-26.0450, -0.4850) (-25.7850, -0.2250)
M5 M4 CDNS 4066195314556$1 (-26.0450, 0.2250) (-25.7850, 0.4850)
M5 M4 CDNS 4066195314556$1 (-25.3350, -0.4850) (-25.0750, -0.2250)
M5 M4 CDNS 4066195314556$1 (-25.3350, 0.2250) (-25.0750, 0.4850)
M5 M4 CDNS 4066195314556$1 (-24.6250, -0.4850) (-24.3650, -0.2250)
M5_M4_CDNS_4066195314556$1 (-24.6250, 0.2250) (-24.3650, 0.4850)
M5 M4 CDNS 4066195314556$1 (-23.9150, -0.4850) (-23.6550, -0.2250)
M5_M4_CDNS_4066195314556$1 (-23.9150, 0.2250) (-23.6550, 0.4850)
M5 M4 CDNS 4066195314556$1 (-23.2050, -0.4850) (-22.9450, -0.2250)
M5_M4_CDNS_4066195314556$1 (-23.2050, 0.2250) (-22.9450, 0.4850)
M5_M4_CDNS_4066195314556$1 (-22.4950, -0.4850) (-22.2350, -0.2250)
M5 M4 CDNS 4066195314556$1 (-22.4950, 0.2250) (-22.2350, 0.4850)
M5_M4_CDNS_4066195314556$1 (-21.7850, -0.4850) (-21.5250, -0.2250)
M5 M4 CDNS 4066195314556$1 (-21.7850, 0.2250) (-21.5250, 0.4850)
M5 M4 CDNS 4066195314556$1 (-21.0750, -0.4850) (-20.8150, -0.2250)
M5_M4_CDNS_4066195314556$1 (-21.0750, 0.2250) (-20.8150, 0.4850)
M5 M4 CDNS 4066195314556$1 (-20.3650, -0.4850) (-20.1050, -0.2250)
M5 M4 CDNS 4066195314556$1 (-20.3650, 0.2250) (-20.1050, 0.4850)
M5_M4_CDNS_4066195314556$1 (-19.6550, -0.4850) (-19.3950, -0.2250)
M5 M4 CDNS 4066195314556$1 (-19.6550, 0.2250) (-19.3950, 0.4850)
M5_M4_CDNS_4066195314556$1 (-18.9450, -0.4850) (-18.6850, -0.2250)
M5 M4 CDNS 4066195314556$1 (-18.9450, 0.2250) (-18.6850, 0.4850)
M5 M4 CDNS 4066195314556$1 (-18.2350, -0.4850) (-17.9750, -0.2250)
M5_M4_CDNS_4066195314556$1 (-18.2350, 0.2250) (-17.9750, 0.4850)
M5 M4 CDNS 4066195314556$1 (-17.5250, -0.4850) (-17.2650, -0.2250)
M5 M4 CDNS 4066195314556$1 (-17.5250, 0.2250) (-17.2650, 0.4850)
M5 M4 CDNS 4066195314556$1 (-16.8150, -0.4850) (-16.5550, -0.2250)
M5 M4 CDNS 4066195314556$1 (-16.8150, 0.2250) (-16.5550, 0.4850)
M5 M4 CDNS 4066195314556$1 (-16.1050, -0.4850) (-15.8450, -0.2250)
M5 M4 CDNS 4066195314556$1 (-16.1050, 0.2250) (-15.8450, 0.4850)
M5_M4_CDNS_4066195314556$1 (-15.3950, -0.4850) (-15.1350, -0.2250)
M5 M4 CDNS 4066195314556$1 (-15.3950, 0.2250) (-15.1350, 0.4850)
M5_M4_CDNS_4066195314556$1 (-14.6850, -0.4850) (-14.4250, -0.2250)
M5 M4 CDNS 4066195314556$1 (-14.6850, 0.2250) (-14.4250, 0.4850)
M5 M4 CDNS 4066195314556$1 (-13.9750, -0.4850) (-13.7150, -0.2250)
M5_M4_CDNS_4066195314556$1 (-13.9750, 0.2250) (-13.7150, 0.4850)
M5 M4 CDNS 4066195314556$1 (-13.2650, -0.4850) (-13.0050, -0.2250)
M5_M4_CDNS_4066195314556$1 (-13.2650, 0.2250) (-13.0050, 0.4850)
```

```
M5 M4 CDNS 4066195314556$1 (-12.5550, -0.4850) (-12.2950, -0.2250)
M5_M4_CDNS_4066195314556$1 (-12.5550, 0.2250) (-12.2950, 0.4850)
M5 M4 CDNS 4066195314556$1 (-11.8450, -0.4850) (-11.5850, -0.2250)
M5 M4 CDNS 4066195314556$1 (-11.8450, 0.2250) (-11.5850, 0.4850)
M5 M4 CDNS 4066195314556$1 (-11.1350, -0.4850) (-10.8750, -0.2250)
M5 M4 CDNS 4066195314556$1 (-11.1350, 0.2250) (-10.8750, 0.4850)
M5 M4 CDNS 4066195314556$1 (-10.4250, -0.4850) (-10.1650, -0.2250)
M5 M4 CDNS 4066195314556$1 (-10.4250, 0.2250) (-10.1650, 0.4850)
M5 M4 CDNS 4066195314556$1 (-9.7150, -0.4850) (-9.4550, -0.2250)
M5 M4 CDNS 4066195314556$1 (-9.7150, 0.2250) (-9.4550, 0.4850)
M5 M4 CDNS 4066195314556$1 (-9.0050, -0.4850) (-8.7450, -0.2250)
M5 M4 CDNS 4066195314556$1 (-9.0050, 0.2250) (-8.7450, 0.4850)
M5 M4 CDNS 4066195314556$1 (-8.2950, -0.4850) (-8.0350, -0.2250)
M5_M4_CDNS_4066195314556$1 (-8.2950, 0.2250) (-8.0350, 0.4850)
M5 M4 CDNS 4066195314556$1 (-7.5850, -0.4850) (-7.3250, -0.2250)
M5_M4_CDNS_4066195314556$1 (-7.5850, 0.2250) (-7.3250, 0.4850)
M5_M4_CDNS_4066195314556$1 (-6.8750, -0.4850) (-6.6150, -0.2250)
M5 M4 CDNS 4066195314556$1 (-6.8750, 0.2250) (-6.6150, 0.4850)
M5_M4_CDNS_4066195314556$1 (-6.1650, -0.4850) (-5.9050, -0.2250)
M5 M4 CDNS 4066195314556$1 (-6.1650, 0.2250) (-5.9050, 0.4850)
M5 M4 CDNS 4066195314556$1 (-5.4550, -0.4850) (-5.1950, -0.2250)
M5_M4_CDNS_4066195314556$1 (-5.4550, 0.2250) (-5.1950, 0.4850)
M5 M4 CDNS 4066195314556$1 (-4.7450, -0.4850) (-4.4850, -0.2250)
M5 M4 CDNS 4066195314556$1 (-4.7450, 0.2250) (-4.4850, 0.4850)
M5_M4_CDNS_4066195314556$1 (-4.0350, -0.4850) (-3.7750, -0.2250)
M5 M4 CDNS 4066195314556$1 (-4.0350, 0.2250) (-3.7750, 0.4850)
M5 M4 CDNS 4066195314556$1 (-3.3250, -0.4850) (-3.0650, -0.2250)
M5 M4 CDNS 4066195314556$1 (-3.3250, 0.2250) (-3.0650, 0.4850)
M5 M4 CDNS 4066195314556$1 (-2.6150, -0.4850) (-2.3550, -0.2250)
M5_M4_CDNS_4066195314556$1 (-2.6150, 0.2250) (-2.3550, 0.4850)
M5 M4 CDNS 4066195314556$1 (-1.9050, -0.4850) (-1.6450, -0.2250)
M5 M4 CDNS 4066195314556$1 (-1.9050, 0.2250) (-1.6450, 0.4850)
M5 M4 CDNS 4066195314556$1 (-1.1950, -0.4850) (-0.9350, -0.2250)
M5 M4 CDNS 4066195314556$1 (-1.1950, 0.2250) (-0.9350, 0.4850)
M5 M4 CDNS 4066195314556$1 (-0.4850, -0.4850) (-0.2250, -0.2250)
M5 M4 CDNS 4066195314556$1 (-0.4850, 0.2250) (-0.2250, 0.4850)
M5_M4_CDNS_4066195314556$1 (0.2250, -0.4850) (0.4850, -0.2250)
M5 M4 CDNS 4066195314556$1 (0.2250, 0.2250)
                                               (0.4850, 0.4850)
M5_M4_CDNS_4066195314556$1 (0.9350, -0.4850) (1.1950, -0.2250)
M5 M4 CDNS 4066195314556$1 (0.9350, 0.2250)
                                               (1.1950, 0.4850)
M5 M4 CDNS 4066195314556$1 (1.6450, -0.4850) (1.9050, -0.2250)
M5 M4 CDNS 4066195314556$1 (1.6450, 0.2250)
                                               (1.9050, 0.4850)
M5 M4 CDNS 4066195314556$1 (2.3550, -0.4850) (2.6150, -0.2250)
M5_M4_CDNS_4066195314556$1 (2.3550, 0.2250)
                                               (2.6150, 0.4850)
```

```
M5_M4_CDNS_4066195314556$1 (3.0650, -0.4850) (3.3250, -0.2250)
M5_M4_CDNS_4066195314556$1 (3.0650, 0.2250) (3.3250, 0.4850)
M5_M4_CDNS_4066195314556$1 (3.7750, -0.4850) (4.0350, -0.2250)
M5_M4_CDNS_4066195314556$1 (3.7750, 0.2250) (4.0350, 0.4850)
M5_M4_CDNS_4066195314556$1 (4.4850, -0.4850) (4.7450, -0.2250)
M5_M4_CDNS_4066195314556$1 (4.4850, 0.2250) (4.7450, 0.4850)
M5_M4_CDNS_4066195314556$1 (5.1950, -0.4850) (5.4550, -0.2250)
M5_M4_CDNS_4066195314556$1 (5.1950, 0.2250) (5.4550, 0.4850)
```

CUP.7_Via2 : CUP.7c Vias shall be in the form of cluster or arrays

(<=3x3). Sea of via (> 3x3 array) is not allowed.

CUP.7d Min Via2 space in via arrays = 0.3

CUP.7e Min space between via arrays = 0.36

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:3095:not_rectangle_spacing1

WARNING: The error count of 280 for this check exceeds the limit set in the runset. Details only available for the first 100.

```
-----
```

```
Structure (lower left x, y) (upper right x, y)
```

Bondpad 5LM\$1 (44.4050, 2.3500) (44.6650, 2.6100)

Bondpad_5LM\$1 (8.4300, 2.3500) (8.6900, 2.6100)

Bondpad 5LM\$1 (4.4250, 2.3500) (4.6850, 2.6100)

Bondpad 5LM\$1 (6.4300, 2.3500) (6.6900, 2.6100)

Bondpad_5LM\$1 (10.4150, 2.3500) (10.6750, 2.6100)

Bondpad_5LM\$1 (12.4000, 2.3500) (12.6600, 2.6100)

Bondpad 5LM\$1 (14.4200, 2.3500) (14.6800, 2.6100)

Bondpad 5LM\$1 (24.4100, 2.3500) (24.6700, 2.6100)

Bondpad 5LM\$1 (22.4100, 2.3500) (22.6700, 2.6100)

Bondpad 5LM\$1 (20.3850, 2.3500) (20.6450, 2.6100)

Bondpad 5LM\$1 (18.4000, 2.3500) (18.6600, 2.6100)

Bondpad_5LM\$1 (26.4350, 2.3500) (26.6950, 2.6100)

Bondpad 5LM\$1 (16.4000, 2.3500) (16.6600, 2.6100)

Bondpad_5LM\$1 (60.4250, 2.3500) (60.6850, 2.6100)

Bondpad 5LM\$1 (58.4000, 2.3500) (58.6600, 2.6100)

Bondpad 5LM\$1 (56.4000, 2.3500) (56.6600, 2.6100)

Bondpad 5LM\$1 (54.3750, 2.3500) (54.6350, 2.6100)

Bondpad 5LM\$1 (52.3900, 2.3500) (52.6500, 2.6100)

Bondpad_5LM\$1 (50.3900, 2.3500) (50.6500, 2.6100)

```
Bondpad 5LM$1 (48.4100, 2.3500) (48.6700, 2.6100)
Bondpad_5LM$1 (28.4200, 2.3500) (28.6800, 2.6100)
Bondpad 5LM$1 (42.4200, 2.3500)
                                 (42.6800, 2.6100)
Bondpad 5LM$1 (40.4200, 2.3500)
                                 (40.6800, 2.6100)
                                 (38.6750, 2.6100)
Bondpad 5LM$1 (38.4150, 2.3500)
Bondpad 5LM$1 (36.4450, 2.3500) (36.7050, 2.6100)
Bondpad 5LM$1 (34.4300, 2.3500)
                                 (34.6900, 2.6100)
Bondpad 5LM$1 (32.4200, 2.3500)
                                 (32.6800, 2.6100)
Bondpad 5LM$1 (30.4050, 2.3500)
                                 (30.6650, 2.6100)
Bondpad 5LM$1 (46.3900, 2.3500)
                                 (46.6500, 2.6100)
Bondpad 5LM$1 (43.6950, 2.3500) (43.9550, 2.6100)
Bondpad 5LM$1 (7.7200, 2.3500)
                                 (7.9800, 2.6100)
Bondpad 5LM$1 (3.7150, 2.3500)
                                 (3.9750, 2.6100)
Bondpad 5LM$1 (5.7200, 2.3500)
                                 (5.9800, 2.6100)
Bondpad 5LM$1 (9.7050, 2.3500)
                                 (9.9650, 2.6100)
Bondpad 5LM$1 (11.6900, 2.3500)
                                 (11.9500, 2.6100)
Bondpad 5LM$1 (13.7100, 2.3500)
                                 (13.9700, 2.6100)
Bondpad 5LM$1 (23.7000, 2.3500)
                                 (23.9600, 2.6100)
Bondpad 5LM$1 (21.7000, 2.3500)
                                 (21.9600, 2.6100)
Bondpad 5LM$1 (19.6750, 2.3500) (19.9350, 2.6100)
Bondpad 5LM$1 (17.6900, 2.3500)
                                 (17.9500, 2.6100)
Bondpad_5LM$1 (25.7250, 2.3500) (25.9850, 2.6100)
Bondpad 5LM$1 (15.6900, 2.3500)
                                 (15.9500, 2.6100)
Bondpad 5LM$1 (59.7150, 2.3500)
                                 (59.9750, 2.6100)
Bondpad 5LM$1 (57.6900, 2.3500)
                                 (57.9500, 2.6100)
Bondpad 5LM$1 (55.6900, 2.3500)
                                 (55.9500, 2.6100)
Bondpad_5LM$1 (53.6650, 2.3500)
                                 (53.9250, 2.6100)
Bondpad 5LM$1 (51.6800, 2.3500)
                                 (51.9400, 2.6100)
Bondpad 5LM$1 (49.6800, 2.3500)
                                 (49.9400, 2.6100)
Bondpad_5LM$1 (47.7000, 2.3500) (47.9600, 2.6100)
Bondpad 5LM$1 (27.7100, 2.3500)
                                 (27.9700, 2.6100)
Bondpad 5LM$1 (41.7100, 2.3500)
                                 (41.9700, 2.6100)
Bondpad 5LM$1 (39.7100, 2.3500)
                                 (39.9700, 2.6100)
Bondpad 5LM$1 (37.7050, 2.3500)
                                 (37.9650, 2.6100)
Bondpad 5LM$1 (35.7350, 2.3500)
                                 (35.9950, 2.6100)
Bondpad 5LM$1 (33.7200, 2.3500)
                                 (33.9800, 2.6100)
Bondpad 5LM$1 (31.7100, 2.3500)
                                 (31.9700, 2.6100)
Bondpad 5LM$1 (29.6950, 2.3500) (29.9550, 2.6100)
Bondpad 5LM$1 (45.6800, 2.3500) (45.9400, 2.6100)
Bondpad 5LM$1 (44.4050, 3.0600) (44.6650, 3.3200)
Bondpad 5LM$1 (8.4300, 3.0600)
                                 (8.6900, 3.3200)
Bondpad 5LM$1 (4.4250, 3.0600)
                                 (4.6850, 3.3200)
Bondpad 5LM$1 (6.4300, 3.0600)
                                 (6.6900, 3.3200)
Bondpad 5LM$1 (10.4150, 3.0600) (10.6750, 3.3200)
```

```
Bondpad 5LM$1 (12.4000, 3.0600) (12.6600, 3.3200)
Bondpad_5LM$1 (14.4200, 3.0600) (14.6800, 3.3200)
Bondpad 5LM$1 (24.4100, 3.0600) (24.6700, 3.3200)
Bondpad 5LM$1 (22.4100, 3.0600) (22.6700, 3.3200)
Bondpad 5LM$1 (20.3850, 3.0600) (20.6450, 3.3200)
Bondpad 5LM$1 (18.4000, 3.0600) (18.6600, 3.3200)
Bondpad 5LM$1 (26.4350, 3.0600) (26.6950, 3.3200)
Bondpad 5LM$1 (16.4000, 3.0600) (16.6600, 3.3200)
Bondpad 5LM$1 (60.4250, 3.0600)
                                 (60.6850, 3.3200)
Bondpad 5LM$1 (58.4000, 3.0600) (58.6600, 3.3200)
Bondpad 5LM$1 (56.4000, 3.0600)
                                 (56.6600, 3.3200)
Bondpad 5LM$1 (54.3750, 3.0600)
                                 (54.6350, 3.3200)
Bondpad 5LM$1 (52.3900, 3.0600) (52.6500, 3.3200)
Bondpad 5LM$1 (50.3900, 3.0600) (50.6500, 3.3200)
Bondpad 5LM$1 (48.4100, 3.0600)
                                 (48.6700, 3.3200)
Bondpad 5LM$1 (28.4200, 3.0600)
                                 (28.6800, 3.3200)
Bondpad 5LM$1 (42.4200, 3.0600)
                                 (42.6800, 3.3200)
Bondpad 5LM$1 (40.4200, 3.0600)
                                 (40.6800, 3.3200)
Bondpad 5LM$1 (38.4150, 3.0600)
                                 (38.6750, 3.3200)
Bondpad 5LM$1 (36.4450, 3.0600)
                                 (36.7050, 3.3200)
Bondpad 5LM$1 (34.4300, 3.0600)
                                 (34.6900, 3.3200)
Bondpad_5LM$1 (32.4200, 3.0600) (32.6800, 3.3200)
Bondpad 5LM$1 (30.4050, 3.0600)
                                 (30.6650, 3.3200)
Bondpad 5LM$1 (46.3900, 3.0600)
                                 (46.6500, 3.3200)
Bondpad 5LM$1 (43.6950, 3.0600) (43.9550, 3.3200)
Bondpad 5LM$1 (7.7200, 3.0600)
                                 (7.9800, 3.3200)
Bondpad 5LM$1 (3.7150, 3.0600)
                                 (3.9750, 3.3200)
Bondpad 5LM$1 (5.7200, 3.0600)
                                 (5.9800, 3.3200)
Bondpad 5LM$1 (9.7050, 3.0600)
                                 (9.9650, 3.3200)
Bondpad_5LM$1 (11.6900, 3.0600) (11.9500, 3.3200)
Bondpad 5LM$1 (13.7100, 3.0600) (13.9700, 3.3200)
Bondpad 5LM$1 (23.7000, 3.0600) (23.9600, 3.3200)
Bondpad 5LM$1 (21.7000, 3.0600) (21.9600, 3.3200)
Bondpad 5LM$1 (19.6750, 3.0600) (19.9350, 3.3200)
Bondpad 5LM$1 (17.6900, 3.0600) (17.9500, 3.3200)
Bondpad 5LM$1 (25.7250, 3.0600) (25.9850, 3.3200)
Bondpad 5LM$1 (15.6900, 3.0600) (15.9500, 3.3200)
```

CUP.7_Via3 : CUP.7c Vias shall be in the form of cluster or arrays

(<=3x3). Sea of via (> 3x3 array) is not allowed.

CUP.7d Min Via3 space in via arrays = 0.3

CUP.7e Min space between via arrays = 0.36

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:3080:not_rectangle_spacing1

WARNING: The error count of 168 for this check exceeds the limit set in the runset. Details only available for the first 100.

```
(lower left x, y) (upper right x, y)
M4 M3 CDNS 4066195314551$1 (-29.5950, -0.4850) (-29.3350, -0.2250)
M4 M3 CDNS 4066195314551$1 (-29.5950, 0.2250) (-29.3350, 0.4850)
M4 M3 CDNS 4066195314551$1 (-28.8850, -0.4850) (-28.6250, -0.2250)
M4_M3_CDNS_4066195314551$1 (-28.8850, 0.2250) (-28.6250, 0.4850)
M4 M3 CDNS 4066195314551$1 (-28.1750, -0.4850) (-27.9150, -0.2250)
M4_M3_CDNS_4066195314551$1 (-28.1750, 0.2250) (-27.9150, 0.4850)
M4 M3 CDNS 4066195314551$1 (-27.4650, -0.4850) (-27.2050, -0.2250)
M4 M3 CDNS 4066195314551$1 (-27.4650, 0.2250) (-27.2050, 0.4850)
M4_M3_CDNS_4066195314551$1 (-26.7550, -0.4850) (-26.4950, -0.2250)
M4 M3 CDNS 4066195314551$1 (-26.7550, 0.2250) (-26.4950, 0.4850)
M4 M3 CDNS 4066195314551$1 (-26.0450, -0.4850) (-25.7850, -0.2250)
M4_M3_CDNS_4066195314551$1 (-26.0450, 0.2250) (-25.7850, 0.4850)
M4 M3 CDNS 4066195314551$1 (-25.3350, -0.4850) (-25.0750, -0.2250)
M4 M3 CDNS 4066195314551$1 (-25.3350, 0.2250) (-25.0750, 0.4850)
M4_M3_CDNS_4066195314551$1 (-24.6250, -0.4850) (-24.3650, -0.2250)
M4 M3 CDNS 4066195314551$1 (-24.6250, 0.2250) (-24.3650, 0.4850)
M4_M3_CDNS_4066195314551$1 (-23.9150, -0.4850) (-23.6550, -0.2250)
M4 M3 CDNS 4066195314551$1 (-23.9150, 0.2250) (-23.6550, 0.4850)
M4 M3 CDNS 4066195314551$1 (-23.2050, -0.4850) (-22.9450, -0.2250)
M4_M3_CDNS_4066195314551$1 (-23.2050, 0.2250) (-22.9450, 0.4850)
M4 M3 CDNS 4066195314551$1 (-22.4950, -0.4850) (-22.2350, -0.2250)
M4 M3 CDNS 4066195314551$1 (-22.4950, 0.2250) (-22.2350, 0.4850)
M4 M3 CDNS 4066195314551$1 (-21.7850, -0.4850) (-21.5250, -0.2250)
M4 M3 CDNS 4066195314551$1 (-21.7850, 0.2250) (-21.5250, 0.4850)
M4 M3 CDNS 4066195314551$1 (-21.0750, -0.4850) (-20.8150, -0.2250)
M4 M3 CDNS 4066195314551$1 (-21.0750, 0.2250) (-20.8150, 0.4850)
M4_M3_CDNS_4066195314551$1 (-20.3650, -0.4850) (-20.1050, -0.2250)
M4 M3 CDNS 4066195314551$1 (-20.3650, 0.2250) (-20.1050, 0.4850)
M4_M3_CDNS_4066195314551$1 (-19.6550, -0.4850) (-19.3950, -0.2250)
M4 M3 CDNS 4066195314551$1 (-19.6550, 0.2250) (-19.3950, 0.4850)
M4 M3 CDNS 4066195314551$1 (-18.9450, -0.4850) (-18.6850, -0.2250)
M4_M3_CDNS_4066195314551$1 (-18.9450, 0.2250) (-18.6850, 0.4850)
M4 M3 CDNS 4066195314551$1 (-18.2350, -0.4850) (-17.9750, -0.2250)
M4_M3_CDNS_4066195314551$1 (-18.2350, 0.2250) (-17.9750, 0.4850)
```

```
M4 M3 CDNS 4066195314551$1 (-17.5250, -0.4850) (-17.2650, -0.2250)
M4_M3_CDNS_4066195314551$1 (-17.5250, 0.2250) (-17.2650, 0.4850)
M4 M3 CDNS 4066195314551$1 (-16.8150, -0.4850) (-16.5550, -0.2250)
M4 M3 CDNS 4066195314551$1 (-16.8150, 0.2250) (-16.5550, 0.4850)
M4 M3 CDNS 4066195314551$1 (-16.1050, -0.4850) (-15.8450, -0.2250)
M4 M3 CDNS 4066195314551$1 (-16.1050, 0.2250) (-15.8450, 0.4850)
M4 M3 CDNS 4066195314551$1 (-15.3950, -0.4850) (-15.1350, -0.2250)
M4 M3 CDNS 4066195314551$1 (-15.3950, 0.2250) (-15.1350, 0.4850)
M4 M3 CDNS 4066195314551$1 (-14.6850, -0.4850) (-14.4250, -0.2250)
M4 M3 CDNS 4066195314551$1 (-14.6850, 0.2250) (-14.4250, 0.4850)
M4 M3 CDNS 4066195314551$1 (-13.9750, -0.4850) (-13.7150, -0.2250)
M4 M3 CDNS 4066195314551$1 (-13.9750, 0.2250) (-13.7150, 0.4850)
M4 M3 CDNS 4066195314551$1 (-13.2650, -0.4850) (-13.0050, -0.2250)
M4_M3_CDNS_4066195314551$1 (-13.2650, 0.2250) (-13.0050, 0.4850)
M4 M3 CDNS 4066195314551$1 (-12.5550, -0.4850) (-12.2950, -0.2250)
M4_M3_CDNS_4066195314551$1 (-12.5550, 0.2250) (-12.2950, 0.4850)
M4_M3_CDNS_4066195314551$1 (-11.8450, -0.4850) (-11.5850, -0.2250)
M4 M3 CDNS 4066195314551$1 (-11.8450, 0.2250) (-11.5850, 0.4850)
M4_M3_CDNS_4066195314551$1 (-11.1350, -0.4850) (-10.8750, -0.2250)
M4 M3 CDNS 4066195314551$1 (-11.1350, 0.2250) (-10.8750, 0.4850)
M4 M3 CDNS 4066195314551$1 (-10.4250, -0.4850) (-10.1650, -0.2250)
M4_M3_CDNS_4066195314551$1 (-10.4250, 0.2250) (-10.1650, 0.4850)
M4 M3 CDNS 4066195314551$1 (-9.7150, -0.4850) (-9.4550, -0.2250)
M4 M3 CDNS 4066195314551$1 (-9.7150, 0.2250) (-9.4550, 0.4850)
M4_M3_CDNS_4066195314551$1 (-9.0050, -0.4850) (-8.7450, -0.2250)
M4 M3 CDNS 4066195314551$1 (-9.0050, 0.2250) (-8.7450, 0.4850)
M4 M3 CDNS 4066195314551$1 (-8.2950, -0.4850) (-8.0350, -0.2250)
M4 M3 CDNS 4066195314551$1 (-8.2950, 0.2250) (-8.0350, 0.4850)
M4 M3 CDNS 4066195314551$1 (-7.5850, -0.4850) (-7.3250, -0.2250)
M4_M3_CDNS_4066195314551$1 (-7.5850, 0.2250) (-7.3250, 0.4850)
M4 M3 CDNS 4066195314551$1 (-6.8750, -0.4850) (-6.6150, -0.2250)
M4 M3 CDNS 4066195314551$1 (-6.8750, 0.2250) (-6.6150, 0.4850)
M4 M3 CDNS 4066195314551$1 (-6.1650, -0.4850) (-5.9050, -0.2250)
M4 M3 CDNS 4066195314551$1 (-6.1650, 0.2250) (-5.9050, 0.4850)
M4 M3 CDNS 4066195314551$1 (-5.4550, -0.4850) (-5.1950, -0.2250)
M4 M3 CDNS 4066195314551$1 (-5.4550, 0.2250) (-5.1950, 0.4850)
M4_M3_CDNS_4066195314551$1 (-4.7450, -0.4850) (-4.4850, -0.2250)
M4 M3 CDNS 4066195314551$1 (-4.7450, 0.2250) (-4.4850, 0.4850)
M4_M3_CDNS_4066195314551$1 (-4.0350, -0.4850) (-3.7750, -0.2250)
M4 M3 CDNS 4066195314551$1 (-4.0350, 0.2250) (-3.7750, 0.4850)
M4 M3 CDNS 4066195314551$1 (-3.3250, -0.4850) (-3.0650, -0.2250)
M4 M3 CDNS 4066195314551$1 (-3.3250, 0.2250) (-3.0650, 0.4850)
M4 M3 CDNS 4066195314551$1 (-2.6150, -0.4850) (-2.3550, -0.2250)
M4 M3 CDNS 4066195314551$1 (-2.6150, 0.2250) (-2.3550, 0.4850)
```

```
M4 M3 CDNS 4066195314551$1 (-1.9050, -0.4850) (-1.6450, -0.2250)
M4_M3_CDNS_4066195314551$1 (-1.9050, 0.2250) (-1.6450, 0.4850)
M4 M3 CDNS 4066195314551$1 (-1.1950, -0.4850) (-0.9350, -0.2250)
M4 M3 CDNS 4066195314551$1 (-1.1950, 0.2250) (-0.9350, 0.4850)
M4 M3 CDNS 4066195314551$1 (-0.4850, -0.4850) (-0.2250, -0.2250)
M4 M3 CDNS 4066195314551$1 (-0.4850, 0.2250) (-0.2250, 0.4850)
M4 M3 CDNS 4066195314551$1 (0.2250, -0.4850) (0.4850, -0.2250)
M4 M3 CDNS 4066195314551$1 (0.2250, 0.2250)
                                               (0.4850, 0.4850)
M4 M3 CDNS 4066195314551$1 (0.9350, -0.4850) (1.1950, -0.2250)
M4 M3 CDNS 4066195314551$1 (0.9350, 0.2250)
                                               (1.1950, 0.4850)
M4 M3 CDNS 4066195314551$1 (1.6450, -0.4850) (1.9050, -0.2250)
M4 M3 CDNS 4066195314551$1 (1.6450, 0.2250)
                                               (1.9050, 0.4850)
M4 M3 CDNS 4066195314551$1 (2.3550, -0.4850) (2.6150, -0.2250)
M4_M3_CDNS_4066195314551$1 (2.3550, 0.2250)
                                               (2.6150, 0.4850)
M4 M3 CDNS 4066195314551$1 (3.0650, -0.4850) (3.3250, -0.2250)
M4_M3_CDNS_4066195314551$1 (3.0650, 0.2250)
                                               (3.3250, 0.4850)
M4 M3 CDNS 4066195314551$1 (3.7750, -0.4850) (4.0350, -0.2250)
M4 M3 CDNS 4066195314551$1 (3.7750, 0.2250)
                                               (4.0350, 0.4850)
M4_M3_CDNS_4066195314551$1 (4.4850, -0.4850) (4.7450, -0.2250)
M4 M3 CDNS 4066195314551$1 (4.4850, 0.2250)
                                               (4.7450, 0.4850)
M4 M3 CDNS 4066195314551$1 (5.1950, -0.4850) (5.4550, -0.2250)
                                               (5.4550, 0.4850)
M4_M3_CDNS_4066195314551$1 (5.1950, 0.2250)
```

CUP.7_Via4 : CUP.7c Vias shall be in the form of cluster or arrays (<=3x3). Sea of via (> 3x3 array) is not allowed.
CUP.7d Min Via4 space in via arrays = 0.3
CUP.7e Min space between via arrays = 0.36

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:3065:not_rectangle_spacing1

WARNING: The error count of 168 for this check exceeds the limit set in the runset. Details only available for the first 100.

```
Structure (lower left x, y) (upper right x, y)

M5_M4_CDNS_4066195314556$1 (-29.5950, -0.4850) (-29.3350, -0.2250)

M5_M4_CDNS_4066195314556$1 (-29.5950, 0.2250) (-29.3350, 0.4850)

M5_M4_CDNS_4066195314556$1 (-28.8850, -0.4850) (-28.6250, -0.2250)

M5_M4_CDNS_4066195314556$1 (-28.8850, 0.2250) (-28.6250, 0.4850)

M5_M4_CDNS_4066195314556$1 (-28.1750, -0.4850) (-27.9150, -0.2250)
```

```
M5 M4 CDNS 4066195314556$1 (-28.1750, 0.2250) (-27.9150, 0.4850)
M5_M4_CDNS_4066195314556$1 (-27.4650, -0.4850) (-27.2050, -0.2250)
M5 M4 CDNS 4066195314556$1 (-27.4650, 0.2250) (-27.2050, 0.4850)
M5 M4 CDNS 4066195314556$1 (-26.7550, -0.4850) (-26.4950, -0.2250)
M5 M4 CDNS 4066195314556$1 (-26.7550, 0.2250) (-26.4950, 0.4850)
M5 M4 CDNS 4066195314556$1 (-26.0450, -0.4850) (-25.7850, -0.2250)
M5 M4 CDNS 4066195314556$1 (-26.0450, 0.2250) (-25.7850, 0.4850)
M5 M4 CDNS 4066195314556$1 (-25.3350, -0.4850) (-25.0750, -0.2250)
M5 M4 CDNS 4066195314556$1 (-25.3350, 0.2250) (-25.0750, 0.4850)
M5 M4 CDNS 4066195314556$1 (-24.6250, -0.4850) (-24.3650, -0.2250)
M5 M4 CDNS 4066195314556$1 (-24.6250, 0.2250) (-24.3650, 0.4850)
M5_M4_CDNS_4066195314556$1 (-23.9150, -0.4850) (-23.6550, -0.2250)
M5 M4 CDNS 4066195314556$1 (-23.9150, 0.2250) (-23.6550, 0.4850)
M5_M4_CDNS_4066195314556$1 (-23.2050, -0.4850) (-22.9450, -0.2250)
M5 M4 CDNS 4066195314556$1 (-23.2050, 0.2250) (-22.9450, 0.4850)
M5_M4_CDNS_4066195314556$1 (-22.4950, -0.4850) (-22.2350, -0.2250)
M5 M4 CDNS 4066195314556$1 (-22.4950, 0.2250) (-22.2350, 0.4850)
M5 M4 CDNS 4066195314556$1 (-21.7850, -0.4850) (-21.5250, -0.2250)
M5_M4_CDNS_4066195314556$1 (-21.7850, 0.2250) (-21.5250, 0.4850)
M5 M4 CDNS 4066195314556$1 (-21.0750, -0.4850) (-20.8150, -0.2250)
M5 M4 CDNS 4066195314556$1 (-21.0750, 0.2250) (-20.8150, 0.4850)
M5_M4_CDNS_4066195314556$1 (-20.3650, -0.4850) (-20.1050, -0.2250)
M5 M4 CDNS 4066195314556$1 (-20.3650, 0.2250) (-20.1050, 0.4850)
M5 M4 CDNS 4066195314556$1 (-19.6550, -0.4850) (-19.3950, -0.2250)
M5_M4_CDNS_4066195314556$1 (-19.6550, 0.2250) (-19.3950, 0.4850)
M5 M4 CDNS 4066195314556$1 (-18.9450, -0.4850) (-18.6850, -0.2250)
M5_M4_CDNS_4066195314556$1 (-18.9450, 0.2250) (-18.6850, 0.4850)
M5 M4 CDNS 4066195314556$1 (-18.2350, -0.4850) (-17.9750, -0.2250)
M5 M4 CDNS 4066195314556$1 (-18.2350, 0.2250) (-17.9750, 0.4850)
M5_M4_CDNS_4066195314556$1 (-17.5250, -0.4850) (-17.2650, -0.2250)
M5 M4 CDNS 4066195314556$1 (-17.5250, 0.2250) (-17.2650, 0.4850)
M5 M4 CDNS 4066195314556$1 (-16.8150, -0.4850) (-16.5550, -0.2250)
M5 M4 CDNS 4066195314556$1 (-16.8150, 0.2250) (-16.5550, 0.4850)
M5 M4 CDNS 4066195314556$1 (-16.1050, -0.4850) (-15.8450, -0.2250)
M5 M4 CDNS 4066195314556$1 (-16.1050, 0.2250) (-15.8450, 0.4850)
M5 M4 CDNS 4066195314556$1 (-15.3950, -0.4850) (-15.1350, -0.2250)
M5_M4_CDNS_4066195314556$1 (-15.3950, 0.2250) (-15.1350, 0.4850)
M5 M4 CDNS 4066195314556$1 (-14.6850, -0.4850) (-14.4250, -0.2250)
M5_M4_CDNS_4066195314556$1 (-14.6850, 0.2250) (-14.4250, 0.4850)
M5 M4 CDNS 4066195314556$1 (-13.9750, -0.4850) (-13.7150, -0.2250)
M5 M4 CDNS 4066195314556$1 (-13.9750, 0.2250) (-13.7150, 0.4850)
M5 M4 CDNS 4066195314556$1 (-13.2650, -0.4850) (-13.0050, -0.2250)
M5 M4 CDNS 4066195314556$1 (-13.2650, 0.2250) (-13.0050, 0.4850)
M5 M4 CDNS 4066195314556$1 (-12.5550, -0.4850) (-12.2950, -0.2250)
```

```
M5 M4 CDNS 4066195314556$1 (-12.5550, 0.2250) (-12.2950, 0.4850)
M5_M4_CDNS_4066195314556$1 (-11.8450, -0.4850) (-11.5850, -0.2250)
M5 M4 CDNS 4066195314556$1 (-11.8450, 0.2250) (-11.5850, 0.4850)
M5 M4 CDNS 4066195314556$1 (-11.1350, -0.4850) (-10.8750, -0.2250)
M5 M4 CDNS 4066195314556$1 (-11.1350, 0.2250) (-10.8750, 0.4850)
M5 M4 CDNS 4066195314556$1 (-10.4250, -0.4850) (-10.1650, -0.2250)
M5 M4 CDNS 4066195314556$1 (-10.4250, 0.2250) (-10.1650, 0.4850)
M5 M4 CDNS 4066195314556$1 (-9.7150, -0.4850) (-9.4550, -0.2250)
M5 M4 CDNS 4066195314556$1 (-9.7150, 0.2250) (-9.4550, 0.4850)
M5 M4 CDNS 4066195314556$1 (-9.0050, -0.4850) (-8.7450, -0.2250)
M5 M4 CDNS 4066195314556$1 (-9.0050, 0.2250) (-8.7450, 0.4850)
M5 M4 CDNS 4066195314556$1 (-8.2950, -0.4850) (-8.0350, -0.2250)
M5 M4 CDNS 4066195314556$1 (-8.2950, 0.2250) (-8.0350, 0.4850)
M5_M4_CDNS_4066195314556$1 (-7.5850, -0.4850) (-7.3250, -0.2250)
M5 M4 CDNS 4066195314556$1 (-7.5850, 0.2250) (-7.3250, 0.4850)
M5_M4_CDNS_4066195314556$1 (-6.8750, -0.4850) (-6.6150, -0.2250)
M5 M4 CDNS 4066195314556$1 (-6.8750, 0.2250) (-6.6150, 0.4850)
M5 M4 CDNS 4066195314556$1 (-6.1650, -0.4850) (-5.9050, -0.2250)
M5_M4_CDNS_4066195314556$1 (-6.1650, 0.2250) (-5.9050, 0.4850)
M5 M4 CDNS 4066195314556$1 (-5.4550, -0.4850) (-5.1950, -0.2250)
M5 M4 CDNS 4066195314556$1 (-5.4550, 0.2250) (-5.1950, 0.4850)
M5_M4_CDNS_4066195314556$1 (-4.7450, -0.4850) (-4.4850, -0.2250)
M5 M4 CDNS 4066195314556$1 (-4.7450, 0.2250) (-4.4850, 0.4850)
M5 M4 CDNS 4066195314556$1 (-4.0350, -0.4850) (-3.7750, -0.2250)
M5_M4_CDNS_4066195314556$1 (-4.0350, 0.2250) (-3.7750, 0.4850)
M5 M4 CDNS 4066195314556$1 (-3.3250, -0.4850) (-3.0650, -0.2250)
M5_M4_CDNS_4066195314556$1 (-3.3250, 0.2250) (-3.0650, 0.4850)
M5 M4 CDNS 4066195314556$1 (-2.6150, -0.4850) (-2.3550, -0.2250)
M5 M4 CDNS 4066195314556$1 (-2.6150, 0.2250) (-2.3550, 0.4850)
M5_M4_CDNS_4066195314556$1 (-1.9050, -0.4850) (-1.6450, -0.2250)
M5 M4 CDNS 4066195314556$1 (-1.9050, 0.2250) (-1.6450, 0.4850)
M5 M4 CDNS 4066195314556$1 (-1.1950, -0.4850) (-0.9350, -0.2250)
M5 M4 CDNS 4066195314556$1 (-1.1950, 0.2250) (-0.9350, 0.4850)
M5 M4 CDNS 4066195314556$1 (-0.4850, -0.4850) (-0.2250, -0.2250)
M5 M4 CDNS 4066195314556$1 (-0.4850, 0.2250) (-0.2250, 0.4850)
M5 M4 CDNS 4066195314556$1 (0.2250, -0.4850) (0.4850, -0.2250)
M5_M4_CDNS_4066195314556$1 (0.2250, 0.2250)
                                               (0.4850, 0.4850)
M5 M4 CDNS 4066195314556$1 (0.9350, -0.4850) (1.1950, -0.2250)
M5_M4_CDNS_4066195314556$1 (0.9350, 0.2250)
                                               (1.1950, 0.4850)
M5 M4 CDNS 4066195314556$1 (1.6450, -0.4850) (1.9050, -0.2250)
M5 M4 CDNS 4066195314556$1 (1.6450, 0.2250)
                                               (1.9050, 0.4850)
M5 M4 CDNS 4066195314556$1 (2.3550, -0.4850) (2.6150, -0.2250)
M5 M4 CDNS 4066195314556$1 (2.3550, 0.2250)
                                               (2.6150, 0.4850)
M5 M4 CDNS 4066195314556$1 (3.0650, -0.4850) (3.3250, -0.2250)
```

```
M5_M4_CDNS_4066195314556$1 (3.0650, 0.2250) (3.3250, 0.4850) M5_M4_CDNS_4066195314556$1 (3.7750, -0.4850) (4.0350, -0.2250) M5_M4_CDNS_4066195314556$1 (3.7750, 0.2250) (4.0350, 0.4850) M5_M4_CDNS_4066195314556$1 (4.4850, -0.4850) (4.7450, -0.2250) M5_M4_CDNS_4066195314556$1 (4.4850, 0.2250) (4.7450, 0.4850) M5_M4_CDNS_4066195314556$1 (5.1950, -0.4850) (5.4550, -0.2250) M5_M4_CDNS_4066195314556$1 (5.1950, 0.2250) (5.4550, 0.4850)
```

CUP.8: Top_Via-1 directly underneath the Pad mask is not Allowed

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:3121:and

WARNING: The error count of 101 for this check exceeds the limit set in the runset. Details only available for the first 100.

Check was stopped early because error limit was reached.

```
Structure
                (lower left x, y) (upper right x, y)
-----
M4 M3 CDNS 4066195314551$1 (-29.5950, -0.4850) (-29.3350, -0.2250)
M4_M3_CDNS_4066195314551$1 (-29.5950, 0.2250) (-29.3350, 0.4850)
M4 M3 CDNS 4066195314551$1 (-28.8850, -0.4850) (-28.6250, -0.2250)
M4_M3_CDNS_4066195314551$1 (-28.8850, 0.2250) (-28.6250, 0.4850)
M4 M3 CDNS 4066195314551$1 (-28.1750, -0.4850) (-27.9150, -0.2250)
M4 M3 CDNS 4066195314551$1 (-28.1750, 0.2250) (-27.9150, 0.4850)
M4_M3_CDNS_4066195314551$1 (-27.4650, -0.4850) (-27.2050, -0.2250)
M4_M3_CDNS_4066195314551$1 (-27.4650, 0.2250) (-27.2050, 0.4850)
M4 M3 CDNS 4066195314551$1 (-26.7550, -0.4850) (-26.4950, -0.2250)
M4_M3_CDNS_4066195314551$1 (-26.7550, 0.2250) (-26.4950, 0.4850)
M4 M3 CDNS 4066195314551$1 (-26.0450, -0.4850) (-25.7850, -0.2250)
M4_M3_CDNS_4066195314551$1 (-26.0450, 0.2250) (-25.7850, 0.4850)
M4 M3 CDNS 4066195314551$1 (-25.3350, -0.4850) (-25.0750, -0.2250)
M4_M3_CDNS_4066195314551$1 (-25.3350, 0.2250) (-25.0750, 0.4850)
M4 M3 CDNS 4066195314551$1 (-24.6250, -0.4850) (-24.3650, -0.2250)
M4_M3_CDNS_4066195314551$1 (-24.6250, 0.2250) (-24.3650, 0.4850)
M4 M3 CDNS 4066195314551$1 (-23.9150, -0.4850) (-23.6550, -0.2250)
M4 M3 CDNS 4066195314551$1 (-23.9150, 0.2250) (-23.6550, 0.4850)
M4_M3_CDNS_4066195314551$1 (-23.2050, -0.4850) (-22.9450, -0.2250)
M4 M3 CDNS 4066195314551$1 (-23.2050, 0.2250) (-22.9450, 0.4850)
M4_M3_CDNS_4066195314551$1 (-22.4950, -0.4850) (-22.2350, -0.2250)
```

```
M4 M3 CDNS 4066195314551$1 (-22.4950, 0.2250) (-22.2350, 0.4850)
M4_M3_CDNS_4066195314551$1 (-21.7850, -0.4850) (-21.5250, -0.2250)
M4 M3 CDNS 4066195314551$1 (-21.7850, 0.2250) (-21.5250, 0.4850)
M4 M3 CDNS 4066195314551$1 (-21.0750, -0.4850) (-20.8150, -0.2250)
M4 M3 CDNS 4066195314551$1 (-21.0750, 0.2250) (-20.8150, 0.4850)
M4 M3 CDNS 4066195314551$1 (-20.3650, -0.4850) (-20.1050, -0.2250)
M4 M3 CDNS 4066195314551$1 (-20.3650, 0.2250) (-20.1050, 0.4850)
M4 M3 CDNS 4066195314551$1 (-19.6550, -0.4850) (-19.3950, -0.2250)
M4 M3 CDNS 4066195314551$1 (-19.6550, 0.2250) (-19.3950, 0.4850)
M4 M3 CDNS 4066195314551$1 (-18.9450, -0.4850) (-18.6850, -0.2250)
M4 M3 CDNS 4066195314551$1 (-18.9450, 0.2250) (-18.6850, 0.4850)
M4 M3 CDNS 4066195314551$1 (-18.2350, -0.4850) (-17.9750, -0.2250)
M4 M3 CDNS 4066195314551$1 (-18.2350, 0.2250) (-17.9750, 0.4850)
M4_M3_CDNS_4066195314551$1 (-17.5250, -0.4850) (-17.2650, -0.2250)
M4 M3 CDNS 4066195314551$1 (-17.5250, 0.2250) (-17.2650, 0.4850)
M4_M3_CDNS_4066195314551$1 (-16.8150, -0.4850) (-16.5550, -0.2250)
M4 M3 CDNS 4066195314551$1 (-16.8150, 0.2250) (-16.5550, 0.4850)
M4 M3 CDNS 4066195314551$1 (-16.1050, -0.4850) (-15.8450, -0.2250)
M4_M3_CDNS_4066195314551$1 (-16.1050, 0.2250) (-15.8450, 0.4850)
M4 M3 CDNS 4066195314551$1 (-15.3950, -0.4850) (-15.1350, -0.2250)
M4 M3 CDNS 4066195314551$1 (-15.3950, 0.2250) (-15.1350, 0.4850)
M4_M3_CDNS_4066195314551$1 (-14.6850, -0.4850) (-14.4250, -0.2250)
M4 M3 CDNS 4066195314551$1 (-14.6850, 0.2250) (-14.4250, 0.4850)
M4 M3 CDNS 4066195314551$1 (-13.9750, -0.4850) (-13.7150, -0.2250)
M4_M3_CDNS_4066195314551$1 (-13.9750, 0.2250) (-13.7150, 0.4850)
M4 M3 CDNS 4066195314551$1 (-13.2650, -0.4850) (-13.0050, -0.2250)
M4_M3_CDNS_4066195314551$1 (-13.2650, 0.2250) (-13.0050, 0.4850)
M4 M3 CDNS 4066195314551$1 (-12.5550, -0.4850) (-12.2950, -0.2250)
M4 M3 CDNS 4066195314551$1 (-12.5550, 0.2250) (-12.2950, 0.4850)
M4_M3_CDNS_4066195314551$1 (-11.8450, -0.4850) (-11.5850, -0.2250)
M4 M3 CDNS 4066195314551$1 (-11.8450, 0.2250) (-11.5850, 0.4850)
M4 M3 CDNS 4066195314551$1 (-11.1350, -0.4850) (-10.8750, -0.2250)
M4 M3 CDNS 4066195314551$1 (-11.1350, 0.2250) (-10.8750, 0.4850)
M4 M3 CDNS 4066195314551$1 (-10.4250, -0.4850) (-10.1650, -0.2250)
M4 M3 CDNS 4066195314551$1 (-10.4250, 0.2250) (-10.1650, 0.4850)
M4 M3 CDNS 4066195314551$1 (-9.7150, -0.4850) (-9.4550, -0.2250)
M4_M3_CDNS_4066195314551$1 (-9.7150, 0.2250) (-9.4550, 0.4850)
M4 M3 CDNS 4066195314551$1 (-9.0050, -0.4850) (-8.7450, -0.2250)
M4_M3_CDNS_4066195314551$1 (-9.0050, 0.2250) (-8.7450, 0.4850)
M4 M3 CDNS 4066195314551$1 (-8.2950, -0.4850) (-8.0350, -0.2250)
M4 M3 CDNS 4066195314551$1 (-8.2950, 0.2250) (-8.0350, 0.4850)
M4 M3 CDNS 4066195314551$1 (-7.5850, -0.4850) (-7.3250, -0.2250)
M4 M3 CDNS 4066195314551$1 (-7.5850, 0.2250) (-7.3250, 0.4850)
M4_M3_CDNS_4066195314551$1 (-6.8750, -0.4850) (-6.6150, -0.2250)
```

```
M4 M3 CDNS 4066195314551$1 (-6.8750, 0.2250) (-6.6150, 0.4850)
M4_M3_CDNS_4066195314551$1 (-6.1650, -0.4850) (-5.9050, -0.2250)
M4 M3 CDNS 4066195314551$1 (-6.1650, 0.2250) (-5.9050, 0.4850)
M4 M3 CDNS 4066195314551$1 (-5.4550, -0.4850) (-5.1950, -0.2250)
M4 M3 CDNS 4066195314551$1 (-5.4550, 0.2250) (-5.1950, 0.4850)
M4 M3 CDNS 4066195314551$1 (-4.7450, -0.4850) (-4.4850, -0.2250)
M4 M3 CDNS 4066195314551$1 (-4.7450, 0.2250) (-4.4850, 0.4850)
M4 M3 CDNS 4066195314551$1 (-4.0350, -0.4850) (-3.7750, -0.2250)
M4 M3 CDNS 4066195314551$1 (-4.0350, 0.2250) (-3.7750, 0.4850)
M4 M3 CDNS 4066195314551$1 (-3.3250, -0.4850) (-3.0650, -0.2250)
M4 M3 CDNS 4066195314551$1 (-3.3250, 0.2250) (-3.0650, 0.4850)
M4_M3_CDNS_4066195314551$1 (-2.6150, -0.4850) (-2.3550, -0.2250)
M4 M3 CDNS 4066195314551$1 (-2.6150, 0.2250) (-2.3550, 0.4850)
M4_M3_CDNS_4066195314551$1 (-1.9050, -0.4850) (-1.6450, -0.2250)
M4 M3 CDNS 4066195314551$1 (-1.9050, 0.2250) (-1.6450, 0.4850)
M4_M3_CDNS_4066195314551$1 (-1.1950, -0.4850) (-0.9350, -0.2250)
M4 M3 CDNS 4066195314551$1 (-1.1950, 0.2250) (-0.9350, 0.4850)
M4 M3 CDNS 4066195314551$1 (-0.4850, -0.4850) (-0.2250, -0.2250)
M4_M3_CDNS_4066195314551$1 (-0.4850, 0.2250) (-0.2250, 0.4850)
M4 M3 CDNS 4066195314551$1 (0.2250, -0.4850) (0.4850, -0.2250)
M4 M3 CDNS 4066195314551$1 (0.2250, 0.2250)
                                               (0.4850, 0.4850)
M4_M3_CDNS_4066195314551$1 (0.9350, -0.4850) (1.1950, -0.2250)
M4 M3 CDNS 4066195314551$1 (0.9350, 0.2250)
                                               (1.1950, 0.4850)
M4 M3 CDNS 4066195314551$1 (1.6450, -0.4850) (1.9050, -0.2250)
M4_M3_CDNS_4066195314551$1 (1.6450, 0.2250)
                                               (1.9050, 0.4850)
M4 M3 CDNS 4066195314551$1 (2.3550, -0.4850) (2.6150, -0.2250)
M4_M3_CDNS_4066195314551$1 (2.3550, 0.2250)
                                               (2.6150, 0.4850)
M4 M3 CDNS 4066195314551$1 (3.0650, -0.4850) (3.3250, -0.2250)
M4 M3 CDNS 4066195314551$1 (3.0650, 0.2250)
                                               (3.3250, 0.4850)
M4_M3_CDNS_4066195314551$1 (3.7750, -0.4850) (4.0350, -0.2250)
M4 M3 CDNS 4066195314551$1 (3.7750, 0.2250)
                                               (4.0350, 0.4850)
M4 M3 CDNS 4066195314551$1 (4.4850, -0.4850) (4.7450, -0.2250)
M4 M3 CDNS 4066195314551$1 (4.4850, 0.2250)
                                               (4.7450, 0.4850)
M4 M3 CDNS 4066195314551$1 (5.1950, -0.4850) (5.4550, -0.2250)
M4 M3 CDNS 4066195314551$1 (5.1950, 0.2250)
                                               (5.4550, 0.4850)
```

CUP.9 : 1LM, 2LM and 3LM process not allowed to have CUP for wire bond case

CUP.1a CUP is not allowed for Wedge-type Wire bond case

```
Structure (lower left x y ) (upper right x y )
```

Structure (lower left x, y) (upper right x, y) Bondpad 5LM\$1 (43.6350, 2.2900) (44.7250, 61.6000) Bondpad 5LM\$1 (7.6600, 2.2900) (8.7500, 61.6000) Bondpad 5LM\$1 (3.6550, 2.2900) (4.7450, 61.6000) Bondpad 5LM\$1 (5.6600, 2.2900) (6.7500, 61.6000) Bondpad 5LM\$1 (9.6450, 2.2900) (10.7350, 61.6000) Bondpad 5LM\$1 (11.6300, 2.2900) (12.7200, 61.6000) Bondpad 5LM\$1 (13.6500, 2.2900) (14.7400, 61.6000) Bondpad 5LM\$1 (23.6400, 2.2900) (24.7300, 61.6000) Bondpad 5LM\$1 (21.6400, 2.2900) (22.7300, 61.6000) Bondpad 5LM\$1 (19.6150, 2.2900) (20.7050, 61.6000) Bondpad 5LM\$1 (17.6300, 2.2900) (18.7200, 61.6000) Bondpad 5LM\$1 (25.6650, 2.2900) (26.7550, 61.6000) Bondpad 5LM\$1 (15.6300, 2.2900) (16.7200, 61.6000) Bondpad 5LM\$1 (59.6550, 2.2900) (60.7450, 61.6000) Bondpad 5LM\$1 (57.6300, 2.2900) (58.7200, 61.6000) Bondpad 5LM\$1 (55.6300, 2.2900) (56.7200, 61.6000) Bondpad_5LM\$1 (53.6050, 2.2900) (54.6950, 61.6000) Bondpad 5LM\$1 (51.6200, 2.2900) (52.7100, 61.6000) Bondpad 5LM\$1 (49.6200, 2.2900) (50.7100, 61.6000) Bondpad_5LM\$1 (47.6400, 2.2900) (48.7300, 61.6000) Bondpad 5LM\$1 (27.6500, 2.2900) (28.7400, 61.6000) Bondpad_5LM\$1 (41.6500, 2.2900) (42.7400, 61.6000) Bondpad 5LM\$1 (39.6500, 2.2900) (40.7400, 61.6000) Bondpad 5LM\$1 (37.6450, 2.2900) (38.7350, 61.6000) Bondpad_5LM\$1 (35.6750, 2.2900) (36.7650, 61.6000) Bondpad 5LM\$1 (33.6600, 2.2900) (34.7500, 61.6000) Bondpad 5LM\$1 (31.6500, 2.2900) (32.7400, 61.6000) Bondpad 5LM\$1 (29.6350, 2.2900) (30.7250, 61.6000) Bondpad 5LM\$1 (45.6200, 2.2900) (46.7100, 61.6000) Bondpad 5LM\$1 (31.3400, 2.0000) (33.0400, 62.0000) Bondpad 5LM\$1 (33.3400, 2.0000) (35.0400, 62.0000) Bondpad 5LM\$1 (35.3400, 2.0000) (37.0400, 62.0000) Bondpad 5LM\$1 (37.3400, 2.0000) (39.0400, 62.0000) Bondpad 5LM\$1 (39.3400, 2.0000) (41.0400, 62.0000) Bondpad 5LM\$1 (41.3400, 2.0000) (43.0400, 62.0000) Bondpad 5LM\$1 (43.3400, 2.0000) (45.0400, 62.0000) Bondpad 5LM\$1 (45.3400, 2.0000) (47.0400, 62.0000) Bondpad 5LM\$1 (47.3400, 2.0000) (49.0400, 62.0000) Bondpad 5LM\$1 (49.3400, 2.0000) (51.0400, 62.0000)

```
Bondpad 5LM$1 (51.3400, 2.0000) (53.0400, 62.0000)
Bondpad_5LM$1 (53.3400, 2.0000) (55.0400, 62.0000)
Bondpad 5LM$1 (55.3400, 2.0000) (57.0400, 62.0000)
Bondpad 5LM$1 (57.3400, 2.0000) (59.0400, 62.0000)
Bondpad 5LM$1 (59.3400, 2.0000) (61.0400, 62.0000)
Bondpad 5LM$1 (3.3400, 2.0000)
                                (5.0400, 62.0000)
Bondpad 5LM$1 (5.3400, 2.0000)
                                (7.0400, 62.0000)
Bondpad 5LM$1 (7.3400, 2.0000)
                                (9.0400, 62.0000)
Bondpad 5LM$1 (9.3400, 2.0000)
                                (11.0400, 62.0000)
Bondpad 5LM$1 (11.3400, 2.0000) (13.0400, 62.0000)
Bondpad 5LM$1 (13.3400, 2.0000) (15.0400, 62.0000)
Bondpad 5LM$1 (15.3400, 2.0000) (17.0400, 62.0000)
Bondpad 5LM$1 (17.3400, 2.0000) (19.0400, 62.0000)
Bondpad 5LM$1 (19.3400, 2.0000) (21.0400, 62.0000)
Bondpad 5LM$1 (21.3400, 2.0000) (23.0400, 62.0000)
Bondpad 5LM$1 (23.3400, 2.0000) (25.0400, 62.0000)
Bondpad 5LM$1 (25.3400, 2.0000) (27.0400, 62.0000)
Bondpad 5LM$1 (27.3400, 2.0000) (29.0400, 62.0000)
Bondpad 5LM$1 (29.3400, 2.0000) (31.0400, 62.0000)
```

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:3141:and

WARNING: The error count of 213 for this check exceeds the limit set in the runset. Details only available for the first 100.

Check was stopped early because error limit was reached.

```
(lower left x, y) (upper right x, y)
Structure
Bondpad 5LM$1 (44.4050, 2.3500) (44.6650, 2.6100)
Bondpad 5LM$1 (8.4300, 2.3500) (8.6900, 2.6100)
Bondpad 5LM$1 (4.4250, 2.3500)
                                 (4.6850, 2.6100)
Bondpad 5LM$1 (6.4300, 2.3500)
                                (6.6900, 2.6100)
Bondpad 5LM$1 (10.4150, 2.3500) (10.6750, 2.6100)
Bondpad 5LM$1 (12.4000, 2.3500) (12.6600, 2.6100)
Bondpad 5LM$1 (14.4200, 2.3500) (14.6800, 2.6100)
Bondpad 5LM$1 (24.4100, 2.3500) (24.6700, 2.6100)
Bondpad_5LM$1 (22.4100, 2.3500) (22.6700, 2.6100)
Bondpad 5LM$1 (20.3850, 2.3500) (20.6450, 2.6100)
Bondpad 5LM$1 (18.4000, 2.3500) (18.6600, 2.6100)
Bondpad 5LM$1 (26.4350, 2.3500) (26.6950, 2.6100)
Bondpad 5LM$1 (16.4000, 2.3500) (16.6600, 2.6100)
Bondpad 5LM$1 (60.4250, 2.3500) (60.6850, 2.6100)
```

```
Bondpad 5LM$1 (58.4000, 2.3500) (58.6600, 2.6100)
Bondpad_5LM$1 (56.4000, 2.3500)
                                 (56.6600, 2.6100)
Bondpad 5LM$1 (54.3750, 2.3500)
                                 (54.6350, 2.6100)
Bondpad 5LM$1 (52.3900, 2.3500)
                                 (52.6500, 2.6100)
Bondpad 5LM$1 (50.3900, 2.3500)
                                 (50.6500, 2.6100)
Bondpad 5LM$1 (48.4100, 2.3500) (48.6700, 2.6100)
Bondpad 5LM$1 (28.4200, 2.3500)
                                 (28.6800, 2.6100)
Bondpad 5LM$1 (42.4200, 2.3500)
                                 (42.6800, 2.6100)
Bondpad 5LM$1 (40.4200, 2.3500)
                                 (40.6800, 2.6100)
Bondpad 5LM$1 (38.4150, 2.3500)
                                 (38.6750, 2.6100)
Bondpad 5LM$1 (36.4450, 2.3500)
                                 (36.7050, 2.6100)
Bondpad 5LM$1 (34.4300, 2.3500)
                                 (34.6900, 2.6100)
Bondpad 5LM$1 (32.4200, 2.3500)
                                 (32.6800, 2.6100)
Bondpad 5LM$1 (30.4050, 2.3500) (30.6650, 2.6100)
Bondpad 5LM$1 (46.3900, 2.3500)
                                 (46.6500, 2.6100)
Bondpad 5LM$1 (43.6950, 2.3500) (43.9550, 2.6100)
Bondpad 5LM$1 (7.7200, 2.3500)
                                 (7.9800, 2.6100)
Bondpad 5LM$1 (3.7150, 2.3500)
                                 (3.9750, 2.6100)
Bondpad 5LM$1 (5.7200, 2.3500)
                                 (5.9800, 2.6100)
Bondpad 5LM$1 (9.7050, 2.3500)
                                 (9.9650, 2.6100)
Bondpad 5LM$1 (11.6900, 2.3500)
                                (11.9500, 2.6100)
Bondpad_5LM$1 (13.7100, 2.3500) (13.9700, 2.6100)
Bondpad 5LM$1 (23.7000, 2.3500)
                                 (23.9600, 2.6100)
Bondpad 5LM$1 (21.7000, 2.3500)
                                 (21.9600, 2.6100)
Bondpad_5LM$1 (19.6750, 2.3500)
                                 (19.9350, 2.6100)
Bondpad 5LM$1 (17.6900, 2.3500) (17.9500, 2.6100)
Bondpad 5LM$1 (25.7250, 2.3500)
                                 (25.9850, 2.6100)
Bondpad 5LM$1 (15.6900, 2.3500) (15.9500, 2.6100)
Bondpad 5LM$1 (59.7150, 2.3500)
                                 (59.9750, 2.6100)
Bondpad_5LM$1 (57.6900, 2.3500) (57.9500, 2.6100)
Bondpad 5LM$1 (55.6900, 2.3500)
                                 (55.9500, 2.6100)
Bondpad 5LM$1 (53.6650, 2.3500)
                                 (53.9250, 2.6100)
Bondpad 5LM$1 (51.6800, 2.3500)
                                 (51.9400, 2.6100)
Bondpad 5LM$1 (49.6800, 2.3500)
                                 (49.9400, 2.6100)
Bondpad 5LM$1 (47.7000, 2.3500) (47.9600, 2.6100)
Bondpad 5LM$1 (27.7100, 2.3500)
                                 (27.9700, 2.6100)
Bondpad 5LM$1 (41.7100, 2.3500)
                                 (41.9700, 2.6100)
Bondpad 5LM$1 (39.7100, 2.3500) (39.9700, 2.6100)
Bondpad 5LM$1 (37.7050, 2.3500) (37.9650, 2.6100)
Bondpad 5LM$1 (35.7350, 2.3500)
                                 (35.9950, 2.6100)
Bondpad 5LM$1 (33.7200, 2.3500)
                                 (33.9800, 2.6100)
Bondpad 5LM$1 (31.7100, 2.3500) (31.9700, 2.6100)
Bondpad 5LM$1 (29.6950, 2.3500) (29.9550, 2.6100)
Bondpad 5LM$1 (45.6800, 2.3500) (45.9400, 2.6100)
```

```
Bondpad 5LM$1 (44.4050, 3.0600) (44.6650, 3.3200)
Bondpad_5LM$1 (8.4300, 3.0600)
                                 (8.6900, 3.3200)
Bondpad 5LM$1 (4.4250, 3.0600)
                                 (4.6850, 3.3200)
Bondpad 5LM$1 (6.4300, 3.0600)
                                 (6.6900, 3.3200)
Bondpad 5LM$1 (10.4150, 3.0600)
                                 (10.6750, 3.3200)
Bondpad 5LM$1 (12.4000, 3.0600) (12.6600, 3.3200)
Bondpad_5LM$1 (14.4200, 3.0600)
                                 (14.6800, 3.3200)
Bondpad 5LM$1 (24.4100, 3.0600)
                                 (24.6700, 3.3200)
Bondpad 5LM$1 (22.4100, 3.0600)
                                 (22.6700, 3.3200)
Bondpad 5LM$1 (20.3850, 3.0600)
                                 (20.6450, 3.3200)
Bondpad 5LM$1 (18.4000, 3.0600)
                                 (18.6600, 3.3200)
Bondpad 5LM$1 (26.4350, 3.0600)
                                 (26.6950, 3.3200)
Bondpad 5LM$1 (16.4000, 3.0600)
                                 (16.6600, 3.3200)
Bondpad 5LM$1 (60.4250, 3.0600)
                                 (60.6850, 3.3200)
Bondpad 5LM$1 (58.4000, 3.0600)
                                 (58.6600, 3.3200)
Bondpad 5LM$1 (56.4000, 3.0600)
                                 (56.6600, 3.3200)
Bondpad 5LM$1 (54.3750, 3.0600)
                                 (54.6350, 3.3200)
Bondpad 5LM$1 (52.3900, 3.0600)
                                 (52.6500, 3.3200)
Bondpad 5LM$1 (50.3900, 3.0600)
                                 (50.6500, 3.3200)
Bondpad 5LM$1 (48.4100, 3.0600)
                                 (48.6700, 3.3200)
Bondpad 5LM$1 (28.4200, 3.0600)
                                 (28.6800, 3.3200)
Bondpad_5LM$1 (42.4200, 3.0600) (42.6800, 3.3200)
Bondpad 5LM$1 (40.4200, 3.0600)
                                 (40.6800, 3.3200)
Bondpad 5LM$1 (38.4150, 3.0600)
                                 (38.6750, 3.3200)
Bondpad_5LM$1 (36.4450, 3.0600)
                                 (36.7050, 3.3200)
Bondpad 5LM$1 (34.4300, 3.0600)
                                 (34.6900, 3.3200)
Bondpad_5LM$1 (32.4200, 3.0600)
                                 (32.6800, 3.3200)
Bondpad 5LM$1 (30.4050, 3.0600)
                                 (30.6650, 3.3200)
Bondpad 5LM$1 (46.3900, 3.0600)
                                 (46.6500, 3.3200)
Bondpad_5LM$1 (43.6950, 3.0600) (43.9550, 3.3200)
Bondpad 5LM$1 (7.7200, 3.0600)
                                 (7.9800, 3.3200)
Bondpad 5LM$1 (3.7150, 3.0600)
                                 (3.9750, 3.3200)
Bondpad 5LM$1 (5.7200, 3.0600)
                                 (5.9800, 3.3200)
Bondpad 5LM$1 (9.7050, 3.0600)
                                 (9.9650, 3.3200)
Bondpad 5LM$1 (11.6900, 3.0600) (11.9500, 3.3200)
Bondpad 5LM$1 (13.7100, 3.0600)
                                 (13.9700, 3.3200)
Bondpad 5LM$1 (23.7000, 3.0600)
                                 (23.9600, 3.3200)
Bondpad 5LM$1 (21.7000, 3.0600) (21.9600, 3.3200)
Bondpad_5LM$1 (19.6750, 3.0600) (19.9350, 3.3200)
Bondpad 5LM$1 (17.6900, 3.0600) (17.9500, 3.3200)
Bondpad 5LM$1 (25.7250, 3.0600) (25.9850, 3.3200)
Bondpad 5LM$1 (15.6900, 3.0600) (15.9500, 3.3200)
```

CUP.9_Wedge_4LM: 9.3 Wedge type wire-bond not allowed to have CUP

 $/ evprj 182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180mcu_drc.rs: 3146: and$

Structure	(lower left x, y) (upper	right x, y)
Bondpad_5LM\$1	(43.6350, 2.2900)	(44.7250, 61.6000)
Bondpad_5LM\$1	(7.6600, 2.2900)	(8.7500, 61.6000)
Bondpad_5LM\$1	(3.6550, 2.2900)	(4.7450, 61.6000)
Bondpad_5LM\$1	(5.6600, 2.2900)	(6.7500, 61.6000)
Bondpad_5LM\$1	(9.6450, 2.2900)	(10.7350, 61.6000)
Bondpad_5LM\$1	(11.6300, 2.2900)	(12.7200, 61.6000)
Bondpad_5LM\$1	(13.6500, 2.2900)	(14.7400, 61.6000)
Bondpad_5LM\$1	(23.6400, 2.2900)	(24.7300, 61.6000)
Bondpad_5LM\$1	(21.6400, 2.2900)	(22.7300, 61.6000)
Bondpad_5LM\$1	(19.6150, 2.2900)	(20.7050, 61.6000)
Bondpad_5LM\$1	(17.6300, 2.2900)	(18.7200, 61.6000)
Bondpad_5LM\$1	(25.6650, 2.2900)	(26.7550, 61.6000)
Bondpad_5LM\$1	(15.6300, 2.2900)	(16.7200, 61.6000)
Bondpad_5LM\$1	(59.6550, 2.2900)	(60.7450, 61.6000)
Bondpad_5LM\$1	(57.6300, 2.2900)	(58.7200, 61.6000)
Bondpad_5LM\$1	(55.6300, 2.2900)	(56.7200, 61.6000)
Bondpad_5LM\$1	(53.6050, 2.2900)	(54.6950, 61.6000)
Bondpad_5LM\$1	(51.6200, 2.2900)	(52.7100, 61.6000)
Bondpad_5LM\$1	(49.6200, 2.2900)	(50.7100, 61.6000)
Bondpad_5LM\$1	(47.6400, 2.2900)	(48.7300, 61.6000)
Bondpad_5LM\$1	(27.6500, 2.2900)	(28.7400, 61.6000)
Bondpad_5LM\$1	(41.6500, 2.2900)	(42.7400, 61.6000)
Bondpad_5LM\$1	(39.6500, 2.2900)	(40.7400, 61.6000)
Bondpad_5LM\$1	(37.6450, 2.2900)	(38.7350, 61.6000)
Bondpad_5LM\$1	(35.6750, 2.2900)	(36.7650, 61.6000)
Bondpad_5LM\$1	(33.6600, 2.2900)	(34.7500, 61.6000)
Bondpad_5LM\$1	(31.6500, 2.2900)	(32.7400, 61.6000)
Bondpad_5LM\$1	(29.6350, 2.2900)	•
Bondpad_5LM\$1	(45.6200, 2.2900)	•
Bondpad_5LM\$1	(2.0000, 2.0000)	(62.0000, 62.0000)
M4_M3_CDNS_4066195314551\$1 (-29.6550, -0.5450) (29.6550, 0.5450)		

 $/ evprj 182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180mcu_drc.rs: 3147: and$

WARNING: The error count of 101 for this check exceeds the limit set in the runset. Details only available for the first 100.

Check was stopped early because error limit was reached. -----(lower left x, y) (upper right x, y) Structure M4 M3 CDNS 4066195314551\$1 (-29.5950, -0.4850) (-29.3350, -0.2250) M4 M3 CDNS 4066195314551\$1 (-29.5950, 0.2250) (-29.3350, 0.4850) M4 M3 CDNS 4066195314551\$1 (-28.8850, -0.4850) (-28.6250, -0.2250) M4 M3 CDNS 4066195314551\$1 (-28.8850, 0.2250) (-28.6250, 0.4850) M4 M3 CDNS 4066195314551\$1 (-28.1750, -0.4850) (-27.9150, -0.2250) M4 M3 CDNS 4066195314551\$1 (-28.1750, 0.2250) (-27.9150, 0.4850) M4 M3 CDNS 4066195314551\$1 (-27.4650, -0.4850) (-27.2050, -0.2250) M4 M3 CDNS 4066195314551\$1 (-27.4650, 0.2250) (-27.2050, 0.4850) M4_M3_CDNS_4066195314551\$1 (-26.7550, -0.4850) (-26.4950, -0.2250) M4 M3 CDNS 4066195314551\$1 (-26.7550, 0.2250) (-26.4950, 0.4850) M4 M3 CDNS 4066195314551\$1 (-26.0450, -0.4850) (-25.7850, -0.2250) M4 M3 CDNS 4066195314551\$1 (-26.0450, 0.2250) (-25.7850, 0.4850) M4 M3 CDNS 4066195314551\$1 (-25.3350, -0.4850) (-25.0750, -0.2250) M4 M3 CDNS 4066195314551\$1 (-25.3350, 0.2250) (-25.0750, 0.4850) M4_M3_CDNS_4066195314551\$1 (-24.6250, -0.4850) (-24.3650, -0.2250) M4 M3 CDNS 4066195314551\$1 (-24.6250, 0.2250) (-24.3650, 0.4850) M4 M3 CDNS 4066195314551\$1 (-23.9150, -0.4850) (-23.6550, -0.2250) M4 M3 CDNS_4066195314551\$1 (-23.9150, 0.2250) (-23.6550, 0.4850) M4 M3 CDNS 4066195314551\$1 (-23.2050, -0.4850) (-22.9450, -0.2250) M4_M3_CDNS_4066195314551\$1 (-23.2050, 0.2250) (-22.9450, 0.4850) M4 M3 CDNS 4066195314551\$1 (-22.4950, -0.4850) (-22.2350, -0.2250) M4 M3 CDNS 4066195314551\$1 (-22.4950, 0.2250) (-22.2350, 0.4850) M4_M3_CDNS_4066195314551\$1 (-21.7850, -0.4850) (-21.5250, -0.2250) M4 M3 CDNS 4066195314551\$1 (-21.7850, 0.2250) (-21.5250, 0.4850) M4 M3 CDNS 4066195314551\$1 (-21.0750, -0.4850) (-20.8150, -0.2250) M4 M3 CDNS 4066195314551\$1 (-21.0750, 0.2250) (-20.8150, 0.4850) M4 M3 CDNS 4066195314551\$1 (-20.3650, -0.4850) (-20.1050, -0.2250) M4 M3 CDNS 4066195314551\$1 (-20.3650, 0.2250) (-20.1050, 0.4850) M4 M3 CDNS 4066195314551\$1 (-19.6550, -0.4850) (-19.3950, -0.2250) M4 M3 CDNS 4066195314551\$1 (-19.6550, 0.2250) (-19.3950, 0.4850) M4 M3 CDNS 4066195314551\$1 (-18.9450, -0.4850) (-18.6850, -0.2250) M4 M3 CDNS 4066195314551\$1 (-18.9450, 0.2250) (-18.6850, 0.4850) M4 M3 CDNS 4066195314551\$1 (-18.2350, -0.4850) (-17.9750, -0.2250) M4 M3 CDNS 4066195314551\$1 (-18.2350, 0.2250) (-17.9750, 0.4850)

M4_M3_CDNS_4066195314551\$1 (-17.5250, -0.4850) (-17.2650, -0.2250) M4_M3_CDNS_4066195314551\$1 (-17.5250, 0.2250) (-17.2650, 0.4850) M4_M3_CDNS_4066195314551\$1 (-16.8150, -0.4850) (-16.5550, -0.2250)

```
M4 M3 CDNS 4066195314551$1 (-16.8150, 0.2250) (-16.5550, 0.4850)
M4_M3_CDNS_4066195314551$1 (-16.1050, -0.4850) (-15.8450, -0.2250)
M4 M3 CDNS 4066195314551$1 (-16.1050, 0.2250) (-15.8450, 0.4850)
M4 M3 CDNS 4066195314551$1 (-15.3950, -0.4850) (-15.1350, -0.2250)
M4 M3 CDNS 4066195314551$1 (-15.3950, 0.2250) (-15.1350, 0.4850)
M4 M3 CDNS 4066195314551$1 (-14.6850, -0.4850) (-14.4250, -0.2250)
M4 M3 CDNS 4066195314551$1 (-14.6850, 0.2250) (-14.4250, 0.4850)
M4 M3 CDNS 4066195314551$1 (-13.9750, -0.4850) (-13.7150, -0.2250)
M4 M3 CDNS 4066195314551$1 (-13.9750, 0.2250) (-13.7150, 0.4850)
M4 M3 CDNS 4066195314551$1 (-13.2650, -0.4850) (-13.0050, -0.2250)
M4 M3 CDNS 4066195314551$1 (-13.2650, 0.2250) (-13.0050, 0.4850)
M4 M3 CDNS 4066195314551$1 (-12.5550, -0.4850) (-12.2950, -0.2250)
M4 M3 CDNS 4066195314551$1 (-12.5550, 0.2250) (-12.2950, 0.4850)
M4_M3_CDNS_4066195314551$1 (-11.8450, -0.4850) (-11.5850, -0.2250)
M4 M3 CDNS 4066195314551$1 (-11.8450, 0.2250) (-11.5850, 0.4850)
M4_M3_CDNS_4066195314551$1 (-11.1350, -0.4850) (-10.8750, -0.2250)
M4_M3_CDNS_4066195314551$1 (-11.1350, 0.2250) (-10.8750, 0.4850)
M4 M3 CDNS 4066195314551$1 (-10.4250, -0.4850) (-10.1650, -0.2250)
M4_M3_CDNS_4066195314551$1 (-10.4250, 0.2250) (-10.1650, 0.4850)
M4 M3 CDNS 4066195314551$1 (-9.7150, -0.4850) (-9.4550, -0.2250)
M4 M3 CDNS 4066195314551$1 (-9.7150, 0.2250) (-9.4550, 0.4850)
M4_M3_CDNS_4066195314551$1 (-9.0050, -0.4850) (-8.7450, -0.2250)
M4 M3 CDNS 4066195314551$1 (-9.0050, 0.2250) (-8.7450, 0.4850)
M4 M3 CDNS 4066195314551$1 (-8.2950, -0.4850) (-8.0350, -0.2250)
M4_M3_CDNS_4066195314551$1 (-8.2950, 0.2250) (-8.0350, 0.4850)
M4 M3 CDNS 4066195314551$1 (-7.5850, -0.4850) (-7.3250, -0.2250)
M4_M3_CDNS_4066195314551$1 (-7.5850, 0.2250) (-7.3250, 0.4850)
M4 M3 CDNS 4066195314551$1 (-6.8750, -0.4850) (-6.6150, -0.2250)
M4 M3 CDNS 4066195314551$1 (-6.8750, 0.2250) (-6.6150, 0.4850)
M4_M3_CDNS_4066195314551$1 (-6.1650, -0.4850) (-5.9050, -0.2250)
M4 M3 CDNS 4066195314551$1 (-6.1650, 0.2250) (-5.9050, 0.4850)
M4 M3 CDNS 4066195314551$1 (-5.4550, -0.4850) (-5.1950, -0.2250)
M4 M3 CDNS 4066195314551$1 (-5.4550, 0.2250) (-5.1950, 0.4850)
M4 M3 CDNS 4066195314551$1 (-4.7450, -0.4850) (-4.4850, -0.2250)
M4 M3 CDNS 4066195314551$1 (-4.7450, 0.2250) (-4.4850, 0.4850)
M4 M3 CDNS 4066195314551$1 (-4.0350, -0.4850) (-3.7750, -0.2250)
M4_M3_CDNS_4066195314551$1 (-4.0350, 0.2250) (-3.7750, 0.4850)
M4 M3 CDNS 4066195314551$1 (-3.3250, -0.4850) (-3.0650, -0.2250)
M4_M3_CDNS_4066195314551$1 (-3.3250, 0.2250) (-3.0650, 0.4850)
M4 M3 CDNS 4066195314551$1 (-2.6150, -0.4850) (-2.3550, -0.2250)
M4 M3 CDNS 4066195314551$1 (-2.6150, 0.2250) (-2.3550, 0.4850)
M4 M3 CDNS 4066195314551$1 (-1.9050, -0.4850) (-1.6450, -0.2250)
M4 M3 CDNS 4066195314551$1 (-1.9050, 0.2250) (-1.6450, 0.4850)
M4_M3_CDNS_4066195314551$1 (-1.1950, -0.4850) (-0.9350, -0.2250)
```

```
M4 M3 CDNS 4066195314551$1 (-1.1950, 0.2250) (-0.9350, 0.4850)
M4_M3_CDNS_4066195314551$1 (-0.4850, -0.4850) (-0.2250, -0.2250)
M4 M3 CDNS 4066195314551$1 (-0.4850, 0.2250) (-0.2250, 0.4850)
M4 M3 CDNS 4066195314551$1 (0.2250, -0.4850) (0.4850, -0.2250)
M4 M3 CDNS 4066195314551$1 (0.2250, 0.2250)
                                              (0.4850, 0.4850)
M4 M3 CDNS 4066195314551$1 (0.9350, -0.4850) (1.1950, -0.2250)
M4 M3 CDNS 4066195314551$1 (0.9350, 0.2250)
                                              (1.1950, 0.4850)
M4 M3 CDNS 4066195314551$1 (1.6450, -0.4850) (1.9050, -0.2250)
M4 M3 CDNS 4066195314551$1 (1.6450, 0.2250)
                                              (1.9050, 0.4850)
M4 M3 CDNS 4066195314551$1 (2.3550, -0.4850) (2.6150, -0.2250)
M4 M3 CDNS 4066195314551$1 (2.3550, 0.2250)
                                              (2.6150, 0.4850)
M4 M3 CDNS 4066195314551$1 (3.0650, -0.4850) (3.3250, -0.2250)
M4 M3 CDNS 4066195314551$1 (3.0650, 0.2250)
                                              (3.3250, 0.4850)
M4_M3_CDNS_4066195314551$1 (3.7750, -0.4850) (4.0350, -0.2250)
M4 M3 CDNS 4066195314551$1 (3.7750, 0.2250)
                                              (4.0350, 0.4850)
M4_M3_CDNS_4066195314551$1 (4.4850, -0.4850) (4.7450, -0.2250)
M4 M3 CDNS 4066195314551$1 (4.4850, 0.2250)
                                              (4.7450, 0.4850)
M4 M3 CDNS 4066195314551$1 (5.1950, -0.4850) (5.4550, -0.2250)
M4 M3 CDNS 4066195314551$1 (5.1950, 0.2250) (5.4550, 0.4850)
CUP.9 Wedge 5LM: 9.3 Wedge type wire-bond not allowed to have CUP
/evprj182/projects/GF180MCU/combined-pdk/dk synopsys/pdk-180/DRC ICV/DRC/ICV/gf180
mcu drc.rs:3152:and
-----
Structure (lower left x, y) (upper right x, y)
Bondpad 5LM$1 (2.0000, 2.0000) (62.0000, 62.0000)
M5 M4 CDNS 4066195314556$1 (-29.6550, -0.5450) (29.6550, 0.5450)
M4_M3_CDNS_4066195314551$1 (-29.6550, -0.5450) (29.6550, 0.5450)
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:3153:and
WARNING: The error count of 101 for this check exceeds the limit set in
    the runset. Details only available for the first 100.
Check was stopped early because error limit was reached.
-----
                (lower left x, y) (upper right x, y)
```

```
M5 M4 CDNS 4066195314556$1 (-29.5950, -0.4850) (-29.3350, -0.2250)
M5_M4_CDNS_4066195314556$1 (-29.5950, 0.2250) (-29.3350, 0.4850)
M5 M4 CDNS 4066195314556$1 (-28.8850, -0.4850) (-28.6250, -0.2250)
M5 M4 CDNS 4066195314556$1 (-28.8850, 0.2250) (-28.6250, 0.4850)
M5 M4 CDNS 4066195314556$1 (-28.1750, -0.4850) (-27.9150, -0.2250)
M5 M4 CDNS 4066195314556$1 (-28.1750, 0.2250) (-27.9150, 0.4850)
M5 M4 CDNS 4066195314556$1 (-27.4650, -0.4850) (-27.2050, -0.2250)
M5 M4 CDNS 4066195314556$1 (-27.4650, 0.2250) (-27.2050, 0.4850)
M5 M4 CDNS 4066195314556$1 (-26.7550, -0.4850) (-26.4950, -0.2250)
M5 M4 CDNS 4066195314556$1 (-26.7550, 0.2250) (-26.4950, 0.4850)
M5 M4 CDNS 4066195314556$1 (-26.0450, -0.4850) (-25.7850, -0.2250)
M5_M4_CDNS_4066195314556$1 (-26.0450, 0.2250) (-25.7850, 0.4850)
M5 M4 CDNS 4066195314556$1 (-25.3350, -0.4850) (-25.0750, -0.2250)
M5_M4_CDNS_4066195314556$1 (-25.3350, 0.2250) (-25.0750, 0.4850)
M5 M4 CDNS 4066195314556$1 (-24.6250, -0.4850) (-24.3650, -0.2250)
M5_M4_CDNS_4066195314556$1 (-24.6250, 0.2250) (-24.3650, 0.4850)
M5_M4_CDNS_4066195314556$1 (-23.9150, -0.4850) (-23.6550, -0.2250)
M5 M4 CDNS 4066195314556$1 (-23.9150, 0.2250) (-23.6550, 0.4850)
M5_M4_CDNS_4066195314556$1 (-23.2050, -0.4850) (-22.9450, -0.2250)
M5 M4 CDNS 4066195314556$1 (-23.2050, 0.2250) (-22.9450, 0.4850)
M5 M4 CDNS 4066195314556$1 (-22.4950, -0.4850) (-22.2350, -0.2250)
M5_M4_CDNS_4066195314556$1 (-22.4950, 0.2250) (-22.2350, 0.4850)
M5 M4 CDNS 4066195314556$1 (-21.7850, -0.4850) (-21.5250, -0.2250)
M5 M4 CDNS 4066195314556$1 (-21.7850, 0.2250) (-21.5250, 0.4850)
M5_M4_CDNS_4066195314556$1 (-21.0750, -0.4850) (-20.8150, -0.2250)
M5 M4 CDNS 4066195314556$1 (-21.0750, 0.2250) (-20.8150, 0.4850)
M5_M4_CDNS_4066195314556$1 (-20.3650, -0.4850) (-20.1050, -0.2250)
M5 M4 CDNS 4066195314556$1 (-20.3650, 0.2250) (-20.1050, 0.4850)
M5 M4 CDNS 4066195314556$1 (-19.6550, -0.4850) (-19.3950, -0.2250)
M5_M4_CDNS_4066195314556$1 (-19.6550, 0.2250) (-19.3950, 0.4850)
M5 M4 CDNS 4066195314556$1 (-18.9450, -0.4850) (-18.6850, -0.2250)
M5 M4 CDNS 4066195314556$1 (-18.9450, 0.2250) (-18.6850, 0.4850)
M5 M4 CDNS 4066195314556$1 (-18.2350, -0.4850) (-17.9750, -0.2250)
M5 M4 CDNS 4066195314556$1 (-18.2350, 0.2250) (-17.9750, 0.4850)
M5 M4 CDNS 4066195314556$1 (-17.5250, -0.4850) (-17.2650, -0.2250)
M5 M4 CDNS 4066195314556$1 (-17.5250, 0.2250) (-17.2650, 0.4850)
M5_M4_CDNS_4066195314556$1 (-16.8150, -0.4850) (-16.5550, -0.2250)
M5 M4 CDNS 4066195314556$1 (-16.8150, 0.2250) (-16.5550, 0.4850)
M5_M4_CDNS_4066195314556$1 (-16.1050, -0.4850) (-15.8450, -0.2250)
M5 M4 CDNS 4066195314556$1 (-16.1050, 0.2250) (-15.8450, 0.4850)
M5 M4 CDNS 4066195314556$1 (-15.3950, -0.4850) (-15.1350, -0.2250)
M5 M4 CDNS 4066195314556$1 (-15.3950, 0.2250) (-15.1350, 0.4850)
M5 M4 CDNS 4066195314556$1 (-14.6850, -0.4850) (-14.4250, -0.2250)
M5 M4 CDNS 4066195314556$1 (-14.6850, 0.2250) (-14.4250, 0.4850)
```

```
M5 M4 CDNS 4066195314556$1 (-13.9750, -0.4850) (-13.7150, -0.2250)
M5_M4_CDNS_4066195314556$1 (-13.9750, 0.2250) (-13.7150, 0.4850)
M5 M4 CDNS 4066195314556$1 (-13.2650, -0.4850) (-13.0050, -0.2250)
M5 M4 CDNS 4066195314556$1 (-13.2650, 0.2250) (-13.0050, 0.4850)
M5 M4 CDNS 4066195314556$1 (-12.5550, -0.4850) (-12.2950, -0.2250)
M5 M4 CDNS 4066195314556$1 (-12.5550, 0.2250) (-12.2950, 0.4850)
M5 M4 CDNS 4066195314556$1 (-11.8450, -0.4850) (-11.5850, -0.2250)
M5 M4 CDNS 4066195314556$1 (-11.8450, 0.2250) (-11.5850, 0.4850)
M5 M4 CDNS 4066195314556$1 (-11.1350, -0.4850) (-10.8750, -0.2250)
M5 M4 CDNS 4066195314556$1 (-11.1350, 0.2250) (-10.8750, 0.4850)
M5 M4 CDNS 4066195314556$1 (-10.4250, -0.4850) (-10.1650, -0.2250)
M5 M4 CDNS 4066195314556$1 (-10.4250, 0.2250) (-10.1650, 0.4850)
M5 M4 CDNS 4066195314556$1 (-9.7150, -0.4850) (-9.4550, -0.2250)
M5_M4_CDNS_4066195314556$1 (-9.7150, 0.2250) (-9.4550, 0.4850)
M5 M4 CDNS 4066195314556$1 (-9.0050, -0.4850) (-8.7450, -0.2250)
M5_M4_CDNS_4066195314556$1 (-9.0050, 0.2250) (-8.7450, 0.4850)
M5_M4_CDNS_4066195314556$1 (-8.2950, -0.4850) (-8.0350, -0.2250)
M5 M4 CDNS 4066195314556$1 (-8.2950, 0.2250) (-8.0350, 0.4850)
M5 M4 CDNS 4066195314556$1 (-7.5850, -0.4850) (-7.3250, -0.2250)
M5 M4 CDNS 4066195314556$1 (-7.5850, 0.2250) (-7.3250, 0.4850)
M5 M4 CDNS 4066195314556$1 (-6.8750, -0.4850) (-6.6150, -0.2250)
M5_M4_CDNS_4066195314556$1 (-6.8750, 0.2250) (-6.6150, 0.4850)
M5 M4 CDNS 4066195314556$1 (-6.1650, -0.4850) (-5.9050, -0.2250)
M5 M4 CDNS 4066195314556$1 (-6.1650, 0.2250) (-5.9050, 0.4850)
M5_M4_CDNS_4066195314556$1 (-5.4550, -0.4850) (-5.1950, -0.2250)
M5 M4 CDNS 4066195314556$1 (-5.4550, 0.2250) (-5.1950, 0.4850)
M5 M4 CDNS 4066195314556$1 (-4.7450, -0.4850) (-4.4850, -0.2250)
M5 M4 CDNS 4066195314556$1 (-4.7450, 0.2250) (-4.4850, 0.4850)
M5 M4 CDNS 4066195314556$1 (-4.0350, -0.4850) (-3.7750, -0.2250)
M5_M4_CDNS_4066195314556$1 (-4.0350, 0.2250) (-3.7750, 0.4850)
M5 M4 CDNS 4066195314556$1 (-3.3250, -0.4850) (-3.0650, -0.2250)
M5 M4 CDNS 4066195314556$1 (-3.3250, 0.2250) (-3.0650, 0.4850)
M5 M4 CDNS 4066195314556$1 (-2.6150, -0.4850) (-2.3550, -0.2250)
M5 M4 CDNS 4066195314556$1 (-2.6150, 0.2250) (-2.3550, 0.4850)
M5 M4 CDNS 4066195314556$1 (-1.9050, -0.4850) (-1.6450, -0.2250)
M5 M4 CDNS 4066195314556$1 (-1.9050, 0.2250) (-1.6450, 0.4850)
M5_M4_CDNS_4066195314556$1 (-1.1950, -0.4850) (-0.9350, -0.2250)
M5 M4 CDNS 4066195314556$1 (-1.1950, 0.2250) (-0.9350, 0.4850)
M5_M4_CDNS_4066195314556$1 (-0.4850, -0.4850) (-0.2250, -0.2250)
M5 M4 CDNS 4066195314556$1 (-0.4850, 0.2250) (-0.2250, 0.4850)
M5 M4 CDNS 4066195314556$1 (0.2250, -0.4850) (0.4850, -0.2250)
M5 M4 CDNS 4066195314556$1 (0.2250, 0.2250) (0.4850, 0.4850)
M5 M4 CDNS 4066195314556$1 (0.9350, -0.4850) (1.1950, -0.2250)
M5 M4 CDNS 4066195314556$1 (0.9350, 0.2250) (1.1950, 0.4850)
```

```
M5 M4 CDNS 4066195314556$1 (1.6450, -0.4850) (1.9050, -0.2250)
M5_M4_CDNS_4066195314556$1 (1.6450, 0.2250)
                                               (1.9050, 0.4850)
M5 M4 CDNS 4066195314556$1 (2.3550, -0.4850) (2.6150, -0.2250)
M5 M4 CDNS 4066195314556$1 (2.3550, 0.2250)
                                               (2.6150, 0.4850)
M5 M4 CDNS 4066195314556$1 (3.0650, -0.4850) (3.3250, -0.2250)
M5 M4 CDNS 4066195314556$1 (3.0650, 0.2250)
                                               (3.3250, 0.4850)
M5 M4 CDNS 4066195314556$1 (3.7750, -0.4850) (4.0350, -0.2250)
M5 M4 CDNS 4066195314556$1 (3.7750, 0.2250)
                                               (4.0350, 0.4850)
M5 M4 CDNS 4066195314556$1 (4.4850, -0.4850) (4.7450, -0.2250)
M5 M4 CDNS 4066195314556$1 (4.4850, 0.2250)
                                               (4.7450, 0.4850)
M5 M4 CDNS 4066195314556$1 (5.1950, -0.4850) (5.4550, -0.2250)
M5 M4 CDNS 4066195314556$1 (5.1950, 0.2250)
                                               (5.4550, 0.4850)
```

.....

DCF.1a : All area between active polygons (COMP) (with spacing greater than equal to this rule) \geq 20.0

must be filled with 'Dummy COMP' except area marked by NDMY, RES_MK, Pad and IND_MK

as well as the region define by DCF.6a, 6b, 6c, 6d, 6e, 6f, 6g.

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:3218:or

WARNING: The error count of 102 for this check exceeds the limit set in the runset. Details only available for the first 100.

(lower left x, y) (upper right x, y) Structure (447.5000, 2869.5150) (487.5000, 2925.0000) trackA (547.5000, 2869.5150) (587.5000, 2925.0000) trackA trackA (647.5000, 2869.5150) (687.5000, 2925.0000) trackA (747.5000, 2869.5150) (787.5000, 2925.0000) trackA (847.5000, 2869.5150) (887.5000, 2925.0000) trackA (947.5000, 2869.5150) (987.5000, 2925.0000) trackA (1047.5000, 2869.5150) (1087.5000, 2925.0000) trackA (1147.5000, 2869.5150) (1187.5000, 2925.0000) trackA (1247.5000, 2869.5150) (1287.5000, 2925.0000) trackA (1347.5000, 2869.5150) (1387.5000, 2925.0000) trackA (1447.5000, 2869.5150) (1487.5000, 2925.0000) trackA (1547.5000, 2869.5150) (1587.5000, 2925.0000) trackA (1647.5000, 2869.5150) (1687.5000, 2925.0000) trackA (1747.5000, 2869.5150) (1787.5000, 2925.0000)

```
trackA
               (1847.5000, 2869.5150) (1887.5000, 2925.0000)
trackA
               (1947.5000, 2869.5150) (1987.5000, 2925.0000)
               (2047.5000, 2869.5150) (2087.5000, 2925.0000)
trackA
               (2147.5000, 2869.5150) (2187.5000, 2925.0000)
trackA
trackA
               (2247.5000, 2869.5150) (2287.5000, 2925.0000)
               (2347.5000, 2869.5150) (2387.5000, 2925.0000)
trackA
trackA
               (2447.5000, 2869.5150) (2487.5000, 2925.0000)
trackA
               (10.0000, 2447.5000) (65.4850, 2487.5000)
trackA
               (2869.5150, 2447.5000) (2925.0000, 2487.5000)
trackA
               (10.0000, 2247.5000) (65.4850, 2287.5000)
trackA
               (10.0000, 2347.5000) (65.4850, 2387.5000)
trackA
               (1338.2950, 2288.1050) (1392.9150, 2348.2350)
               (2869.5150, 2247.5000) (2925.0000, 2287.5000)
trackA
trackA
               (2869.5150, 2347.5000) (2925.0000, 2387.5000)
               (10.0000, 2047.5000) (65.4850, 2087.5000)
trackA
trackA
               (10.0000, 2147.5000) (65.4850, 2187.5000)
               (2869.5150, 2047.5000) (2925.0000, 2087.5000)
trackA
trackA
               (2869.5150, 2147.5000) (2925.0000, 2187.5000)
               (10.0000, 1747.5000) (65.4850, 1787.5000)
trackA
               (10.0000, 1847.5000) (65.4850, 1887.5000)
trackA
               (2869.5150, 1747.5000) (2925.0000, 1787.5000)
trackA
trackA
               (2869.5150, 1847.5000) (2925.0000, 1887.5000)
trackA
               (10.0000, 1547.5000) (65.4850, 1587.5000)
               (10.0000, 1647.5000) (65.4850, 1687.5000)
trackA
trackA
               (2869.5150, 1547.5000) (2925.0000, 1587.5000)
trackA
               (2869.5150, 1647.5000) (2925.0000, 1687.5000)
               (10.0000, 1247.5000) (65.4850, 1287.5000)
trackA
               (10.0000, 1347.5000) (65.4850, 1387.5000)
trackA
               (2869.5150, 1247.5000) (2925.0000, 1287.5000)
trackA
               (2869.5150, 1347.5000) (2925.0000, 1387.5000)
trackA
trackA
               (10.0000, 1047.5000) (65.4850, 1087.5000)
               (10.0000, 1147.5000) (65.4850, 1187.5000)
trackA
trackA
               (496.4250, 1065.5850) (560.8450, 1090.5150)
trackA
               (567.9550, 1065.5850) (632.3750, 1090.5150)
trackA
               (639.4850, 1065.5850) (703.9050, 1090.5150)
trackA
               (711.0150, 1064.5850) (775.4350, 1089.5150)
trackA
               (2869.5150, 1047.5000) (2925.0000, 1087.5000)
trackA
               (2869.5150, 1147.5000) (2925.0000, 1187.5000)
trackA
               (10.0000, 747.5000) (65.4850, 787.5000)
trackA
               (10.0000, 847.5000) (65.4850, 887.5000)
trackA
               (2869.5150, 747.5000) (2925.0000, 787.5000)
trackA
               (2869.5150, 847.5000) (2925.0000, 887.5000)
trackA
               (10.0000, 547.5000) (65.4850, 587.5000)
trackA
               (10.0000, 647.5000) (65.4850, 687.5000)
```

```
trackA
               (2869.5150, 547.5000) (2925.0000, 587.5000)
trackA
               (2869.5150, 647.5000) (2925.0000, 687.5000)
trackA
               (10.0000, 447.5000) (65.4850, 487.5000)
trackA
               (2045.5150, 349.8400) (2090.7550, 373.4300)
trackA
               (2869.5150, 447.5000) (2925.0000, 487.5000)
trackA
               (447.5000, 10.0000)
                                    (487.5000, 65.4850)
trackA
               (547.5000, 10.0000)
                                    (587.5000, 65.4850)
trackA
               (647.5000, 10.0000)
                                    (687.5000, 65.4850)
trackA
               (747.5000, 10.0000)
                                    (787.5000, 65.4850)
trackA
               (847.5000, 10.0000)
                                    (887.5000, 65.4850)
trackA
               (947.5000, 10.0000)
                                     (987.5000, 65.4850)
trackA
               (1047.5000, 10.0000)
                                     (1087.5000, 65.4850)
trackA
               (1147.5000, 10.0000)
                                    (1187.5000, 65.4850)
trackA
               (1247.5000, 10.0000) (1287.5000, 65.4850)
trackA
               (1347.5000, 10.0000) (1387.5000, 65.4850)
trackA
               (1447.5000, 10.0000)
                                     (1487.5000, 65.4850)
               (1547.5000, 10.0000) (1587.5000, 65.4850)
trackA
               (1647.5000, 10.0000) (1687.5000, 65.4850)
trackA
trackA
               (1747.5000, 10.0000) (1787.5000, 65.4850)
               (1847.5000, 10.0000) (1887.5000, 65.4850)
trackA
               (1947.5000, 10.0000) (1987.5000, 65.4850)
trackA
trackA
               (2047.5000, 10.0000) (2087.5000, 65.4850)
trackA
               (2147.5000, 10.0000) (2187.5000, 65.4850)
               (2247.5000, 10.0000) (2287.5000, 65.4850)
trackA
trackA
               (2347.5000, 10.0000) (2387.5000, 65.4850)
trackA
               (2447.5000, 10.0000) (2487.5000, 65.4850)
trackA
               (10.0000, 2547.5000) (387.5000, 2925.0000)
               (2547.5000, 2547.5000) (2925.0000, 2925.0000)
trackA
trackA
               (349.8400, 349.8400) (2585.1600, 2585.1600)
               (10.0000, 1947.5000) (65.4850, 1987.5000)
trackA
trackA
               (2869.5150, 1947.5000) (2925.0000, 1987.5000)
trackA
               (10.0000, 1447.5000) (65.4850, 1487.5000)
trackA
               (2869.5150, 1447.5000) (2925.0000, 1487.5000)
trackA
               (10.0000, 947.5000) (65.4850, 987.5000)
trackA
               (2869.5150, 947.5000) (2925.0000, 987.5000)
op buffer
                (-42.5450, -63.9200) (-7.7200, -41.3250)
op buffer
                (-22.7450, -63.9200) (14.5750, 6.1600)
                    (14.4600, -14.1500) (32.6500, -8.5500)
io secondary 5p0
io_secondary_5p0
                    (-37.3500, -14.1500) (21.3500, 51.2000)
                    (14.3200, 36.2100)
                                         (32.6500, 51.2000)
io secondary 5p0
cap mim
                 (9.4000, 9.4000)
                                     (15.6000, 15.6000)
gf180mcu_fd_io__cor$2 (75.3250, 75.3250)
                                          (214.3750, 214.3750)
```

DCF.1b_DCF.1d : Minimum global density for active layers (COMP+ Dummy COMP) = 25.0%Maximum global density for active layers (COMP+ Dummy COMP) = 70.0% /evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu drc.rs:3236:density -----Structure Window (x1,y1) (x2,y2) Report = Value ----trackA (0.0000, 0.0000) (2935.0000, 2935.0000) Min ratio = 0.1966Max ratio = 0.1966Avg ratio = 0.1966Min areaL1 = 1693142.3202Max areaL1 = 1693142.3202Avg areaL1 = 1693142.3202Min areaW = 8614225.0000Max areaW = 8614225.0000Avg areaW = 8614225.0000

DF.11 : Min. Length of butting COMP edge : 0.30

 $/ evprj 182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180mcu_drc.rs: 2209: length_edge$

WARNING: The error count of 102 for this check exceeds the limit set in the runset. Details only available for the first 100.

Check was stopped early because error limit was reached.

Structure (lower left x, y) (upper right x, y) Distance

trackA (1349.0800, 2368.3950) (1349.2500, 2368.3950) 0.1700 trackA (1349.2500, 2368.3950) (1349.2500, 2368.5650) 0.1700 trackA (1349.0800, 2374.2450) (1349.2500, 2374.2450) 0.1700 trackA (1349.2500, 2374.2450) (1349.2500, 2374.4150) 0.1700 trackA (1349.6300, 2368.3950) (1349.6300, 2368.5650) 0.1700 trackA (1349.6300, 2368.3950) (1349.8000, 2368.3950) 0.1700

```
trackA
        (1349.6300, 2374.2450) (1349.6300, 2374.4150) 0.1700
trackA
        (1349.6300, 2374.2450) (1349.8000, 2374.2450) 0.1700
        (1356.4800, 2365.6250) (1356.6500, 2365.6250) 0.1700
trackA
trackA
        (1356.6500, 2365.4550) (1356.6500, 2365.6250) 0.1700
trackA
        (1356.4800, 2371.4750) (1356.6500, 2371.4750) 0.1700
trackA
        (1356.6500, 2371.3050) (1356.6500, 2371.4750) 0.1700
trackA
        (1356.4800, 2377.3250) (1356.6500, 2377.3250) 0.1700
trackA
        (1356.6500, 2377.1550) (1356.6500, 2377.3250) 0.1700
trackA
        (1357.0300, 2365.4550) (1357.0300, 2365.6250) 0.1700
trackA
        (1357.0300, 2365.6250) (1357.2000, 2365.6250) 0.1700
trackA
        (1357.0300, 2371.3050) (1357.0300, 2371.4750) 0.1700
trackA
        (1357.0300, 2371.4750) (1357.2000, 2371.4750) 0.1700
trackA
        (1357.0300, 2377.1550) (1357.0300, 2377.3250) 0.1700
trackA
        (1357.0300, 2377.3250) (1357.2000, 2377.3250) 0.1700
        (1358.0600, 2368.3950) (1358.3100, 2368.3950) 0.2500
trackA
trackA
        (1358.3100, 2368.3950) (1358.3100, 2368.5650) 0.1700
trackA
        (1358.7300, 2368.3950) (1358.7300, 2368.5650) 0.1700
trackA
        (1358.7300, 2368.3950) (1358.9800, 2368.3950) 0.2500
        (1367.3700, 2368.3950) (1367.6200, 2368.3950) 0.2500
trackA
trackA
        (1367.6200, 2368.3950) (1367.6200, 2368.5650) 0.1700
        (1368.0400, 2368.3950) (1368.0400, 2368.5650) 0.1700
trackA
trackA
        (1368.0400, 2368.3950) (1368.2900, 2368.3950) 0.2500
        (1376.6800, 2368.3950) (1376.9300, 2368.3950) 0.2500
trackA
trackA
        (1376.9300, 2368.3950) (1376.9300, 2368.5650) 0.1700
trackA
        (1377.3500, 2368.3950) (1377.3500, 2368.5650) 0.1700
trackA
        (1377.3500, 2368.3950) (1377.6000, 2368.3950) 0.2500
trackA
        (1385.9900, 2368.3950) (1386.2400, 2368.3950) 0.2500
        (1386.2400, 2368.3950) (1386.2400, 2368.5650) 0.1700
trackA
trackA
        (1386.6600, 2368.3950) (1386.6600, 2368.5650) 0.1700
trackA
        (1386.6600, 2368.3950) (1386.9100, 2368.3950) 0.2500
trackA
        (1454.5800, 2366.5650) (1454.7500, 2366.5650) 0.1700
trackA
        (1454.7500, 2366.5650) (1454.7500, 2366.7350) 0.1700
trackA
        (1454.5800, 2374.1750) (1454.7500, 2374.1750) 0.1700
trackA
        (1454.7500, 2374.1750) (1454.7500, 2374.3450) 0.1700
trackA
        (1455.1300, 2366.5650) (1455.1300, 2366.7350) 0.1700
trackA
        (1455.1300, 2366.5650) (1455.3000, 2366.5650) 0.1700
trackA
        (1455.1300, 2374.1750) (1455.1300, 2374.3450) 0.1700
trackA
        (1455.1300, 2374.1750) (1455.3000, 2374.1750) 0.1700
trackA
        (1462.6750, 2363.7950) (1462.8450, 2363.7950) 0.1700
trackA
        (1462.8450, 2363.6250) (1462.8450, 2363.7950) 0.1700
trackA
        (1462.6750, 2371.4050) (1462.8450, 2371.4050) 0.1700
trackA
        (1462.8450, 2371.2350) (1462.8450, 2371.4050) 0.1700
trackA
        (1463.2250, 2363.6250) (1463.2250, 2363.7950) 0.1700
trackA
        (1463.2250, 2363.7950) (1463.3950, 2363.7950) 0.1700
```

```
trackA
        (1463.2250, 2371.2350) (1463.2250, 2371.4050) 0.1700
trackA
        (1463.2250, 2371.4050) (1463.3950, 2371.4050) 0.1700
        (1496.3800, 2363.7950) (1496.5400, 2363.7950) 0.1600
trackA
trackA
        (1496.5400, 2363.6250) (1496.5400, 2363.7950) 0.1700
trackA
        (1496.3800, 2371.4050) (1496.5400, 2371.4050) 0.1600
trackA
        (1496.5400, 2371.2350) (1496.5400, 2371.4050) 0.1700
trackA
        (1496.9000, 2363.6250) (1496.9000, 2363.7950) 0.1700
trackA
        (1496.9000, 2363.7950) (1497.0600, 2363.7950) 0.1600
trackA
        (1496.9000, 2371.2350) (1496.9000, 2371.4050) 0.1700
trackA
        (1496.9000, 2371.4050) (1497.0600, 2371.4050) 0.1600
trackA
        (1497.0600, 2364.5250) (1497.2100, 2364.5250) 0.1500
trackA
        (1497.0600, 2372.1350) (1497.2100, 2372.1350) 0.1500
trackA
        (1349.0800, 2380.0950) (1349.2500, 2380.0950) 0.1700
trackA
        (1349.2500, 2380.0950) (1349.2500, 2380.2650) 0.1700
        (1349.0800, 2385.9450) (1349.2500, 2385.9450) 0.1700
trackA
trackA
        (1349.2500, 2385.9450) (1349.2500, 2386.1150) 0.1700
trackA
        (1349.6300, 2380.0950) (1349.6300, 2380.2650) 0.1700
trackA
        (1349.6300, 2380.0950) (1349.8000, 2380.0950) 0.1700
        (1349.6300, 2385.9450) (1349.6300, 2386.1150) 0.1700
trackA
trackA
        (1349.6300, 2385.9450) (1349.8000, 2385.9450) 0.1700
        (1356.4800, 2383.1750) (1356.6500, 2383.1750) 0.1700
trackA
        (1356.6500, 2383.0050) (1356.6500, 2383.1750) 0.1700
trackA
trackA
        (1356.4800, 2389.0250) (1356.6500, 2389.0250) 0.1700
trackA
        (1356.6500, 2388.8550) (1356.6500, 2389.0250) 0.1700
trackA
        (1357.0300, 2383.0050) (1357.0300, 2383.1750) 0.1700
trackA
        (1357.0300, 2383.1750) (1357.2000, 2383.1750) 0.1700
        (1357.0300, 2388.8550) (1357.0300, 2389.0250) 0.1700
trackA
trackA
        (1357.0300, 2389.0250) (1357.2000, 2389.0250) 0.1700
trackA
        (1358.1400, 2389.0250) (1358.3000, 2389.0250) 0.1600
trackA
        (1358.3000, 2388.8550) (1358.3000, 2389.0250) 0.1700
trackA
        (1358.7400, 2388.8550) (1358.7400, 2389.0250) 0.1700
trackA
        (1358.7400, 2389.0250) (1358.9000, 2389.0250) 0.1600
trackA
        (1367.4500, 2389.0250) (1367.6100, 2389.0250) 0.1600
trackA
        (1367.6100, 2388.8550) (1367.6100, 2389.0250) 0.1700
trackA
        (1368.0500, 2388.8550) (1368.0500, 2389.0250) 0.1700
trackA
        (1368.0500, 2389.0250) (1368.2100, 2389.0250) 0.1600
trackA
        (1376.7600, 2389.0250) (1376.9200, 2389.0250) 0.1600
trackA
        (1376.9200, 2388.8550) (1376.9200, 2389.0250) 0.1700
trackA
        (1377.3600, 2388.8550) (1377.3600, 2389.0250) 0.1700
trackA
        (1377.3600, 2389.0250) (1377.5200, 2389.0250) 0.1600
trackA
        (1386.0700, 2389.0250) (1386.2300, 2389.0250) 0.1600
trackA
        (1386.2300, 2388.8550) (1386.2300, 2389.0250) 0.1700
trackA
        (1386.6700, 2388.8550) (1386.6700, 2389.0250) 0.1700
trackA
        (1386.6700, 2389.0250) (1386.8300, 2389.0250) 0.1600
```

```
trackA (1454.5800, 2381.7850) (1454.7500, 2381.7850) 0.1700
trackA (1454.7500, 2381.7850) (1454.7500, 2381.9550) 0.1700
trackA (1454.5800, 2389.3950) (1454.7500, 2389.3950) 0.1700
trackA (1454.7500, 2389.3950) (1454.7500, 2389.5650) 0.1700
trackA (1455.1300, 2381.7850) (1455.1300, 2381.9550) 0.1700
trackA (1455.1300, 2381.7850) (1455.3000, 2381.7850) 0.1700
```

.....

DF.12 : Max distance of Nwell tap (NCOMP inside Nwell) from (PCOMP inside Nwell) : 20

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:2218:and

WARNING: The error count of 110 for this check exceeds the limit set in the runset. Details only available for the first 100.

Check was stopped early because error limit was reached.

```
Structure
                        (lower left x, y) (upper right x, y)
-----
                        (-40.2550, -22.5200) (-38.5150, -10.5200)
op buffer
op_buffer
                        (-40.2550, 9.6200) (-38.5150, 10.7500)
op buffer
                        (-37.6550, -22.5200) (-35.8750, -10.5200)
op_buffer
                        (-37.6550, 9.6200) (-35.8750, 10.7500)
op buffer
                        (-35.1250, -22.5200) (-33.3450, -10.5200)
op buffer
                        (-35.1250, 9.6200) (-33.3450, 10.7500)
                        (-32.5950, -22.5200) (-30.8150, -10.5200)
op_buffer
op buffer
                        (-32.5950, 9.6200) (-30.8150, 10.7500)
op buffer
                        (-30.0650, -22.5200) (-28.2850, -10.5200)
op_buffer
                        (-30.0650, 9.6200) (-28.2850, 10.7500)
op buffer
                        (-27.5350, -22.5200) (-25.7550, -10.5200)
op buffer
                        (-27.4250, 9.6200) (-25.6850, 10.7500)
                        (-25.0050, -22.5200)(-23.2250, -10.5200)
op buffer
op_buffer
                        (-22.4750, -22.5200) (-20.6950, -10.5200)
                        (-19.9450, -22.5200) (-18.1650, -10.5200)
op buffer
op_buffer
                        (-17.3050, -22.5200) (-15.5650, -10.5200)
                        (-7.2850, -12.7150) (-5.5450, -10.5150)
op buffer
                        (-4.6850, -12.7150) (-2.9050, -10.5150)
op buffer
op_buffer
                        (-2.1550, -12.7150) (-0.3750, -10.5150)
op buffer
                        (0.3750, -12.7150) (2.1550, -10.5150)
                        (2.9050, -12.7150) (4.6850, -10.5150)
op_buffer
```

```
op buffer
                        (5.5450, -12.7150) (7.2850, -10.5150)
Unnamed_02d9ae27
                               (-9.5500, -12.8700) (-7.8100, -10.7100)
Unnamed 02d9ae27
                               (-9.5500, 18.5800) (-7.8100, 21.8250)
Unnamed 02d9ae27
                               (-6.9500, -12.8700) (-4.0300, -10.7100)
Unnamed 02d9ae27
                               (-6.9500, 18.5800) (-4.0300, 21.8250)
Unnamed 02d9ae27
                               (-3.2900, -12.8700) (-0.3700, -10.7100)
Unnamed 02d9ae27
                               (-3.2900, 18.5800) (-0.3700, 21.8250)
Unnamed 02d9ae27
                               (0.3700, -12.8700) (3.2900, -10.7100)
Unnamed 02d9ae27
                               (0.3700, 18.5800)
                                                  (3.2900, 21.8250)
Unnamed 02d9ae27
                               (4.0300, -12.8700) (6.9500, -10.7100)
Unnamed 02d9ae27
                               (4.0300, 18.5800)
                                                  (6.9500, 21.8250)
Unnamed 02d9ae27
                               (7.8100, -12.8700) (9.5500, -10.7100)
Unnamed 02d9ae27
                               (7.8100, 18.5800)
                                                 (9.5500, 21.8250)
transformed 9f8db47f
                             (-16.3900, -4.4250) (-14.6500, 0.5750)
transformed 9f8db47f
                             (-13.7900, -4.4250) (-7.4500, 0.5750)
transformed 9f8db47f
                             (-6.7100, -4.4250) (-0.3700, 0.5750)
transformed_9f8db47f
                             (0.3700, -4.4250)
                                                (6.7100, 0.5750)
transformed 9f8db47f
                             (7.4500, -4.4250)
                                               (13.7900, 0.5750)
transformed 9f8db47f
                             (14.6500, -4.4250) (16.3900, 0.5750)
transformed 729ded33
                               (-16.3900, -4.4250) (-14.6500, 0.5750)
transformed 729ded33
                               (-13.7900, -4.4250) (-7.4500, 0.5750)
transformed_729ded33
                               (-6.7100, -4.4250) (-0.3700, 0.5750)
transformed 729ded33
                               (0.3700, -4.4250)
                                                (6.7100, 0.5750)
transformed 729ded33
                               (7.4500, -4.4250)
                                                 (13.7900, 0.5750)
transformed_729ded33
                               (14.6500, -4.4250) (16.3900, 0.5750)
gf180mcu fd sc mcu7t5v0
                                    (0.2800, 2.3600)
                                                      (2.9000, 3.5800)
                           buf 1
gf180mcu_fd_sc_mcu7t5v0_
                                    (0.1800, 2.3600)
                                                      (7.1600, 3.5800)
                           buf 4
gf180mcu fd sc mcu7t5v0
                                     (0.1800, 2.3600)
                                                        (0.5400, 2.9300)
                           antenna
gf180mcu fd sc mcu7t5v0
                                    (0.1800, 2.3600)
                                                      (5.1100, 3.5800)
                           buf 3
gf180mcu_fd_sc_mcu7t5v0_
                           fillcap_16 (6.9000, 2.3600)
                                                       (8.7800, 3.5800)
                           fillcap 16 (4.6600, 2.3600)
gf180mcu fd sc mcu7t5v0
                                                       (6.5400, 3.5800)
gf180mcu fd sc mcu7t5v0
                           fillcap 16 (2.4200, 2.3600)
                                                       (4.3000, 3.5800)
                           fillcap_16 (0.1800, 2.3600)
gf180mcu_fd_sc_mcu7t5v0_
                                                       (2.0600, 3.5800)
gf180mcu fd sc mcu7t5v0
                           clkbuf 1 (0.2800, 2.3600)
                                                       (2.8600, 3.5800)
                           dffrng 1 (17.4050, 2.3600)
gf180mcu_fd_sc_mcu7t5v0_
                                                        (18.7850, 3.5750)
gf180mcu fd sc mcu7t5v0
                           dffrng 1 (3.0400, 2.3600)
                                                       (9.0600, 3.3000)
gf180mcu_fd_sc_mcu7t5v0_
                           dffrnq_1 (0.2800, 2.3600)
                                                       (2.6800, 3.2250)
gf180mcu fd sc mcu7t5v0
                           dffrng 1 (9.4200, 2.5800)
                                                       (17.0450, 3.5800)
gf180mcu_fd_sc_mcu7t5v0_
                           dffrnq_1 (8.5200, 4.2600)
                                                       (9.9000, 4.3500)
                           fillcap 4 (0.1800, 2.3600)
gf180mcu fd sc mcu7t5v0
                                                       (2.0600, 3.5800)
gf180mcu fd sc mcu7t5v0
                           fillcap 8 (2.4200, 2.3600)
                                                       (4.3000, 3.5800)
                           _fillcap_8 (0.1800, 2.3600)
gf180mcu fd sc mcu7t5v0
                                                       (2.0600, 3.5800)
gf180mcu fd sc mcu7t5v0
                           fillcap 64 (33.7800, 2.3600)
                                                        (35.6600, 3.5800)
                           fillcap 64 (31.5400, 2.3600)
gf180mcu fd sc mcu7t5v0
                                                        (33.4200, 3.5800)
```

```
gf180mcu fd sc mcu7t5v0 fillcap 64 (29.3000, 2.3600)
                                                        (31.1800, 3.5800)
gf180mcu_fd_sc_mcu7t5v0_
                            fillcap_64 (27.0600, 2.3600)
                                                        (28.9400, 3.5800)
gf180mcu fd sc mcu7t5v0
                            fillcap 64 (24.8200, 2.3600)
                                                        (26.7000, 3.5800)
gf180mcu fd sc mcu7t5v0
                            fillcap 64 (22.5800, 2.3600)
                                                        (24.4600, 3.5800)
gf180mcu fd sc mcu7t5v0
                           fillcap 64 (20.3400, 2.3600)
                                                        (22.2200, 3.5800)
gf180mcu fd sc mcu7t5v0
                            fillcap 64 (18.1000, 2.3600)
                                                        (19.9800, 3.5800)
gf180mcu fd sc mcu7t5v0
                           fillcap 64 (15.8600, 2.3600)
                                                        (17.7400, 3.5800)
gf180mcu fd sc mcu7t5v0
                            fillcap 64 (13.6200, 2.3600)
                                                        (15.5000, 3.5800)
gf180mcu fd sc mcu7t5v0
                            fillcap 64 (11.3800, 2.3600)
                                                        (13.2600, 3.5800)
gf180mcu fd sc mcu7t5v0
                           fillcap 64 (9.1400, 2.3600)
                                                        (11.0200, 3.5800)
gf180mcu_fd_sc_mcu7t5v0_
                            fillcap 64 (6.9000, 2.3600)
                                                        (8.7800, 3.5800)
gf180mcu_fd_sc_mcu7t5v0_
                            fillcap_64 (4.6600, 2.3600)
                                                        (6.5400, 3.5800)
                           fillcap 64 (2.4200, 2.3600)
gf180mcu fd sc mcu7t5v0
                                                        (4.3000, 3.5800)
                           fillcap_64 (0.1800, 2.3600)
gf180mcu_fd_sc_mcu7t5v0_
                                                        (2.0600, 3.5800)
gf180mcu fd sc mcu7t5v0
                           fillcap 32 (15.8600, 2.3600)
                                                        (17.7400, 3.5800)
gf180mcu_fd_sc_mcu7t5v0_
                           _fillcap_32 (13.6200, 2.3600)
                                                        (15.5000, 3.5800)
gf180mcu_fd_sc_mcu7t5v0_
                           fillcap_32 (11.3800, 2.3600)
                                                        (13.2600, 3.5800)
gf180mcu fd sc mcu7t5v0
                           fillcap 32 (9.1400, 2.3600)
                                                        (11.0200, 3.5800)
gf180mcu_fd_sc_mcu7t5v0_
                           fillcap_32 (6.9000, 2.3600)
                                                        (8.7800, 3.5800)
gf180mcu fd sc mcu7t5v0
                           fillcap 32 (4.6600, 2.3600)
                                                        (6.5400, 3.5800)
gf180mcu fd sc mcu7t5v0 fillcap 32 (2.4200, 2.3600)
                                                        (4.3000, 3.5800)
gf180mcu_fd_sc_mcu7t5v0__fillcap_32 (0.1800, 2.3600)
                                                        (2.0600, 3.5800)
io secondary 5p0
                            (1.9000, 37.7100) (11.9000, 47.7100)
io secondary 5p0
                            (-9.1800, 37.7100) (0.8200, 47.7100)
pfet$6
                       (-0.4600, 0.0000)
                                         (1.5800, 0.5000)
pfet$5
                       (-0.4600, 0.0000)
                                         (1.5800, 1.5000)
                       (-0.4600, 0.0000)
                                         (1.5800, 1.5000)
pfet$4
                       (-0.4600, 0.0000)
                                         (1.5800, 50.0000)
pfet$3
                       (-0.4600, 0.0000)
                                         (1.5800, 50.0000)
pfet$2
pfet$1
                       (-0.4600, 0.0000)
                                         (1.5800, 50.0000)
pfet
                      (-0.4600, 0.0000)
                                        (1.5800, 50.0000)
                                      (0.0000, 0.0000)
pn 6p0 CDNS 4066195314528$1
                                                        (1.0000, 1.0000)
pmos_6p0_CDNS_4066195314515$1
                                       (-0.4400, 0.0000)
                                                          (1.1400, 12.0000)
pmos 6p0 CDNS 4066195314516$1
                                       (-0.4400, 0.0000)
                                                          (2.3600, 12.0000)
                                      (0.0000, 0.0000)
                                                        (0.4800, 0.4800)
pn 6p0 CDNS 4066195314510$1
```

DF.13 : Max distance of substrate tap (PCOMP outside Nwell) from

(NCOMP outside Nwell): 20

WARNING: The error count of 102 for this check exceeds the limit set in the runset. Details only available for the first 100.

Check was stopped early because error limit was reached.

```
(lower left x, y) (upper right x, y)
op buffer
                      (-41.3050, -39.7450) (-14.5150, -26.6650)
                      (-41.3050, -2.8300) (-24.6350, 5.4600)
op buffer
                      (-8.3350, -25.6400) (8.3350, -16.8600)
op buffer
op buffer
                      (-7.7200, -56.7850) (7.7200, -40.1800)
                             (-10.6000, -25.5000) (10.6000, -17.0000)
Unnamed 02d9ae27
                             (-10.6000, 5.5750)
Unnamed 02d9ae27
                                                 (10.6000, 14.4400)
gf180mcu fd sc mcu7t5v0 filltie (0.2800, 0.2800)
                                                   (0.8400, 1.2800)
gf180mcu fd sc mcu7t5v0 endcap (0.2800, 0.2800)
                                                       (0.8000, 1.2800)
cmirror interdigitized$2
                          (-13.1000, -4.0450) (13.1000, 4.0450)
cmirror interdigitized$1
                          (-13.1000, -4.0450) (13.1000, 4.0450)
io_secondary_5p0
                          (-32.0800, -19.3300) (12.9200, -7.8100)
                      (1.6400, 0.0000)
                                         (2.3500, 0.5000)
nfet$17
                      (1.6400, -0.0100)
                                         (2.3500, 0.4300)
nfet$16
nfet$15
                      (1.6400, -0.0100)
                                         (2.3500, 0.4300)
nfet$13
                      (1.6400, -0.0100)
                                         (2.3500, 0.4300)
                      (1.6400, -0.0100)
                                         (2.3500, 0.4300)
nfet$12
nfet$11
                     (1.6400, -0.0100)
                                         (2.3500, 0.4300)
nfet$10
                     (1.6400, -0.0100)
                                         (2.3500, 0.4300)
gf180mcu_fd_io__dvss$1
                              (0.0000, 65.4850)
                                                  (75.0000, 349.8400)
                              (1.7250, 327.9150)
                                                  (2.4950, 347.6350)
gf180mcu fd io dvss$1
                              (72.5050, 327.9150)
                                                  (73.2750, 347.6350)
gf180mcu_fd_io__dvss$1
gf180mcu_fd_io__dvss$1
                              (15.5250, 303.1250)
                                                   (59.4750, 322.2550)
gf180mcu fd io dvss$1
                              (65.0600, 197.8950)
                                                  (70.0100, 275.3450)
gf180mcu fd io dvss$1
                              (16.3600, 196.0100)
                                                  (58.6400, 204.9850)
gf180mcu_fd_io__dvss$1
                              (9.9550, 189.1100)
                                                  (10.2750, 191.0600)
gf180mcu fd io dvss$1
                              (64.7250, 189.1100) (65.0450, 191.0600)
gf180mcu_fd_io__dvss$1
                              (9.9550, 159.7200)
                                                  (10.2750, 160.6700)
gf180mcu fd io dvss$1
                              (64.7250, 159.7200)
                                                  (65.0450, 160.6700)
gf180mcu_fd_io__dvss$1
                              (9.9550, 130.3600)
                                                  (10.2750, 131.3100)
gf180mcu fd io dvss$1
                              (64.7250, 130.3600)
                                                  (65.0450, 131.3100)
gf180mcu_fd_io__dvss$1
                              (9.9550, 101.0000)
                                                  (10.2750, 101.9500)
gf180mcu fd io dvss$1
                              (64.7250, 101.0000)
                                                  (65.0450, 101.9500)
gf180mcu fd io dvss$1
                              (9.9550, 70.6100)
                                                  (10.2750, 72.5600)
gf180mcu fd io dvss$1
                              (64.7250, 70.6100)
                                                  (65.0450, 72.5600)
M1 PSUB CDNS 40661953145101$1 (-4.9750, -12.4750) (4.9750, 12.4750)
M1 PSUB CDNS 40661953145130$1 (-27.2250, -0.4750) (27.2250, 0.4750)
```

```
M1 PSUB CDNS 40661953145133$1
                                      (-0.9750, -60.2250)
                                                         (0.9750, 60.2250)
M1_PSUB_CDNS_40661953145134$1
                                     (-27.2250, -0.9750)
                                                         (27.2250, 0.9750)
                                (7.8250, 23.7500)
comp018green esd rc v5p0$2
                                                    (9.1650, 85.1900)
comp018green esd rc v5p0$2
                                (59.2050, 23.7500)
                                                    (59.5250, 24.7700)
comp018green esd rc v5p0$2
                                (59.2050, 53.7150)
                                                    (59.5250, 54.7350)
comp018green esd rc v5p0$2
                                (59.2050, 84.1700)
                                                    (59.5250, 85.1900)
M1 PSUB CDNS 40661953145129$1
                                     (-0.5100, -25.0200)
                                                         (0.5100, 25.0200)
M1 PSUB CDNS 40661953145126$1
                                      (-0.5100, -30.7200)
                                                         (0.5100, 30.7200)
M1 PSUB CDNS 40661953145100$1
                                     (-1.2250, -103.7250) (1.2250, 103.7250)
                                     (-35.0050, -0.2250) (35.0050, 0.2250)
M1 PSUB CDNS 4066195314565$1
M1 PSUB CDNS 4066195314567$1
                                     (-20.5950, -0.2250)
                                                         (20.5950, 0.2250)
M1 PSUB CDNS 406619531455$1
                                    (-0.2250, -141.9750) (0.2250, 141.9750)
gf180mcu fd io dvdd$1
                                                 (75.0000, 349.8400)
                             (0.0000, 65.4850)
                                                 (2.4950, 347.6350)
gf180mcu_fd_io__dvdd$1
                             (1.7250, 327.9150)
gf180mcu fd io dvdd$1
                             (72.5050, 327.9150)
                                                  (73.2750, 347.6350)
gf180mcu_fd_io__dvdd$1
                             (15.5250, 303.1250)
                                                  (59.4750, 322.2550)
gf180mcu fd io dvdd$1
                             (65.0600, 197.8950)
                                                  (70.0100, 275.3450)
gf180mcu fd io dvdd$1
                             (16.3600, 196.2950)
                                                  (58.6400, 205.2700)
gf180mcu_fd_io__dvdd$1
                             (9.9550, 189.3950)
                                                 (10.2750, 191.3450)
gf180mcu fd io dvdd$1
                             (64.7250, 189.3950)
                                                  (65.0450, 191.3450)
gf180mcu fd io dvdd$1
                             (9.9550, 160.0050)
                                                 (10.2750, 160.9550)
gf180mcu_fd_io__dvdd$1
                                                  (65.0450, 160.9550)
                             (64.7250, 160.0050)
gf180mcu fd io dvdd$1
                             (9.9550, 130.6450)
                                                 (10.2750, 131.5950)
gf180mcu fd io dvdd$1
                             (64.7250, 130.6450)
                                                  (65.0450, 131.5950)
gf180mcu_fd_io__dvdd$1
                             (9.9550, 101.2850)
                                                 (10.2750, 102.2350)
gf180mcu fd io dvdd$1
                             (64.7250, 101.2850)
                                                  (65.0450, 102.2350)
gf180mcu_fd_io__dvdd$1
                             (9.9550, 70.8950)
                                                 (10.2750, 72.8450)
gf180mcu fd io dvdd$1
                             (64.7250, 70.8950)
                                                 (65.0450, 72.8450)
gf180mcu_fd_io__cor$2
                            (65.4850, 65.4850)
                                                (355.0000, 355.0000)
gf180mcu_fd_io__cor$2
                            (109.3450, 126.6200) (164.4600, 181.7350)
gf180mcu fd io cor$2
                            (171.8850, 94.9200)
                                                 (196.1600, 119.1950)
gf180mcu fd io cor$2
                            (67.7300, 173.6400)
                                                 (262.3900, 284.2350)
gf180mcu_fd_io__cor$2
                            (88.0250, 198.7700)
                                                 (99.2250, 205.1150)
gf180mcu fd io cor$2
                            (120.2750, 143.6750)
                                                 (178.4100, 173.6400)
nmos clamp 20 50 4$2
                              (4.8600, 3.1600)
                                                 (5.1800, 5.1100)
nmos clamp 20 50 4$2
                              (4.8600, 33.5500)
                                                 (5.1800, 34.5000)
nmos_clamp_20_50_4$2
                              (4.8600, 62.9100)
                                                 (5.1800, 63.8600)
nmos clamp 20 50 4$2
                              (4.8600, 92.2700)
                                                 (5.1800, 93.2200)
nmos_clamp_20_50_4$2
                              (4.8600, 121.6600)
                                                  (5.1800, 123.6100)
nmos clamp 20 50 4$2
                              (59.6300, 3.1600)
                                                 (59.9500, 5.1100)
nmos clamp 20 50 4$2
                              (59.6300, 33.5500)
                                                  (59.9500, 34.5000)
nmos_clamp_20_50_4$2
                              (59.6300, 62.9100)
                                                  (59.9500, 63.8600)
nmos clamp 20 50 4$2
                              (59.6300, 92.2700)
                                                  (59.9500, 93.2200)
nmos_clamp_20_50_4$2
                              (59.6300, 121.6600)
                                                  (59.9500, 123.6100)
```

```
moscap corner$2
                          (0.1600, 0.1600)
                                             (1.5000, 61,6000)
                          (51.5400, 0.1600)
                                              (51.8600, 1.1800)
moscap_corner$2
moscap corner$2
                          (51.5400, 30.1250)
                                               (51.8600, 31.1450)
                                               (51.8600, 61.6000)
moscap corner$2
                          (51.5400, 60.5800)
M1 PSUB CDNS 40661953145283$1 (-1.0050, -38.6350) (1.0050, 38.6350)
comp018green out predrv$1
                               (0.0000, 0.0000)
                                                  (17.9700, 13.6000)
comp018green sigbuf$1
                             (6.4000, 0.0000)
                                                (13.5600, 5.1500)
comp018green sigbuf$1
                             (0.0000, 0.0000)
                                                (3.8700, 5.1500)
comp018green std nand2$1
                                (0.0000, 0.0550)
                                                   (5.2800, 5.2050)
comp018green out sigbuf oe$1
                                (7.8100, 0.0000)
                                                    (13.5600, 5.1500)
comp018green out sigbuf oe$1
                                 (0.0000, 0.0000)
                                                    (5.2800, 5.1500)
gf180mcu fd io asig 5p0$1
                               (0.0000, 65.4850)
                                                   (75.0000, 349.8400)
gf180mcu fd io asig 5p0$1
                                                   (5.2350, 165.4100)
                               (1.2850, 67.9600)
gf180mcu_fd_io_asig_5p0$1
                               (1.7250, 169.2400)
                                                    (2.4950, 347.3500)
gf180mcu fd io asig 5p0$1
                               (7.0050, 67.9600)
                                                   (67.9950, 102.9100)
gf180mcu_fd_io__asig_5p0$1
                               (10.2650, 108.2050)
                                                    (64.7350, 136.7350)
gf180mcu_fd_io_asig_5p0$1
                               (15.4200, 145.5100)
                                                    (59.5800, 163.4800)
gf180mcu fd io asig 5p0$1
                               (69.7650, 67.9600)
                                                    (73.7150, 165.4100)
                               (72.5050, 169.2400)
gf180mcu_fd_io_asig_5p0$1
                                                    (73.2750, 347.3500)
gf180mcu fd io fill5$1
                            (0.0000, 65.4850)
                                               (5.0000, 349.8400)
```

DF.18_LV : Min DNWELL space to (PCOMP outside Nwell and DNWELL) = 2.5

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:2260:external2

Structure (lower left x, y) (upper right x, y) Distance

```
(521.9600, 1232.2650) (536.9100, 1233.1950) 0.9300
trackA
trackA
        (535.9800, 1232.2650) (536.9100, 1257.4160) 0.9300
trackA
        (521.9600, 1232.2650) (522.8900, 1257.4160) 0.9300
trackA
        (521.9600, 1282.2950) (536.9100, 1283.2250) 0.9300
trackA
        (535.9800, 1258.0740) (536.9100, 1283.2250) 0.9300
trackA
        (521.9600, 1258.0740) (522.8900, 1283.2250) 0.9300
        (592.4600, 1232.2650) (607.4100, 1233.1950) 0.9300
trackA
trackA
        (606.4800, 1232.2650) (607.4100, 1257.4160) 0.9300
trackA
        (592.4600, 1232.2650) (593.3900, 1257.4160) 0.9300
        (592.4600, 1282.2950) (607.4100, 1283.2250) 0.9300
trackA
trackA
        (606.4800, 1258.0740) (607.4100, 1283.2250) 0.9300
trackA
        (592.4600, 1258.0740) (593.3900, 1283.2250) 0.9300
trackA
        (662.9600, 1232.2650) (677.9100, 1233.1950) 0.9300
```

```
trackA (662.9600, 1232.2650) (663.8900, 1257.4160) 0.9300
       (662.9600, 1282.2950) (677.9100, 1283.2250) 0.9300
trackA
       (676.9800, 1258.0740) (677.9100, 1283.2250) 0.9300
trackA
trackA
       (662.9600, 1258.0740) (663.8900, 1283.2250) 0.9300
       (733.4600, 1232.2650) (748.4100, 1233.1950) 0.9300
trackA
trackA
      (747.4800, 1232.2650) (748.4100, 1257.4160) 0.9300
trackA
       (733.4600, 1232.2650) (734.3900, 1257.4160) 0.9300
trackA
      (733.4600, 1282.2950) (748.4100, 1283.2250) 0.9300
trackA (747.4800, 1258.0740) (748.4100, 1283.2250) 0.9300
trackA (733.4600, 1258.0740) (734.3900, 1283.2250) 0.9300
DF.1a: Min. COMP Width: 0.22
/evprj182/projects/GF180MCU/combined-pdk/dk synopsys/pdk-180/DRC ICV/DRC/ICV/gf180
mcu drc.rs:2092:internal1
_____
Structure (lower left x, y) (upper right x, y) Distance
-----
trackA (1642.4950, 2408.6150) (1642.6250, 2408.6200) 0.0050
trackA (1642.2750, 2408.6150) (1642.4950, 2408.6200) 0.0050
trackA (1642.4950, 2409.0350) (1642.6250, 2409.0400) 0.0050
trackA (1642.2750, 2409.0350) (1642.4950, 2409.0400) 0.0050
DF.3a LV: Minimum COMP space. P-substrate tap (PCOMP outside DNWELL
and NWELL) can be butted for different voltage device like Low voltage,
Medium voltage and High voltage as the potential is same
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:2130:outside
_____
Structure (lower left x, y) (upper right x, y)
-----
trackA (1642.4950, 2408.6200) (1642.6250, 2409.0350)
trackA (1642.6250, 2409.0350) (1642.9050, 2409.0400)
```

(676.9800, 1232.2650) (677.9100, 1257.4160) 0.9300

trackA

```
and NWELL) can be butted for different voltage device like Low voltage,
Medium voltage and High voltage as the potential is same
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:2136:external1
Structure (lower left x, y) (upper right x, y) Distance
-----
trackA (1358.0150, 2377.1050) (1359.0250, 2377.3250) 0.2200
trackA (1357.9510, 2374.2450) (1359.0890, 2374.3350) 0.0900
trackA (1367.3250, 2377.1050) (1368.3350, 2377.3250) 0.2200
trackA (1367.2610, 2374.2450) (1368.3990, 2374.3350) 0.0900
trackA (1376.6350, 2377.1050) (1377.6450, 2377.3250) 0.2200
trackA (1376.5710, 2374.2450) (1377.7090, 2374.3350) 0.0900
trackA (1385.9450, 2377.1050) (1386.9550, 2377.3250) 0.2200
trackA (1385.8810, 2374.2450) (1387.0190, 2374.3350) 0.0900
trackA (1496.1810, 2417.0350) (1497.5690, 2417.0650) 0.0300
DF.3b: Min/Max space from NCOMP to PCOMP in the same well for butted
COMP = 0.0
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:2146:and
Structure (lower left x, y) (upper right x, y)
______
trackA (1349.0800, 2389.7550) (1349.8000, 2391.9650)
trackA (1358.0600, 2389.7550) (1358.9800, 2391.7750)
trackA (1367.3700, 2389.7550) (1368.2900, 2391.7750)
trackA (1376.6800, 2389.7550) (1377.6000, 2391.7750)
trackA (1385.9900, 2389.7550) (1386.9100, 2391.7750)
trackA
       (1356.4800, 2388.8550) (1357.2000, 2389.7550)
trackA
      (1349.0800, 2383.9050) (1349.8000, 2386.1150)
trackA
      (1358.0600, 2383.9050) (1358.9800, 2384.5250)
trackA
       (1367.3700, 2383.9050) (1368.2900, 2384.5250)
      (1376.6800, 2383.9050) (1377.6000, 2384.5250)
trackA
trackA (1385.9900, 2383.9050) (1386.9100, 2384.5250)
trackA
      (1356.4800, 2383.0050) (1357.2000, 2383.9050)
trackA (1349.0800, 2378.0550) (1349.8000, 2380.2650)
```

DF.3a MV: Minimum COMP space. P-substrate tap (PCOMP outside DNWELL

```
(1356.4800, 2377.1550) (1357.2000, 2378.0550)
trackA
trackA
        (1349.0800, 2372.2050) (1349.8000, 2374.4150)
trackA
        (1356.4800, 2371.3050) (1357.2000, 2372.2050)
trackA
        (1349.0800, 2366.3550) (1349.8000, 2368.5650)
        (1356.4800, 2365.4550) (1357.2000, 2366.3550)
trackA
trackA
        (1358.1400, 2388.8550) (1358.9000, 2389.5450)
trackA
        (1367.4500, 2388.8550) (1368.2100, 2389.5450)
trackA
        (1376.7600, 2388.8550) (1377.5200, 2389.5450)
trackA
        (1386.0700, 2388.8550) (1386.8300, 2389.5450)
trackA
        (1454.5800, 2417.7950) (1455.3000, 2420.0050)
trackA
        (1462.6750, 2416.8950) (1463.3950, 2417.7950)
trackA
        (1454.5800, 2410.1850) (1455.3000, 2412.3950)
trackA
        (1462.6750, 2409.2850) (1463.3950, 2410.1850)
        (1496.3800, 2409.2850) (1497.0600, 2410.1850)
trackA
trackA
        (1454.5800, 2402.5750) (1455.3000, 2404.7850)
trackA
        (1462.6750, 2401.6750) (1463.3950, 2402.5750)
trackA
        (1496.3800, 2401.6750) (1497.0600, 2402.5750)
trackA
        (1454.5800, 2394.9650) (1455.3000, 2397.1750)
trackA
        (1462.6750, 2394.0650) (1463.3950, 2394.9650)
trackA
        (1496.3800, 2394.0650) (1497.0600, 2394.9650)
trackA
        (1454.5800, 2387.3550) (1455.3000, 2389.5650)
trackA
        (1462.6750, 2386.4550) (1463.3950, 2387.3550)
trackA
        (1496.3800, 2386.4550) (1497.0600, 2387.3550)
trackA
        (1454.5800, 2379.7450) (1455.3000, 2381.9550)
trackA
        (1462.6750, 2378.8450) (1463.3950, 2379.7450)
trackA
        (1496.3800, 2378.8450) (1497.0600, 2379.7450)
trackA
        (1454.5800, 2372.1350) (1455.3000, 2374.3450)
trackA
        (1462.6750, 2371.2350) (1463.3950, 2372.1350)
trackA
        (1496.3800, 2371.2350) (1497.0600, 2372.1350)
trackA
        (1454.5800, 2364.5250) (1455.3000, 2366.7350)
trackA
        (1462.6750, 2363.6250) (1463.3950, 2364.5250)
trackA
        (1496.3800, 2363.6250) (1497.0600, 2364.5250)
trackA
        (1496.3800, 2417.0650) (1497.2100, 2417.1950)
trackA
        (1358.0600, 2367.7950) (1358.9800, 2368.5650)
trackA
        (1367.3700, 2367.7950) (1368.2900, 2368.5650)
        (1376.6800, 2367.7950) (1377.6000, 2368.5650)
trackA
trackA
        (1385.9900, 2367.7950) (1386.9100, 2368.5650)
        (1496.5400, 2416.8950) (1497.3800, 2417.0350)
trackA
```

DN.2: Min. DNWELL Space: 5.42

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:1961:external1

Structure (lower left x, y) (upper right x, y) Distance

trackA (522.8900, 1255.0950) (535.9800, 1260.3950) 5.3000 trackA (593.3900, 1255.0950) (606.4800, 1260.3950) 5.3000 trackA (663.8900, 1255.0950) (676.9800, 1260.3950) 5.3000 trackA (734.3900, 1255.0950) (747.4800, 1260.3950) 5.3000

DN.3 : Each DNWELL shall be directly surrounded by PCOMP guard ring tied to the P-substrate potential

 $/ evprj 182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180mcu_drc.rs:1971: and$

(lower left x v) (upper right x v)

Structure	(lower left x, y) (upper right x, y)
trackA	(1787.0200, 2579.7850) (1790.1200, 2582.9900)
trackA	(1796.1500, 2579.8050) (1799.2500, 2583.0100)
trackA	(1217.6150, 2298.7250) (1227.2750, 2315.0450)
trackA	(1218.3450, 2319.6150) (1227.2050, 2339.7150)
trackA	(1236.6400, 2352.4200) (1262.6100, 2423.1100)
trackA	(1248.3400, 2330.7200) (1262.3000, 2347.4000)
trackA	(1287.7150, 2294.2350) (1310.8350, 2358.2150)
trackA	(1312.7550, 2294.2350) (1336.9950, 2365.3350)
trackA	(1620.3500, 2313.1050) (1682.4800, 2332.9850)
trackA	(1620.3500, 2334.9850) (1682.4800, 2354.8650)
trackA	(1639.8300, 2285.7550) (1659.7300, 2305.2850)
trackA	(1649.5100, 2356.8650) (1682.4800, 2376.7450)
trackA	(1459.5750, 2416.3750) (1497.9000, 2420.5250)
trackA	(1459.5750, 2408.7650) (1497.9000, 2412.9150)
trackA	(1459.5750, 2401.1550) (1497.9000, 2405.3050)
trackA	(1459.5750, 2393.5450) (1497.9000, 2397.6950)
trackA	(1459.5750, 2385.9350) (1497.9000, 2390.0850)
trackA	(1459.5750, 2378.3250) (1497.9000, 2382.4750)
trackA	(1459.5750, 2370.7150) (1497.9000, 2374.8650)
trackA	(1459.5750, 2363.1050) (1497.9000, 2367.2550)
trackA	(1615.0600, 2118.4350) (1659.8600, 2188.2750)
trackA	(1661.5650, 2118.4350) (1682.0050, 2188.2750)
trackA	(458.0100, 1161.2550) (462.3300, 1164.9150)

```
trackA
                       (458.0100, 1182.5350) (460.6000, 1185.0750)
trackA
                       (465.8500, 1157.8950) (470.1700, 1159.8750)
trackA
                       (465.8500, 1182.5350) (468.4400, 1183.9550)
trackA
                       (467.5800, 1162.3750) (470.1700, 1163.7950)
trackA
                       (473.6900, 1157.8950) (478.0100, 1159.8750)
trackA
                       (473.6900, 1182.5350) (476.2800, 1183.9550)
trackA
                       (475.4200, 1162.3750) (478.0100, 1163.7950)
trackA
                       (481.5300, 1171.3350) (484.1200, 1175.5550)
trackA
                       (481.5300, 1195.9750) (484.1200, 1197.3950)
trackA
                       (483.2600, 1157.8950) (485.8500, 1159.8750)
trackA
                       (483.2600, 1190.3750) (485.8500, 1192.9150)
trackA
                       (489.3700, 1157.8950) (493.6900, 1160.4350)
trackA
                       (489.3700, 1180.2950) (493.6900, 1182.2750)
trackA
                       (489.3700, 1182.5350) (491.9600, 1183.9550)
                       (491.1000, 1170.2150) (493.6900, 1177.7950)
trackA
trackA
                       (497.2100, 1157.8950) (499.8000, 1160.4350)
trackA
                       (497.2100, 1162.9350) (499.8000, 1164.3550)
trackA
                       (497.2100, 1175.8150) (499.8000, 1177.7950)
                       (497.2100, 1182.5350) (499.8000, 1183.9550)
trackA
                       (2120.8250, 934.9300) (2176.7350, 965.7100)
trackA
                       (2227.2450, 934.9300) (2283.1550, 965.7100)
trackA
                       (2285.1650, 874.3400) (2312.0750, 945.6800)
trackA
trackA
                       (865.7850, 510.8700) (887.9250, 521.3100)
                       (916.0650, 510.8700) (934.1250, 521.3100)
trackA
trackA
                       (936.4350, 510.0200) (954.4950, 521.5600)
trackA
                       (1151.9100, 545.9050) (1165.9800, 573.2150)
trackA
                       (1151.9100, 577.8300) (1165.9800, 595.4700)
                       (1185.6000, 538.6550) (1203.6700, 565.9650)
trackA
                       (1215.6900, 538.6550) (1233.7600, 565.9650)
trackA
trackA
                       (1245.7700, 538.6550) (1263.8400, 565.9650)
trackA
                       (1275.8500, 538.6550) (1367.1800, 565.9650)
trackA
                       (1379.1900, 538.6550) (1592.6200, 565.9650)
trackA
                       (797.0200, 358.6400) (839.1800, 371.8200)
trackA
                       (897.0100, 358.6400) (939.1700, 371.8200)
trackA
                       (2499.4500, 448.3150) (2524.3000, 460.7150)
trackA
                       (1605.4750, 2193.2750) (1640.7750, 2283.2250)
trackA
                       (1642.4750, 2193.2750) (1659.7300, 2283.2250)
trackA
                       (2121.4050, 968.5250) (2135.3050, 983.6150)
trackA
                       (2227.8250, 968.5250) (2241.7250, 983.6150)
trackA
                       (1182.8000, 475.2700) (1396.6900, 495.4900)
op buffer
                        (-41.8950, -26.0800) (-13.9250, -5.1100)
op buffer
                        (-41.8950, 6.0500) (-24.0450, 16.1600)
op buffer
                        (-8.9250, -16.2750) (8.9250, -5.1050)
Unnamed 02d9ae27
                               (-11.1900, -16.4200) (11.1900, -5.3000)
```

```
Unnamed 02d9ae27
                              (-11.1900, 15.0200) (11.1900, 27.2300)
transformed_9f8db47f
                             (-18.0350, -7.9850) (18.0350, 7.9850)
                              (-18.0350, -7.9850) (18.0350, 7.9850)
transformed 729ded33
gf180mcu fd sc mcu7t5v0 buf 1
                                    (-0.4300, 1.7600)
                                                       (3.7900, 4.3500)
gf180mcu fd sc mcu7t5v0 buf 4
                                    (-0.4300, 1.7600)
                                                       (8.2700, 4.3500)
gf180mcu fd sc mcu7t5v0 antenna (-0.4300, 1.7600)
                                                        (1.5500, 4.3500)
gf180mcu fd sc mcu7t5v0 buf 3
                                    (-0.4300, 1.7600)
                                                       (6.0300, 4.3500)
gf180mcu fd sc mcu7t5v0 fillcap 16 (-0.4300, 1.7600)
                                                        (9.3900, 4.3500)
gf180mcu_fd_sc_mcu7t5v0__clkbuf_1 (-0.4300, 1.7600)
                                                        (3.7900, 4.3500)
                          dffrng 1 (-0.4300, 1.7600)
gf180mcu fd sc mcu7t5v0
                                                        (19.4700, 4.3500)
                           filltie (-0.4300, 1.7600)
gf180mcu fd sc mcu7t5v0
                                                     (1.5500, 4.3500)
                           fillcap 4 (-0.4300, 1.7600)
gf180mcu fd sc mcu7t5v0
                                                       (2.6700, 4.3500)
gf180mcu fd sc mcu7t5v0 fillcap 8 (-0.4300, 1.7600)
                                                       (4.9100, 4.3500)
                                   (-0.4300, 1.7600)
gf180mcu_fd_sc_mcu7t5v0_
                          endcap
                                                        (1.5500, 4.3500)
gf180mcu_fd_sc_mcu7t5v0__fillcap_64 (-0.4300, 1.7600)
                                                        (36.2700, 4.3500)
gf180mcu_fd_sc_mcu7t5v0__fillcap_32 (-0.4300, 1.7600)
                                                        (18.3500, 4.3500)
io secondary 5p0
                            (22.6500, -7.2500)
                                                (35.8300, 34.9100)
```

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:1974:and

WARNING: The error count of 102 for this check exceeds the limit set in the runset. Details only available for the first 100.

Check was stopped early because error limit was reached.

(lower left x, y) (upper right x, y) trackA (1787.6300, 2578.5250) (1789.1100, 2579.1850) trackA (1796.7650, 2578.5450) (1798.2450, 2579.2050) trackA (1459.5750, 2416.8950) (1497.2100, 2417.7950) (1459.5750, 2409.2850) (1497.2100, 2410.1850) trackA trackA (1459.5750, 2401.6750) (1497.2100, 2402.5750) trackA (1459.5750, 2394.0650) (1497.2100, 2394.9650) (1459.5750, 2386.4550) (1497.2100, 2387.3550) trackA trackA (1459.5750, 2378.8450) (1497.2100, 2379.7450) (1459.5750, 2371.2350) (1497.2100, 2372.1350) trackA (1459.5750, 2363.6250) (1497.2100, 2364.5250) trackA trackA (1219.6750, 2300.7850) (1225.2150, 2305.8050) (1219.6750, 2307.9650) (1225.2150, 2312.9850) trackA trackA (1220.0050, 2321.2750) (1225.5450, 2326.2950) trackA (1220.0050, 2327.1550) (1225.5450, 2332.1750) trackA (1220.0050, 2333.0350) (1225.5450, 2338.0550) trackA (1240.5700, 2354.7800) (1258.6800, 2371.2400)

```
trackA
                       (1240.5700, 2372.8750) (1258.6800, 2387.1850)
trackA
                       (1240.5700, 2388.3450) (1258.6800, 2402.6550)
                       (1240.5700, 2404.2900) (1258.6800, 2420.7500)
trackA
trackA
                       (1250.0000, 2332.3800) (1255.0400, 2336.2600)
                       (1250.0000, 2337.1200) (1255.0400, 2341.0000)
trackA
trackA
                       (1250.0000, 2341.8600) (1255.0400, 2345.7400)
trackA
                       (1256.9800, 2343.2400) (1262.0200, 2347.1200)
trackA
                       (1288.0250, 2294.5450) (1310.5250, 2357.9050)
trackA
                       (1313.0650, 2294.5450) (1336.6850, 2365.0250)
trackA
                       (1496.5400, 2416.8950) (1497.3800, 2417.0350)
trackA
                       (1620.6700, 2313.4250) (1682.1600, 2332.0750)
trackA
                       (1620.6700, 2335.3050) (1682.1600, 2353.9550)
trackA
                       (1640.1500, 2286.0750) (1659.4100, 2304.9650)
trackA
                       (1649.8300, 2357.1850) (1682.1600, 2375.8350)
trackA
                       (1615.3800, 2118.7550) (1659.5400, 2187.9550)
trackA
                       (1665.5350, 2118.7550) (1681.6850, 2187.9550)
trackA
                       (480.4500, 1171.9450) (480.9300, 1173.4250)
trackA
                       (494.2900, 1170.8250) (495.1100, 1176.7650)
                       (2121.1050, 935.2100) (2176.4550, 965.4300)
trackA
                       (2227.5250, 935.2100) (2282.8750, 965.4300)
trackA
                       (2285.4450, 874.6200) (2311.7950, 945.4000)
trackA
trackA
                       (1276.1300, 538.9350) (1366.9000, 565.6850)
                       (1379.4700, 538.9350) (1592.3400, 565.6850)
trackA
trackA
                       (866.0650, 511.1500) (887.6450, 521.0300)
trackA
                       (916.3450, 511.1500) (933.8450, 521.0300)
trackA
                       (936.7150, 510.3000) (954.2150, 521.2800)
                       (1152.1900, 546.1850) (1165.7000, 572.9350)
trackA
                       (1152.1900, 578.1100) (1165.7000, 595.1900)
trackA
                       (1185.8800, 538.9350) (1203.3900, 565.6850)
trackA
trackA
                       (1215.9700, 538.9350) (1233.4800, 565.6850)
trackA
                       (1246.0500, 538.9350) (1263.5600, 565.6850)
                       (1466.0450, 2200.6850) (1511.8050, 2277.2650)
trackA
trackA
                       (1605.7950, 2193.5950) (1640.4550, 2282.9050)
trackA
                       (1649.7400, 2193.5950) (1659.4100, 2282.9050)
trackA
                       (2121.6850, 968.8050) (2135.0250, 983.3350)
op buffer
                        (-41.3050, -25.4900) (-14.5150, -5.7000)
op buffer
                        (-41.3050, 6.6400)
                                           (-24.6350, 15.5700)
op buffer
                        (-8.3350, -15.6850) (8.3350, -5.6950)
Unnamed_02d9ae27
                               (-10.6000, 15.6100) (10.6000, 26.6450)
Unnamed 02d9ae27
                               (-10.6000, -15.8300) (10.6000, -5.8900)
transformed 9f8db47f
                              (-17.4450, -7.3950) (17.4450, 7.3950)
transformed 729ded33
                               (-17.4450, -7.3950) (17.4450, 7.3950)
gf180mcu fd sc mcu7t5v0 buf 1
                                     (0.1800, 0.3400)
                                                        (3.0000, 1.1600)
gf180mcu fd sc mcu7t5v0 buf 4
                                     (0.1800, 0.3400)
                                                        (7.2600, 1.1600)
```

```
gf180mcu fd sc mcu7t5v0 antenna
                                      (0.1800, 0.5900)
                                                          (0.5400, 1.1600)
gf180mcu_fd_sc_mcu7t5v0_
                                     (0.1800, 0.3400)
                                                         (5.2100, 1.1600)
                            buf_3
gf180mcu fd sc mcu7t5v0
                            fillcap 16 (6.9000, 0.3400)
                                                         (8.7800, 1.1600)
gf180mcu fd sc mcu7t5v0
                            fillcap 16 (4.6600, 0.3400)
                                                         (6.5400, 1.1600)
gf180mcu_fd_sc_mcu7t5v0_
                           _fillcap_16 (2.4200, 0.3400)
                                                         (4.3000, 1.1600)
gf180mcu fd sc mcu7t5v0
                            fillcap 16 (0.1800, 0.3400)
                                                         (2.0600, 1.1600)
gf180mcu fd sc mcu7t5v0
                            clkbuf 1 (0.1800, 0.5650)
                                                         (2.9600, 1.0600)
gf180mcu fd sc mcu7t5v0
                            dffrnq_1 (17.3050, 0.3450)
                                                          (18.7850, 1.1600)
gf180mcu fd sc mcu7t5v0
                            dffrng 1 (3.1600, 0.6200)
                                                         (16.9450, 1.2950)
gf180mcu fd sc mcu7t5v0
                            dffrng 1 (0.1800, 0.7550)
                                                         (2.7800, 1.1600)
gf180mcu_fd_sc_mcu7t5v0_
                            filltie (0.3600, 1.9200)
                                                      (0.7600, 3.5600)
                            fillcap_4 (0.1800, 0.3400)
gf180mcu_fd_sc_mcu7t5v0_
                                                         (2.0600, 1.1600)
                            fillcap_8 (2.4200, 0.3400)
gf180mcu fd sc mcu7t5v0
                                                         (4.3000, 1.1600)
                                                         (2.0600, 1.1600)
gf180mcu_fd_sc_mcu7t5v0_
                            fillcap 8 (0.1800, 0.3400)
gf180mcu fd sc mcu7t5v0
                            endcap
                                      (0.3600, 1.9200)
                                                          (0.7200, 3.5600)
gf180mcu_fd_sc_mcu7t5v0_
                            fillcap 64 (33.7800, 0.3400)
                                                          (35.6600, 1.1600)
gf180mcu_fd_sc_mcu7t5v0_
                            fillcap 64 (31.5400, 0.3400)
                                                          (33.4200, 1.1600)
gf180mcu fd sc mcu7t5v0
                            fillcap 64 (29.3000, 0.3400)
                                                          (31.1800, 1.1600)
gf180mcu_fd_sc_mcu7t5v0_
                            fillcap_64 (27.0600, 0.3400)
                                                          (28.9400, 1.1600)
gf180mcu fd sc mcu7t5v0
                            fillcap 64 (24.8200, 0.3400)
                                                          (26.7000, 1.1600)
gf180mcu fd sc mcu7t5v0
                           fillcap 64 (22.5800, 0.3400)
                                                          (24.4600, 1.1600)
gf180mcu_fd_sc_mcu7t5v0_
                            fillcap_64 (20.3400, 0.3400)
                                                          (22.2200, 1.1600)
gf180mcu fd sc mcu7t5v0
                            fillcap 64 (18.1000, 0.3400)
                                                          (19.9800, 1.1600)
gf180mcu fd sc mcu7t5v0
                            fillcap 64 (15.8600, 0.3400)
                                                          (17.7400, 1.1600)
gf180mcu_fd_sc_mcu7t5v0_
                            fillcap_64 (13.6200, 0.3400)
                                                          (15.5000, 1.1600)
gf180mcu fd sc mcu7t5v0
                            fillcap 64 (11.3800, 0.3400)
                                                          (13.2600, 1.1600)
gf180mcu fd sc mcu7t5v0
                            fillcap_64 (9.1400, 0.3400)
                                                         (11.0200, 1.1600)
gf180mcu fd sc mcu7t5v0
                            fillcap 64 (6.9000, 0.3400)
                                                         (8.7800, 1.1600)
gf180mcu_fd_sc_mcu7t5v0_
                            fillcap 64 (4.6600, 0.3400)
                                                         (6.5400, 1.1600)
gf180mcu_fd_sc_mcu7t5v0_
                            fillcap_64 (2.4200, 0.3400)
                                                         (4.3000, 1.1600)
gf180mcu_fd_sc_mcu7t5v0_
                            fillcap 64 (0.1800, 0.3400)
                                                         (2.0600, 1.1600)
gf180mcu fd sc mcu7t5v0
                            fillcap 32 (15.8600, 0.3400)
                                                          (17.7400, 1.1600)
gf180mcu_fd_sc_mcu7t5v0_
                            fillcap_32 (13.6200, 0.3400)
                                                          (15.5000, 1.1600)
gf180mcu fd sc mcu7t5v0
                           fillcap 32 (11.3800, 0.3400)
                                                          (13.2600, 1.1600)
gf180mcu_fd_sc_mcu7t5v0_
                            fillcap 32 (9.1400, 0.3400)
                                                         (11.0200, 1.1600)
gf180mcu fd sc mcu7t5v0
                            fillcap 32 (6.9000, 0.3400)
                                                         (8.7800, 1.1600)
                            fillcap_32 (4.6600, 0.3400)
gf180mcu_fd_sc_mcu7t5v0_
                                                         (6.5400, 1.1600)
gf180mcu fd sc mcu7t5v0
                            fillcap 32 (2.4200, 0.3400)
                                                         (4.3000, 1.1600)
gf180mcu_fd_sc_mcu7t5v0_
                            fillcap_32 (0.1800, 0.3400)
                                                         (2.0600, 1.1600)
io_secondary_5p0
                             (22.7700, -7.1300)
                                                 (35.7100, 34.7900)
```

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:1981:and

```
Structure (lower left x, y) (upper right x, y)
-----
trackA (2076.8300, 2011.2600) (2117.2800, 2027.8700)
trackA (1284.1750, 2291.3750) (1459.5750, 2425.1450)
trackA (1499.4000, 2331.9850) (1545.9700, 2414.1750)
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:1984:not outside
-----
Structure (lower left x, y) (upper right x, y)
______
trackA (1284.1750, 2291.3750) (1459.5750, 2425.1450)
trackA (1499.4000, 2331.9850) (1545.9700, 2414.1750)
trackA (2076.8300, 2011.2600) (2117.2800, 2027.8700)
trackA (522.8900, 1233.1950) (535.9800, 1255.0950)
trackA
      (522.8900, 1260.3950) (535.9800, 1282.2950)
trackA (593.3900, 1233.1950) (606.4800, 1255.0950)
trackA (593.3900, 1260.3950) (606.4800, 1282.2950)
trackA (663.8900, 1233.1950) (676.9800, 1255.0950)
trackA (663.8900, 1260.3950) (676.9800, 1282.2950)
trackA (734.3900, 1233.1950) (747.4800, 1255.0950)
trackA (734.3900, 1260.3950) (747.4800, 1282.2950)
DV.1 : Min. Dualgate enclose DNWELL = 0.5
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:6130:enclose
Structure (lower left x, y) (upper right x, y) Distance
-----
trackA (1132.2950, 2367.5050) (1179.8850, 2367.5060) 0.0000
trackA (1132.2950, 2415.4940) (1179.8850, 2415.4950) 0.0000
trackA (1179.8840, 2367.5050) (1179.8850, 2415.4950) 0.0000
trackA
      (1132.2950, 2367.5050) (1132.2960, 2415.4950) 0.0000
trackA (1280.2000, 2222.7790) (1390.1800, 2222.7800) 0.0000
trackA (1284.1750, 2380.5400) (1340.0950, 2380.5410) 0.0000
trackA
      (1340.0950, 2352.2350) (1396.9150, 2352.2360) 0.0000
trackA (1396.9150, 2291.3750) (1459.5750, 2291.3760) 0.0000
trackA (1284.1750, 2425.1440) (1459.5750, 2425.1450) 0.0000
trackA
      (1459.5740, 2291.3750) (1459.5750, 2362.6050) 0.0000
trackA (1459.5740, 2367.7550) (1459.5750, 2370.2150) 0.0000
```

```
trackA
        (1459.5740, 2375.3650) (1459.5750, 2377.8250) 0.0000
trackA
       (1459.5740, 2382.9750) (1459.5750, 2385.4350) 0.0000
trackA
       (1459.5740, 2390.5850) (1459.5750, 2393.0450) 0.0000
trackA
       (1459.5740, 2398.1950) (1459.5750, 2400.6550) 0.0000
trackA
       (1459.5740, 2405.8050) (1459.5750, 2408.2650) 0.0000
trackA
       (1459.5740, 2413.4150) (1459.5750, 2415.8750) 0.0000
trackA
       (1459.5740, 2421.0250) (1459.5750, 2425.1450) 0.0000
trackA
        (1284.1750, 2380.5400) (1284.1760, 2425.1450) 0.0000
trackA
        (1340.0950, 2352.2350) (1340.0960, 2380.5400) 0.0000
       (1396.9150, 2291.3750) (1396.9160, 2352.2350) 0.0000
trackA
        (1280.2000, 2117.6200) (1390.1800, 2117.6210) 0.0000
trackA
trackA
       (1390.1790, 2117.6200) (1390.1800, 2222.7800) 0.0000
       (1280.2000, 2117.6200) (1280.2010, 2222.7800) 0.0000
trackA
```

HRES.10 : Minimum/Maximum Pplus overlap of SAB = 0.1

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:3917:interacting

Structure	(lower left x, y) (upper right x, y)
trackA	(1289.3750, 2297.0950) (1290.3750, 2302.0950)
trackA	(1289.3750, 2305.7550) (1290.3750, 2310.7550)
trackA	(1289.3750, 2314.4150) (1290.3750, 2319.4150)
trackA	(1289.3750, 2323.0750) (1290.3750, 2328.0750)
trackA	(1289.3750, 2331.7350) (1290.3750, 2336.7350)
trackA	(1289.3750, 2340.3950) (1290.3750, 2345.3950)
trackA	(1289.3750, 2349.0550) (1290.3750, 2354.0550)
trackA	(1293.1350, 2297.0950) (1294.1350, 2302.0950)
trackA	(1293.1350, 2305.7550) (1294.1350, 2310.7550)
trackA	(1293.1350, 2314.4150) (1294.1350, 2319.4150)
trackA	(1293.1350, 2323.0750) (1294.1350, 2328.0750)
trackA	(1293.1350, 2331.7350) (1294.1350, 2336.7350)
trackA	(1293.1350, 2340.3950) (1294.1350, 2345.3950)
trackA	(1293.1350, 2349.0550) (1294.1350, 2354.0550)
trackA	(1296.8950, 2297.0950) (1297.8950, 2302.0950)
trackA	(1296.8950, 2305.7550) (1297.8950, 2310.7550)
trackA	(1296.8950, 2314.4150) (1297.8950, 2319.4150)
trackA	(1296.8950, 2323.0750) (1297.8950, 2328.0750)
trackA	(1296.8950, 2331.7350) (1297.8950, 2336.7350)
trackA	(1296.8950, 2340.3950) (1297.8950, 2345.3950)

```
trackA
                   (1296.8950, 2349.0550) (1297.8950, 2354.0550)
trackA
                   (1300.6550, 2297.0950) (1301.6550, 2302.0950)
                   (1300.6550, 2305.7550) (1301.6550, 2310.7550)
trackA
                   (1300.6550, 2314.4150) (1301.6550, 2319.4150)
trackA
trackA
                   (1300.6550, 2323.0750) (1301.6550, 2328.0750)
                   (1300.6550, 2331.7350) (1301.6550, 2336.7350)
trackA
trackA
                   (1300.6550, 2340.3950) (1301.6550, 2345.3950)
trackA
                   (1300.6550, 2349.0550) (1301.6550, 2354.0550)
trackA
                   (1304.4150, 2297.0950) (1305.4150, 2302.0950)
trackA
                   (1304.4150, 2305.7550) (1305.4150, 2310.7550)
trackA
                   (1304.4150, 2314.4150) (1305.4150, 2319.4150)
trackA
                   (1304.4150, 2323.0750) (1305.4150, 2328.0750)
                   (1304.4150, 2331.7350) (1305.4150, 2336.7350)
trackA
trackA
                   (1304.4150, 2340.3950) (1305.4150, 2345.3950)
                   (1304.4150, 2349.0550) (1305.4150, 2354.0550)
trackA
trackA
                   (1308.1750, 2297.0950) (1309.1750, 2302.0950)
                   (1308.1750, 2305.7550) (1309.1750, 2310.7550)
trackA
trackA
                   (1308.1750, 2314.4150) (1309.1750, 2319.4150)
                   (1308.1750, 2323.0750) (1309.1750, 2328.0750)
trackA
                   (1308.1750, 2331.7350) (1309.1750, 2336.7350)
trackA
                   (1308.1750, 2340.3950) (1309.1750, 2345.3950)
trackA
trackA
                   (1308.1750, 2349.0550) (1309.1750, 2354.0550)
                   (1314.4150, 2297.0950) (1315.4150, 2307.0950)
trackA
                   (1314.4150, 2310.7550) (1315.4150, 2320.7550)
trackA
trackA
                   (1314.4150, 2324.4150) (1315.4150, 2334.4150)
trackA
                   (1314.4150, 2338.0750) (1315.4150, 2348.0750)
                   (1314.4150, 2351.7350) (1315.4150, 2361.7350)
trackA
                   (1318.1750, 2297.0950) (1319.1750, 2307.0950)
trackA
trackA
                   (1318.1750, 2310.7550) (1319.1750, 2320.7550)
                   (1318.1750, 2324.4150) (1319.1750, 2334.4150)
trackA
trackA
                   (1318.1750, 2338.0750) (1319.1750, 2348.0750)
                   (1318.1750, 2351.7350) (1319.1750, 2361.7350)
trackA
trackA
                   (1321.9350, 2297.0950) (1322.9350, 2307.0950)
trackA
                   (1321.9350, 2310.7550) (1322.9350, 2320.7550)
trackA
                   (1321.9350, 2324.4150) (1322.9350, 2334.4150)
trackA
                   (1321.9350, 2338.0750) (1322.9350, 2348.0750)
trackA
                   (1321.9350, 2351.7350) (1322.9350, 2361.7350)
trackA
                   (1325.6950, 2297.0950) (1326.6950, 2307.0950)
trackA
                   (1325.6950, 2310.7550) (1326.6950, 2320.7550)
trackA
                   (1325.6950, 2324.4150) (1326.6950, 2334.4150)
trackA
                   (1325.6950, 2338.0750) (1326.6950, 2348.0750)
trackA
                   (1325.6950, 2351.7350) (1326.6950, 2361.7350)
trackA
                   (1329.4550, 2297.0950) (1330.4550, 2307.0950)
trackA
                   (1329.4550, 2310.7550) (1330.4550, 2320.7550)
```

```
trackA
                   (1329.4550, 2324.4150) (1330.4550, 2334.4150)
trackA
                   (1329.4550, 2338.0750) (1330.4550, 2348.0750)
                   (1329.4550, 2351.7350) (1330.4550, 2361.7350)
trackA
                   (1333.2150, 2297.0950) (1334.2150, 2307.0950)
trackA
trackA
                   (1333.2150, 2310.7550) (1334.2150, 2320.7550)
                   (1333.2150, 2324.4150) (1334.2150, 2334.4150)
trackA
trackA
                   (1333.2150, 2338.0750) (1334.2150, 2348.0750)
trackA
                   (1333.2150, 2351.7350) (1334.2150, 2361.7350)
op buffer
                    (-4.0000, -72.3300)
                                          (-3.0000, -72.2200)
op buffer
                    (-4.0000, -59.6900)
                                          (-3.0000, -59.5800)
op buffer
                    (-4.0000, -54.3600)
                                          (-3.0000, -54.2500)
op buffer
                    (-4.0000, -41.7200)
                                          (-3.0000, -41.6100)
op buffer
                    (-2.6000, -72.3300)
                                          (-1.6000, -72.2200)
op buffer
                    (-2.6000, -59.6900)
                                          (-1.6000, -59.5800)
                    (-2.6000, -54.3600)
                                          (-1.6000, -54.2500)
op buffer
op buffer
                    (-2.6000, -41.7200)
                                          (-1.6000, -41.6100)
op buffer
                    (-1.2000, -72.3300)
                                          (-0.2000, -72.2200)
op buffer
                    (-1.2000, -59.6900)
                                          (-0.2000, -59.5800)
                    (-1.2000, -54.3600)
                                          (-0.2000, -54.2500)
op_buffer
                    (-1.2000, -41.7200)
                                          (-0.2000, -41.6100)
op buffer
op buffer
                    (0.2000, -72.3300)
                                          (1.2000, -72.2200)
op_buffer
                    (0.2000, -59.6900)
                                          (1.2000, -59.5800)
op buffer
                    (0.2000, -54.3600)
                                          (1.2000, -54.2500)
                    (0.2000, -41.7200)
                                          (1.2000, -41.6100)
op buffer
op_buffer
                    (1.6000, -72.3300)
                                          (2.6000, -72.2200)
op buffer
                    (1.6000, -59.6900)
                                          (2.6000, -59.5800)
op_buffer
                    (1.6000, -54.3600)
                                          (2.6000, -54.2500)
                    (1.6000, -41.7200)
                                          (2.6000, -41.6100)
op buffer
                    (3.0000, -72.3300)
                                          (4.0000, -72.2200)
op buffer
op_buffer
                    (3.0000, -59.6900)
                                          (4.0000, -59.5800)
op buffer
                    (3.0000, -54.3600)
                                          (4.0000, -54.2500)
                    (3.0000, -41.7200)
                                          (4.0000, -41.6100)
op buffer
ppolyf_u_high_Rs_resistor$1 (10.0000, 0.0000)
                                                  (10.1000, 1.0000)
ppolyf u high Rs resistor$1 (-0.1000, 0.0000)
                                                 (0.0000, 1.0000)
ppolyf u high Rs resistor (5.0000, 0.0000)
                                                (5.1000, 1.0000)
ppolyf u high Rs resistor (-0.1000, 0.0000)
                                                (0.0000, 1.0000)
```

HRES.12: P type Poly2 resistor (high sheet rho) shall be covered by RES_MK marking.

RES_MK length shall be coincide with resistor length (Defined by Pplus space)

and width covering the width of Poly2.

If the size of single RES_MK mark layer is greater than 15000 um2 and both sides (X and Y) are greater than 80 um, then the minimum spacing to adjacent RES_MK layer >= 20 Checked in PRES.9

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu drc.rs:3928:xor

```
Structure
                   (lower left x, y) (upper right x, y)
-----
                    (3.0000, -41.7350) (4.0000, -41.7200)
op buffer
                    (3.0000, -54.2500) (4.0000, -54.2350)
op buffer
op_buffer
                    (3.0000, -59.7050) (4.0000, -59.6900)
                    (3.0000, -72.2200) (4.0000, -72.2050)
op buffer
op buffer
                    (1.6000, -41.7350) (2.6000, -41.7200)
                    (1.6000, -54.2500) (2.6000, -54.2350)
op buffer
op buffer
                    (1.6000, -59.7050) (2.6000, -59.6900)
                    (1.6000, -72.2200) (2.6000, -72.2050)
op_buffer
                    (0.2000, -41.7350) (1.2000, -41.7200)
op buffer
                    (0.2000, -54.2500) (1.2000, -54.2350)
op buffer
op_buffer
                    (0.2000, -59.7050) (1.2000, -59.6900)
                    (0.2000, -72.2200) (1.2000, -72.2050)
op buffer
                    (-1.2000, -41.7350) (-0.2000, -41.7200)
op buffer
op_buffer
                    (-1.2000, -54.2500) (-0.2000, -54.2350)
op buffer
                    (-1.2000, -59.7050) (-0.2000, -59.6900)
op_buffer
                    (-1.2000, -72.2200) (-0.2000, -72.2050)
                    (-2.6000, -41.7350) (-1.6000, -41.7200)
op buffer
op buffer
                    (-2.6000, -54.2500) (-1.6000, -54.2350)
op_buffer
                    (-2.6000, -59.7050) (-1.6000, -59.6900)
op buffer
                    (-2.6000, -72.2200) (-1.6000, -72.2050)
                    (-4.0000, -41.7350) (-3.0000, -41.7200)
op buffer
op_buffer
                    (-4.0000, -54.2500) (-3.0000, -54.2350)
op buffer
                    (-4.0000, -59.7050) (-3.0000, -59.6900)
op_buffer
                    (-4.0000, -72.2200) (-3.0000, -72.2050)
ppolyf u high Rs resistor$1 (-0.6400, 0.0000) (10.6400, 1.0000)
ppolyf_u_high_Rs_resistor (-0.6400, 0.0000) (5.6400, 1.0000)
```

HRES.2 : Min width of Poly2 resistor = 1.0

```
Structure (lower left x, y) (upper right x, y) Distance
```

----op buffer (-4.0000, -72.8600) (-3.0700, -72.3470) 0.9300 op buffer (-3.9300, -72.8600) (-3.0000, -72.3470) 0.9300 op buffer (-3.9300, -72.8600) (-3.0700, -72.7150) 0.8600 op buffer (-2.6000, -72.8600) (-1.6700, -72.3470) 0.9300 op buffer (-2.5300, -72.8600) (-1.6000, -72.3470) 0.9300 op buffer (-2.5300, -72.8600) (-1.6700, -72.7150) 0.8600 op buffer (-1.2000, -72.8600) (-0.2700, -72.3470) 0.9300 op_buffer (-1.1300, -72.8600) (-0.2000, -72.3470) 0.9300 op buffer (-1.1300, -72.8600) (-0.2700, -72.7150) 0.8600 op buffer (0.2000, -72.8600) (1.1300, -72.3470) 0.9300 op buffer (0.2700, -72.8600) (1.2000, -72.3470) 0.9300 op buffer (0.2700, -72.8600) (1.1300, -72.7150) 0.8600 op buffer (1.6000, -72.8600) (2.5300, -72.3470) 0.9300 op_buffer (1.6700, -72.8600) (2.6000, -72.3470) 0.9300 op buffer (1.6700, -72.8600) (2.5300, -72.7150) 0.8600 op buffer (3.0000, -72.8600) (3.9300, -72.3470) 0.9300 op_buffer (3.0700, -72.8600) (4.0000, -72.3470) 0.9300 op buffer (3.0700, -72.8600) (3.9300, -72.7150) 0.8600 op buffer (-3.9300, -59.5630) (-3.0000, -59.0500) 0.9300 op buffer (-4.0000, -59.5630) (-3.0700, -59.0500) 0.9300 op buffer (-3.9300, -59.1950) (-3.0700, -59.0500) 0.8600 op_buffer (-2.5300, -59.5630) (-1.6000, -59.0500) 0.9300 op buffer (-2.6000, -59.5630) (-1.6700, -59.0500) 0.9300 op buffer (-2.5300, -59.1950) (-1.6700, -59.0500) 0.8600 op_buffer (-1.1300, -59.5630) (-0.2000, -59.0500) 0.9300 op_buffer (-1.2000, -59.5630) (-0.2700, -59.0500) 0.9300 op buffer (-1.1300, -59.1950) (-0.2700, -59.0500) 0.8600 op buffer (0.2700, -59.5630) (1.2000, -59.0500) 0.9300 op buffer (0.2000, -59.5630) (1.1300, -59.0500) 0.9300 op_buffer (0.2700, -59.1950) (1.1300, -59.0500) 0.8600 op buffer (1.6700, -59.5630) (2.6000, -59.0500) 0.9300 op buffer (1.6000, -59.5630) (2.5300, -59.0500) 0.9300 op buffer (1.6700, -59.1950) (2.5300, -59.0500) 0.8600 op_buffer (3.0700, -59.5630) (4.0000, -59.0500) 0.9300 op buffer (3.0000, -59.5630) (3.9300, -59.0500) 0.9300 op buffer (3.0700, -59.1950) (3.9300, -59.0500) 0.8600 op buffer (-4.0000, -54.8900) (-3.0700, -54.3770) 0.9300 op buffer (-3.9300, -54.8900) (-3.0000, -54.3770) 0.9300 op buffer (-3.9300, -54.8900) (-3.0700, -54.7450) 0.8600

```
op buffer (-2.6000, -54.8900) (-1.6700, -54.3770) 0.9300
op_buffer (-2.5300, -54.8900) (-1.6000, -54.3770) 0.9300
op buffer (-2.5300, -54.8900) (-1.6700, -54.7450) 0.8600
op buffer (-1.2000, -54.8900) (-0.2700, -54.3770) 0.9300
op buffer (-1.1300, -54.8900) (-0.2000, -54.3770) 0.9300
op buffer (-1.1300, -54.8900) (-0.2700, -54.7450) 0.8600
op buffer (0.2000, -54.8900) (1.1300, -54.3770) 0.9300
op buffer (0.2700, -54.8900) (1.2000, -54.3770) 0.9300
op buffer (0.2700, -54.8900) (1.1300, -54.7450) 0.8600
op buffer (1.6000, -54.8900) (2.5300, -54.3770) 0.9300
op buffer (1.6700, -54.8900) (2.6000, -54.3770) 0.9300
op buffer (1.6700, -54.8900) (2.5300, -54.7450) 0.8600
op buffer (3.0000, -54.8900) (3.9300, -54.3770) 0.9300
op buffer (3.0700, -54.8900) (4.0000, -54.3770) 0.9300
op buffer (3.0700, -54.8900) (3.9300, -54.7450) 0.8600
op buffer (-3.9300, -41.5930) (-3.0000, -41.0800) 0.9300
op_buffer (-4.0000, -41.5930) (-3.0700, -41.0800) 0.9300
op buffer (-3.9300, -41.2250) (-3.0700, -41.0800) 0.8600
op_buffer (-2.5300, -41.5930) (-1.6000, -41.0800) 0.9300
op buffer (-2.6000, -41.5930) (-1.6700, -41.0800) 0.9300
op buffer (-2.5300, -41.2250) (-1.6700, -41.0800) 0.8600
op_buffer (-1.1300, -41.5930) (-0.2000, -41.0800) 0.9300
op buffer (-1.2000, -41.5930) (-0.2700, -41.0800) 0.9300
op buffer (-1.1300, -41.2250) (-0.2700, -41.0800) 0.8600
op_buffer (0.2700, -41.5930) (1.2000, -41.0800) 0.9300
op_buffer (0.2000, -41.5930) (1.1300, -41.0800) 0.9300
op buffer (0.2700, -41.2250) (1.1300, -41.0800) 0.8600
op buffer (1.6700, -41.5930) (2.6000, -41.0800) 0.9300
op buffer (1.6000, -41.5930) (2.5300, -41.0800) 0.9300
op_buffer (1.6700, -41.2250) (2.5300, -41.0800) 0.8600
op buffer (3.0700, -41.5930) (4.0000, -41.0800) 0.9300
op buffer (3.0000, -41.5930) (3.9300, -41.0800) 0.9300
op buffer (3.0700, -41.2250) (3.9300, -41.0800) 0.8600
```

HRES.4 : Minimum RESISTOR overlap of Poly2 resistor = 0.4

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:3887:enclose

Structure (lower left x, y) (upper right x, y)

```
op buffer (-4.3310, -72.9400) (-3.5990, -72.7150)
op_buffer (-4.3310, -41.2250) (-3.5990, -41.0000)
op buffer (-4.3220, -72.9400) (-2.6780, -72.8600)
op buffer (-4.3220, -41.0800) (-2.6780, -41.0000)
op buffer (-3.4010, -72.9400) (-2.6690, -72.7150)
op buffer (-3.4010, -41.2250) (-2.6690, -41.0000)
op buffer (-2.9310, -72.9400) (-2.1990, -72.7150)
op buffer (-2.9310, -41.2250) (-2.1990, -41.0000)
op buffer (-2.9220, -72.9400) (-1.2780, -72.8600)
op buffer (-2.9220, -41.0800) (-1.2780, -41.0000)
op buffer (-2.0010, -72.9400) (-1.2690, -72.7150)
op_buffer (-2.0010, -41.2250) (-1.2690, -41.0000)
op buffer (-1.5310, -72.9400) (-0.7990, -72.7150)
op_buffer (-1.5310, -41.2250) (-0.7990, -41.0000)
op buffer (-1.5220, -72.9400) (0.1220, -72.8600)
op_buffer (-1.5220, -41.0800) (0.1220, -41.0000)
op_buffer (-0.6010, -72.9400) (0.1310, -72.7150)
op buffer (-0.6010, -41.2250) (0.1310, -41.0000)
op_buffer (-0.1310, -72.9400) (0.6010, -72.7150)
op buffer (-0.1310, -41.2250) (0.6010, -41.0000)
op buffer (-0.1220, -72.9400) (1.5220, -72.8600)
op_buffer (-0.1220, -41.0800) (1.5220, -41.0000)
op buffer (0.7990, -72.9400) (1.5310, -72.7150)
op buffer (0.7990, -41.2250) (1.5310, -41.0000)
op_buffer (1.2690, -72.9400) (2.0010, -72.7150)
op buffer (1.2690, -41.2250) (2.0010, -41.0000)
op_buffer (1.2780, -72.9400) (2.9220, -72.8600)
op buffer (1.2780, -41.0800) (2.9220, -41.0000)
op buffer (2.1990, -72.9400) (2.9310, -72.7150)
op_buffer (2.1990, -41.2250) (2.9310, -41.0000)
op buffer (2.6690, -72.9400) (3.4010, -72.7150)
op buffer (2.6690, -41.2250) (3.4010, -41.0000)
op_buffer (2.6780, -72.9400) (4.3220, -72.8600)
op buffer (2.6780, -41.0800) (4.3220, -41.0000)
op buffer (3.5990, -72.9400) (4.3310, -72.7150)
op buffer (3.5990, -41.2250) (4.3310, -41.0000)
```

HDES 7: Minimum Polya avarian of contact an Polya register

HRES.7 : Minimum Pplus overlap of contact on Poly2 resistor = 0.2

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu drc.rs:3897:enclose

```
Structure (lower left x, y) (upper right x, y)
```

op buffer (-3.9920, -72.9400) (-3.5080, -72.7900) op buffer (-3.9920, -59.1200) (-3.5080, -58.9700) op buffer (-3.9920, -54.9700) (-3.5080, -54.8200) op buffer (-3.9920, -41.1500) (-3.5080, -41.0000) op buffer (-3.4920, -72.9400) (-3.0080, -72.7900) op buffer (-3.4920, -59.1200) (-3.0080, -58.9700) op buffer (-3.4920, -54.9700) (-3.0080, -54.8200) op buffer (-3.4920, -41.1500) (-3.0080, -41.0000) op_buffer (-2.5920, -72.9400) (-2.1080, -72.7900) op buffer (-2.5920, -59.1200) (-2.1080, -58.9700) op_buffer (-2.5920, -54.9700) (-2.1080, -54.8200) op buffer (-2.5920, -41.1500) (-2.1080, -41.0000) op_buffer (-2.0920, -72.9400) (-1.6080, -72.7900) op_buffer (-2.0920, -59.1200) (-1.6080, -58.9700) op buffer (-2.0920, -54.9700) (-1.6080, -54.8200) op_buffer (-2.0920, -41.1500) (-1.6080, -41.0000) op buffer (-1.1920, -72.9400) (-0.7080, -72.7900) op buffer (-1.1920, -59.1200) (-0.7080, -58.9700) op_buffer (-1.1920, -54.9700) (-0.7080, -54.8200) op buffer (-1.1920, -41.1500) (-0.7080, -41.0000) op buffer (-0.6920, -72.9400) (-0.2080, -72.7900) op_buffer (-0.6920, -59.1200) (-0.2080, -58.9700) op buffer (-0.6920, -54.9700) (-0.2080, -54.8200) op_buffer (-0.6920, -41.1500) (-0.2080, -41.0000) op buffer (0.2080, -72.9400) (0.6920, -72.7900) op buffer (0.2080, -59.1200) (0.6920, -58.9700) op_buffer (0.2080, -54.9700) (0.6920, -54.8200) op buffer (0.2080, -41.1500) (0.6920, -41.0000) op buffer (0.7080, -72.9400) (1.1920, -72.7900) op_buffer (0.7080, -59.1200) (1.1920, -58.9700) op buffer (0.7080, -54.9700) (1.1920, -54.8200) op_buffer (0.7080, -41.1500) (1.1920, -41.0000) op buffer (1.6080, -72.9400) (2.0920, -72.7900) op_buffer (1.6080, -59.1200) (2.0920, -58.9700) op buffer (1.6080, -54.9700) (2.0920, -54.8200) op_buffer (1.6080, -41.1500) (2.0920, -41.0000) op buffer (2.1080, -72.9400) (2.5920, -72.7900) op buffer (2.1080, -59.1200) (2.5920, -58.9700) op buffer (2.1080, -54.9700) (2.5920, -54.8200) op buffer (2.1080, -41.1500) (2.5920, -41.0000) op buffer (3.0080, -72.9400) (3.4920, -72.7900)

```
op buffer (3.0080, -59.1200) (3.4920, -58.9700)
op_buffer (3.0080, -54.9700) (3.4920, -54.8200)
op buffer (3.0080, -41.1500) (3.4920, -41.0000)
op buffer (3.5080, -72.9400) (3.9920, -72.7900)
op buffer (3.5080, -59.1200) (3.9920, -58.9700)
op buffer (3.5080, -54.9700) (3.9920, -54.8200)
op buffer (3.5080, -41.1500) (3.9920, -41.0000)
HVNESD.13(b): Max. at least one or nearest source contact to gate
edge space (SCGS) <= 1
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu_drc.rs:7058:not_interacting
-----
Structure
           (lower left x, y) (upper right x, y)
_____
comp018green out drv nleg 4T$1 (10.5500, 2.6600) (11.5500, 40.6600)
comp018green out drv nleg 4T$1 (1.0300, 2.6600)
                                              (2.0300, 40.6600)
HVNESD.8(c): Max. at least one or nearest drain contact to gate edge
space (DCGS) <= 4
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu_drc.rs:7038:not_interacting
-----
Structure (lower left x, y) (upper right x, y)
-----
gf180mcu fd io bi t$1 (59.1100, 75.6900) (63.1100, 113.6900)
gf180mcu_fd_io__bi_t$1 (46.8900, 75.6900) (51.3700, 113.6900)
gf180mcu fd io bi t$1 (35.1500, 75.6900) (39.6300, 113.6900)
gf180mcu_fd_io__bi_t$1 (23.4100, 75.6900) (27.8900, 113.6900)
gf180mcu fd io bi t$1 (11.6700, 75.6900) (15.6700, 113.6900)
HVPESD.11: Source COMP must enclose by LVS_Source
```

```
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu_drc.rs:7139:not
(lower left x, y) (upper right x, y)
Structure
-----
comp018green out drv nleg 4T$1 (1.0300, 2.6600) (11.5500, 40.6600)
IO.0 : Guidelines : To flag I/O latch-up related violation:
(a) Non well tap COMP directly connected to PAD is recommended to
be marked by 'Latchup MK' layer
(b) Min/max Latchup MK layer overlap of COMP (directly connected to
Pad) = 0.0
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:5629:xor
Structure (lower left x, y) (upper right x, y)
______
trackA (2049.9500, 2003.8300) (2054.0100, 2006.8300)
trackA (2054.7500, 2003.8300) (2058.8100, 2006.8300)
trackA (2059.5500, 2003.8300) (2063.6100, 2006.8300)
trackA (2064.3500, 2003.8300) (2068.4100, 2006.8300)
op buffer (-37.6550, -36.7850) (-35.8750, -31.4850)
op_buffer (-37.6550, -22.5200) (-35.8750, -10.5200)
op buffer (-37.6550, 0.1400) (-35.8750, 0.6400)
op buffer (-37.6550, 9.6200) (-35.8750, 10.7500)
op_buffer (-35.1250, -36.7850) (-33.3450, -31.4850)
op buffer (-35.1250, -22.5200) (-33.3450, -10.5200)
op buffer (-35.1250, 0.1400) (-33.3450, 0.6400)
op buffer (-35.1250, 9.6200) (-33.3450, 10.7500)
op buffer (-32.5950, -36.7850) (-30.8150, -31.4850)
op buffer (-32.5950, -22.5200) (-30.8150, -10.5200)
op buffer (-32.5950, 0.1400) (-30.8150, 0.6400)
op buffer (-32.5950, 9.6200) (-30.8150, 10.7500)
op buffer (-30.0650, -36.7850) (-28.2850, -31.4850)
op_buffer (-30.0650, -22.5200) (-28.2850, -10.5200)
op buffer (-30.0650, 0.1400) (-28.2850, 0.6400)
op buffer (-30.0650, 9.6200) (-28.2850, 10.7500)
op buffer (-27.5350, -36.7850) (-25.7550, -31.4850)
op buffer (-27.5350, -22.5200) (-25.7550, -10.5200)
op buffer (-25.0050, -36.7850) (-23.2250, -31.4850)
```

```
op_buffer (-25.0050, -22.5200) (-23.2250, -10.5200)
op_buffer (-22.4750, -36.7850) (-20.6950, -31.4850)
op buffer (-22.4750, -22.5200) (-20.6950, -10.5200)
op buffer (-19.9450, -36.7850) (-18.1650, -31.4850)
op buffer (-19.9450, -22.5200) (-18.1650, -10.5200)
IO.1 a2: For LV and MV
It should also be directly surrounded by an Nwell guard ring
(Non broken NCOMP ring inside Nwell).
Nwell guard ring shall be connected to the most positive supply.
Max space of Nwell guard ring to the NCOMP in Psub directly
connected to I/O pad = 15
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:5670:edge size
Structure (lower left x, y) (upper right x, y)
trackA (2049.9450, 2003.8250) (2054.0150, 2006.8350)
trackA (2054.7450, 2003.8250) (2058.8150, 2006.8350)
trackA (2059.5450, 2003.8250) (2063.6150, 2006.8350)
trackA (2064.3450, 2003.8250) (2068.4150, 2006.8350)
op buffer (-37.6600, -36.7900) (-35.8700, -31.4800)
op_buffer (-37.6600, 0.1350) (-35.8700, 0.6450)
op buffer (-35.1300, -36.7900) (-33.3400, -31.4800)
op buffer (-35.1300, 0.1350) (-33.3400, 0.6450)
op_buffer (-32.6000, -36.7900) (-30.8100, -31.4800)
op_buffer (-32.6000, 0.1350) (-30.8100, 0.6450)
op buffer (-30.0700, -36.7900) (-28.2800, -31.4800)
op_buffer (-30.0700, 0.1350) (-28.2800, 0.6450)
op buffer (-27.5400, -36.7900) (-25.7500, -31.4800)
op_buffer (-25.0100, -36.7900) (-23.2200, -31.4800)
op buffer (-22.4800, -36.7900) (-20.6900, -31.4800)
op_buffer (-19.9500, -36.7900) (-18.1600, -31.4800)
```

.....

IO.1_b : Within 15um from the edge of the NCOMP connected to I/O pad (marked by Latchup_MK):

Max Nwell tap distance to PCOMP inside Nwell <= 2 (irrespective of its direct connection to Pad)

.....

```
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:5684:wide
Structure (lower left x, y) (upper right x, y)
-----
op buffer (-38.9450, -22.5250) (-38.5100, -16.5695)
op buffer (-38.9450, -14.7755) (-38.5100, -10.5150)
op buffer (-38.9450, 9.6150) (-38.5100, 10.7550)
op buffer (-37.6600, -22.5250) (-35.8700, -16.4850)
op_buffer (-37.6600, -14.8600) (-35.8700, -10.5150)
op buffer (-37.6600, 9.6150) (-35.8700, 10.7550)
op_buffer (-35.1300, -22.5250) (-33.3400, -16.4850)
op buffer (-35.1300, -14.8600) (-33.3400, -10.5150)
op_buffer (-35.1300, 9.6150) (-33.3400, 10.7550)
op_buffer (-32.6000, -22.5250) (-30.8100, -16.4850)
op buffer (-32.6000, -14.8600) (-30.8100, -10.5150)
op buffer (-32.6000, 9.6150) (-30.8100, 10.7550)
op buffer (-30.0700, -22.5250) (-28.2800, -16.4850)
op buffer (-30.0700, -14.8600) (-28.2800, -10.5150)
op_buffer (-30.0700, 9.6150) (-28.2800, 10.7550)
op_buffer (-27.5400, -22.5250) (-25.7500, -16.4850)
op buffer (-27.5400, -14.7860) (-25.7500, -10.5150)
op_buffer (-27.4300, 9.6150) (-26.9950, 10.7550)
op buffer (-25.0100, -22.5250) (-23.2200, -16.4850)
op_buffer (-25.0100, -14.4645) (-23.2200, -10.5150)
op buffer (-22.4800, -22.5250) (-20.6900, -16.4850)
op buffer (-22.4800, -13.6810) (-20.6900, -10.5150)
op_buffer (-19.9500, -22.5250) (-18.1600, -16.4850)
op_buffer (-19.9500, -12.3265) (-18.1600, -10.5150)
op buffer (-17.3100, -22.5250) (-16.8750, -16.5695)
```

IO.3 a2: For LV and MV

It should also be directly surrounded by PCOMP guard ring outside Nwell.

PCOMP guardring shall be connected to the lowest potential.

Max space of guard ring PCOMP to the PCOMP in Nwell directly connected to the I/O pad = 15

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:5734:edge_size

```
Structure (lower left x, y) (upper right x, y)
_____
op buffer (-37.6600, -22.5250) (-35.8700, -10.5150)
op buffer (-37.6600, 9.6150) (-35.8700, 10.7550)
op buffer (-35.1300, -22.5250) (-33.3400, -10.5150)
op buffer (-35.1300, 9.6150) (-33.3400, 10.7550)
op buffer (-32.6000, -22.5250) (-30.8100, -10.5150)
op buffer (-32.6000, 9.6150) (-30.8100, 10.7550)
op buffer (-30.0700, -22.5250) (-28.2800, -10.5150)
op buffer (-30.0700, 9.6150) (-28.2800, 10.7550)
op buffer (-27.5400, -22.5250) (-25.7500, -10.5150)
op buffer (-25.0100, -22.5250) (-23.2200, -10.5150)
op buffer (-22.4800, -22.5250) (-20.6900, -10.5150)
op buffer (-19.9500, -22.5250) (-18.1600, -10.5150)
IO.3 b: For LV and MV
Within 10um from the edge of the PCOMP connected to I/O Pad (marked
by Latchup MK):
Max P substrate tap distance to NCOMP outside Nwell <= 5.0 (irrespective
of its direct connection to Pad)
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:5746:wide
Structure (lower left x, y) (upper right x, y)
-----
op_buffer (-35.8800, -32.5200) (-35.8700, -32.0250)
op buffer (-35.1300, -32.5200) (-35.1200, -32.0250)
op_buffer (-33.3500, -32.5200) (-33.3400, -32.0250)
op buffer (-32.6000, -32.5200) (-32.5900, -32.0250)
op_buffer (-30.8200, -32.5200) (-30.8100, -32.0250)
op buffer (-30.0700, -32.5200) (-30.0600, -32.0250)
op_buffer (-28.2900, -32.5200) (-28.2800, -32.0250)
op buffer (-27.5400, -32.5200) (-27.5300, -32.0250)
op_buffer (-25.7600, -32.5200) (-25.7500, -32.0250)
op buffer (-25.0100, -32.5200) (-25.0000, -32.0250)
op buffer (-23.2300, -32.5200) (-23.2200, -32.0250)
op buffer (-22.4800, -32.5200) (-22.4700, -32.0250)
op buffer (-20.7000, -32.5200) (-20.6900, -32.0250)
op_buffer (-19.9500, -32.5200) (-19.9400, -32.0250)
```

```
LPW.12 : LVPWELL cannot overlap with Nwell
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:2021:and
-----
Structure (lower left x, y) (upper right x, y)
_____
transformed 9f8db47f (-18.0350, -7.9850) (18.0350, 7.9850)
transformed 729ded33 (-18.0350, -7.9850) (18.0350, 7.9850)
LU.3a MV LU.3b MV LU.3c MV: Max. Psub tap outside (DNWELL and YMTP MK)
space to any point in the boundary of Ncomp outside Nwell/DNWELL =
15 (MV)
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:5418:coincident edge
______
Structure (lower left x, y) (upper right x, y)
______
trackA (1598.8600, 2332.4700) (1599.1200, 2332.4700)
trackA (1599.1200, 2330.2700) (1599.1200, 2332.4700)
trackA (1598.8600, 2330.2700) (1599.1200, 2330.2700)
trackA (1598.8600, 2337.7000) (1599.1200, 2337.7000)
trackA (1599.1200, 2335.5000) (1599.1200, 2337.7000)
trackA (1598.8600, 2335.5000) (1599.1200, 2335.5000)
trackA (1602.4100, 2330.2700) (1602.6700, 2330.2700)
trackA (1602.4100, 2330.2700) (1602.4100, 2332.4700)
trackA
      (1602.4100, 2332.4700) (1602.6700, 2332.4700)
trackA
      (1602.4100, 2335.5000) (1602.6700, 2335.5000)
trackA
       (1602.4100, 2335.5000) (1602.4100, 2337.7000)
trackA
       (1602.4100, 2337.7000) (1602.6700, 2337.7000)
trackA
      (1588.3700, 2147.0100) (1589.7300, 2147.0100)
trackA
       (1589.7300, 2145.2100) (1589.7300, 2147.0100)
trackA
      (1588.3700, 2145.2100) (1589.7300, 2145.2100)
trackA (1588.3700, 2151.8400) (1589.7300, 2151.8400)
trackA
      (1589.7300, 2150.0400) (1589.7300, 2151.8400)
trackA (1588.3700, 2150.0400) (1589.7300, 2150.0400)
```

```
trackA
        (1588.3700, 2156.6700) (1589.7300, 2156.6700)
trackA
        (1589.7300, 2154.8700) (1589.7300, 2156.6700)
trackA
        (1588.3700, 2154.8700) (1589.7300, 2154.8700)
trackA
        (1588.3700, 2161.5000) (1589.7300, 2161.5000)
trackA
        (1589.7300, 2159.7000) (1589.7300, 2161.5000)
trackA
        (1588.3700, 2159.7000) (1589.7300, 2159.7000)
trackA
        (1588.8100, 2092.2900) (1589.0700, 2092.2900)
trackA
        (1589.0700, 2090.0900) (1589.0700, 2092.2900)
trackA
        (1588.8100, 2090.0900) (1589.0700, 2090.0900)
trackA
        (1588.8100, 2097.5200) (1589.0700, 2097.5200)
trackA
        (1589.0700, 2095.3200) (1589.0700, 2097.5200)
trackA
        (1588.8100, 2095.3200) (1589.0700, 2095.3200)
trackA
        (1592.3600, 2090.0900) (1592.6200, 2090.0900)
trackA
        (1592.3600, 2090.0900) (1592.3600, 2092.2900)
trackA
        (1592.3600, 2092.2900) (1592.6200, 2092.2900)
trackA
        (1592.3600, 2095.3200) (1592.6200, 2095.3200)
trackA
        (1592.3600, 2095.3200) (1592.3600, 2097.5200)
trackA
        (1592.3600, 2097.5200) (1592.6200, 2097.5200)
trackA
        (1593.0200, 2145.2100) (1594.3800, 2145.2100)
trackA
        (1593.0200, 2145.2100) (1593.0200, 2147.0100)
trackA
        (1593.0200, 2147.0100) (1594.3800, 2147.0100)
trackA
        (1593.0200, 2150.0400) (1594.3800, 2150.0400)
trackA
        (1593.0200, 2150.0400) (1593.0200, 2151.8400)
trackA
        (1593.0200, 2151.8400) (1594.3800, 2151.8400)
trackA
        (1593.0200, 2154.8700) (1594.3800, 2154.8700)
trackA
        (1593.0200, 2154.8700) (1593.0200, 2156.6700)
trackA
        (1593.0200, 2156.6700) (1594.3800, 2156.6700)
trackA
        (1593.0200, 2159.7000) (1594.3800, 2159.7000)
trackA
        (1593.0200, 2159.7000) (1593.0200, 2161.5000)
trackA (1593.0200, 2161.5000) (1594.3800, 2161.5000)
LU.4a LV: Max. Nwell tap outside DNWELL space to any point in the
boundary of Pcomp inside Nwell = 50 (LV)
For Nwell to Ncomp space outside DNWELL >= 2.0um
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:5443:coincident edge
               (lower left x, y) (upper right x, y)
Structure
transformed 9f8db47f (-16.3900, 0.5750) (-14.6500, 0.5750)
```

```
transformed 9f8db47f (-14.6500, -4.4250) (-14.6500, 0.5750)
transformed_9f8db47f (-16.3900, -4.4250) (-14.6500, -4.4250)
transformed 9f8db47f (-16.3900, -4.4250) (-16.3900, 0.5750)
transformed 9f8db47f (-13.7900, 0.5750) (-7.4500, 0.5750)
transformed 9f8db47f (-7.4500, -4.4250) (-7.4500, 0.5750)
transformed 9f8db47f (-13.7900, -4.4250) (-7.4500, -4.4250)
transformed 9f8db47f (-13.7900, -4.4250) (-13.7900, 0.5750)
transformed 9f8db47f (-6.7100, 0.5750) (-0.3700, 0.5750)
transformed 9f8db47f (-0.3700, -4.4250) (-0.3700, 0.5750)
transformed 9f8db47f (-6.7100, -4.4250) (-0.3700, -4.4250)
transformed 9f8db47f (-6.7100, -4.4250) (-6.7100, 0.5750)
transformed 9f8db47f (0.3700, 0.5750) (6.7100, 0.5750)
transformed 9f8db47f (6.7100, -4.4250) (6.7100, 0.5750)
transformed 9f8db47f (0.3700, -4.4250) (6.7100, -4.4250)
transformed 9f8db47f (0.3700, -4.4250) (0.3700, 0.5750)
transformed 9f8db47f (7.4500, 0.5750) (13.7900, 0.5750)
transformed 9f8db47f (13.7900, -4.4250) (13.7900, 0.5750)
transformed 9f8db47f (7.4500, -4.4250) (13.7900, -4.4250)
transformed 9f8db47f (7.4500, -4.4250) (7.4500, 0.5750)
transformed 9f8db47f (14.6500, 0.5750) (16.3900, 0.5750)
transformed 9f8db47f (16.3900, -4.4250) (16.3900, 0.5750)
transformed 9f8db47f (14.6500, -4.4250) (16.3900, -4.4250)
transformed 9f8db47f (14.6500, -4.4250) (14.6500, 0.5750)
transformed 729ded33 (-16.3900, 0.5750) (-14.6500, 0.5750)
transformed 729ded33 (-14.6500, -4.4250) (-14.6500, 0.5750)
transformed 729ded33 (-16.3900, -4.4250) (-14.6500, -4.4250)
transformed 729ded33 (-16.3900, -4.4250) (-16.3900, 0.5750)
transformed 729ded33 (-13.7900, 0.5750) (-7.4500, 0.5750)
transformed 729ded33 (-7.4500, -4.4250) (-7.4500, 0.5750)
transformed_729ded33 (-13.7900, -4.4250) (-7.4500, -4.4250)
transformed 729ded33 (-13.7900, -4.4250) (-13.7900, 0.5750)
transformed 729ded33 (-6.7100, 0.5750) (-0.3700, 0.5750)
transformed 729ded33 (-0.3700, -4.4250) (-0.3700, 0.5750)
transformed 729ded33 (-6.7100, -4.4250) (-0.3700, -4.4250)
transformed 729ded33 (-6.7100, -4.4250) (-6.7100, 0.5750)
transformed 729ded33 (0.3700, 0.5750) (6.7100, 0.5750)
transformed 729ded33 (6.7100, -4.4250) (6.7100, 0.5750)
transformed 729ded33 (0.3700, -4.4250) (6.7100, -4.4250)
transformed 729ded33 (0.3700, -4.4250) (0.3700, 0.5750)
transformed 729ded33 (7.4500, 0.5750) (13.7900, 0.5750)
transformed 729ded33 (13.7900, -4.4250) (13.7900, 0.5750)
transformed 729ded33 (7.4500, -4.4250) (13.7900, -4.4250)
transformed 729ded33 (7.4500, -4.4250) (7.4500, 0.5750)
transformed 729ded33 (14.6500, 0.5750) (16.3900, 0.5750)
```

```
transformed 729ded33 (16.3900, -4.4250) (16.3900, 0.5750)
transformed_729ded33 (14.6500, -4.4250) (16.3900, -4.4250)
transformed 729ded33 (14.6500, -4.4250) (14.6500, 0.5750)
LU.4a MV LU.4b MV LU.4c MV: Max. Nwell tap outside DNWELL space to
any point in the boundary of Pcomp inside Nwell = 15 (MV)
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:5481:coincident edge
Structure (lower left x, y) (upper right x, y)
------
       (1787.7300, 2581.2850) (1789.1100, 2581.2850)
trackA
       (1789.1100, 2580.3850) (1789.1100, 2581.2850)
trackA
trackA
       (1787.7300, 2580.3850) (1789.1100, 2580.3850)
trackA
       (1787.7300, 2580.3850) (1787.7300, 2581.2850)
trackA
       (1796.7650, 2581.3050) (1798.1450, 2581.3050)
trackA
       (1798.1450, 2580.4050) (1798.1450, 2581.3050)
trackA
       (1796.7650, 2580.4050) (1798.1450, 2580.4050)
trackA
       (1796.7650, 2580.4050) (1796.7650, 2581.3050)
trackA
       (1621.1550, 2209.5850) (1625.0950, 2209.5850)
trackA
       (1621.1550, 2211.5850) (1625.0950, 2211.5850)
trackA
       (1621.1550, 2214.6150) (1625.0950, 2214.6150)
trackA
       (1621.1550, 2216.6150) (1625.0950, 2216.6150)
trackA
       (1621.1550, 2219.6450) (1625.0950, 2219.6450)
trackA
       (1621.1550, 2221.6450) (1625.0950, 2221.6450)
trackA
       (1621.1550, 2224.6750) (1625.0950, 2224.6750)
trackA
       (1621.1550, 2226.6750) (1625.0950, 2226.6750)
trackA
       (1621.1550, 2229.7050) (1625.0950, 2229.7050)
trackA
       (1621.1550, 2231.7050) (1625.0950, 2231.7050)
trackA
       (1621.1550, 2234.7350) (1625.0950, 2234.7350)
trackA
       (1621.1550, 2236.7350) (1625.0950, 2236.7350)
       (1621.1550, 2239.7650) (1625.0950, 2239.7650)
trackA
trackA
       (1621.1550, 2241.7650) (1625.0950, 2241.7650)
       (1621.1550, 2244.7950) (1625.0950, 2244.7950)
trackA
trackA
       (1621.1550, 2246.7950) (1625.0950, 2246.7950)
       (1621.1550, 2249.8250) (1625.0950, 2249.8250)
trackA
trackA
       (1621.1550, 2251.8250) (1625.0950, 2251.8250)
trackA
       (1621.1550, 2254.8550) (1625.0950, 2254.8550)
trackA
       (1621.1550, 2256.8550) (1625.0950, 2256.8550)
```

(1621.1550, 2259.8850) (1625.0950, 2259.8850)

trackA

```
trackA
        (1621.1550, 2261.8850) (1625.0950, 2261.8850)
trackA
        (1621.1550, 2264.9150) (1625.0950, 2264.9150)
trackA
        (1621.1550, 2266.9150) (1625.0950, 2266.9150)
trackA
        (1630.7400, 2136.7500) (1635.8100, 2136.7500)
trackA
        (1635.8100, 2134.7500) (1635.8100, 2136.7500)
trackA
        (1630.7400, 2134.7500) (1635.8100, 2134.7500)
trackA
        (1630.7400, 2141.7800) (1635.8100, 2141.7800)
trackA
        (1635.8100, 2139.7800) (1635.8100, 2141.7800)
trackA
        (1630.7400, 2139.7800) (1635.8100, 2139.7800)
trackA
        (1630.7400, 2146.8100) (1635.8100, 2146.8100)
trackA
        (1635.8100, 2144.8100) (1635.8100, 2146.8100)
trackA
        (1630.7400, 2144.8100) (1635.8100, 2144.8100)
trackA
        (1630.7400, 2151.8400) (1635.8100, 2151.8400)
trackA
        (1635.8100, 2149.8400) (1635.8100, 2151.8400)
        (1630.7400, 2149.8400) (1635.8100, 2149.8400)
trackA
trackA
        (1630.7400, 2156.8700) (1635.8100, 2156.8700)
trackA
        (1635.8100, 2154.8700) (1635.8100, 2156.8700)
trackA
        (1630.7400, 2154.8700) (1635.8100, 2154.8700)
        (1630.7400, 2161.9000) (1635.8100, 2161.9000)
trackA
        (1635.8100, 2159.9000) (1635.8100, 2161.9000)
trackA
trackA
        (1630.7400, 2159.9000) (1635.8100, 2159.9000)
trackA
        (1630.7400, 2166.9300) (1635.8100, 2166.9300)
trackA
        (1635.8100, 2164.9300) (1635.8100, 2166.9300)
        (1630.7400, 2164.9300) (1635.8100, 2164.9300)
trackA
trackA
        (1630.7400, 2171.9600) (1635.8100, 2171.9600)
trackA
        (1635.8100, 2169.9600) (1635.8100, 2171.9600)
trackA
        (1630.7400, 2169.9600) (1635.8100, 2169.9600)
trackA
        (1639.1100, 2134.7500) (1644.1800, 2134.7500)
trackA
        (1639.1100, 2134.7500) (1639.1100, 2136.7500)
        (1639.1100, 2136.7500) (1644.1800, 2136.7500)
trackA
trackA
        (1639.1100, 2139.7800) (1644.1800, 2139.7800)
trackA
        (1639.1100, 2139.7800) (1639.1100, 2141.7800)
trackA
        (1639.1100, 2141.7800) (1644.1800, 2141.7800)
trackA
        (1639.1100, 2144.8100) (1644.1800, 2144.8100)
trackA
        (1639.1100, 2144.8100) (1639.1100, 2146.8100)
trackA
        (1639.1100, 2146.8100) (1644.1800, 2146.8100)
trackA
        (1639.1100, 2149.8400) (1644.1800, 2149.8400)
trackA
        (1639.1100, 2149.8400) (1639.1100, 2151.8400)
trackA
        (1639.1100, 2151.8400) (1644.1800, 2151.8400)
trackA
        (1639.1100, 2154.8700) (1644.1800, 2154.8700)
trackA
        (1639.1100, 2154.8700) (1639.1100, 2156.8700)
trackA
        (1639.1100, 2156.8700) (1644.1800, 2156.8700)
trackA
        (1639.1100, 2159.9000) (1644.1800, 2159.9000)
trackA
        (1639.1100, 2159.9000) (1639.1100, 2161.9000)
```

```
trackA (1639.1100, 2161.9000) (1644.1800, 2161.9000) trackA (1639.1100, 2164.9300) (1644.1800, 2164.9300) trackA (1639.1100, 2164.9300) (1639.1100, 2166.9300) trackA (1639.1100, 2166.9300) (1644.1800, 2166.9300) trackA (1639.1100, 2169.9600) (1644.1800, 2169.9600) trackA (1639.1100, 2169.9600) (1639.1100, 2171.9600) trackA (1639.1100, 2171.9600) (1644.1800, 2171.9600)
```

```
M1.1: Metal1 minimum width: 0.23
```

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:1808:internal1

WARNING: The error count of 128 for this check exceeds the limit set in the runset. Details only available for the first 100.

```
Structure (lower left x, y) (upper right x, y) Distance
```

trackA (1394.2300, 2367.9750) (1394.3950, 2368.1350) 0.1725 (1394.2300, 2367.9750) (1394.2950, 2368.1960) 0.1725 trackA (1394.1300, 2367.9750) (1394.2950, 2368.1350) 0.1725 trackA trackA (1394.2300, 2367.9140) (1394.2950, 2368.1350) 0.1725 trackA (1290.5200, 2388.3750) (1290.6800, 2388.5400) 0.1605 trackA (1290.4500, 2388.3750) (1290.6800, 2388.3850) 0.1605 (1290.5200, 2388.2200) (1290.6800, 2388.3850) 0.1605 trackA trackA (1290.5200, 2388.3750) (1290.7500, 2388.3850) 0.1605 (1295.5200, 2388.3750) (1295.6800, 2388.5400) 0.1605 trackA trackA (1295.4500, 2388.3750) (1295.6800, 2388.3850) 0.1605 (1295.5200, 2388.2200) (1295.6800, 2388.3850) 0.1605 trackA trackA (1295.5200, 2388.3750) (1295.7500, 2388.3850) 0.1605 trackA (1300.5200, 2388.3750) (1300.6800, 2388.5400) 0.1605 trackA (1300.4500, 2388.3750) (1300.6800, 2388.3850) 0.1605 trackA (1300.5200, 2388.2200) (1300.6800, 2388.3850) 0.1605 trackA (1300.5200, 2388.3750) (1300.7500, 2388.3850) 0.1605 trackA (1394.2300, 2389.7950) (1394.4420, 2389.8850) 0.1110 trackA (1394.2300, 2389.7950) (1394.2950, 2390.0160) 0.1110 trackA (1394.0830, 2389.7950) (1394.2950, 2389.8850) 0.1110 trackA (1394.2300, 2389.6640) (1394.2950, 2389.8850) 0.1110 trackA (1290.5200, 2394.3450) (1290.6800, 2394.5100) 0.1605 trackA (1290.4500, 2394.3450) (1290.6800, 2394.3550) 0.1605 trackA (1290.5200, 2394.1900) (1290.6800, 2394.3550) 0.1605

```
trackA
        (1290.5200, 2394.3450) (1290.7500, 2394.3550) 0.1605
trackA
        (1290.5200, 2400.3150) (1290.6800, 2400.4800) 0.1605
        (1290.4500, 2400.3150) (1290.6800, 2400.3250) 0.1605
trackA
trackA
        (1290.5200, 2400.1600) (1290.6800, 2400.3250) 0.1605
trackA
        (1290.5200, 2400.3150) (1290.7500, 2400.3250) 0.1605
trackA
        (1295.5200, 2394.3450) (1295.6800, 2394.5100) 0.1605
trackA
        (1295.4500, 2394.3450) (1295.6800, 2394.3550) 0.1605
trackA
        (1295.5200, 2394.1900) (1295.6800, 2394.3550) 0.1605
trackA
        (1295.5200, 2394.3450) (1295.7500, 2394.3550) 0.1605
trackA
        (1300.5200, 2394.3450) (1300.6800, 2394.5100) 0.1605
trackA
        (1300.4500, 2394.3450) (1300.6800, 2394.3550) 0.1605
trackA
        (1300.5200, 2394.1900) (1300.6800, 2394.3550) 0.1605
trackA
        (1300.5200, 2394.3450) (1300.7500, 2394.3550) 0.1605
trackA
        (1295.5200, 2400.3150) (1295.6800, 2400.4800) 0.1605
trackA
        (1295.4500, 2400.3150) (1295.6800, 2400.3250) 0.1605
trackA
        (1295.5200, 2400.1600) (1295.6800, 2400.3250) 0.1605
trackA
        (1295.5200, 2400.3150) (1295.7500, 2400.3250) 0.1605
trackA
        (1300.5200, 2400.3150) (1300.6800, 2400.4800) 0.1605
trackA
        (1300.4500, 2400.3150) (1300.6800, 2400.3250) 0.1605
trackA
        (1300.5200, 2400.1600) (1300.6800, 2400.3250) 0.1605
        (1300.5200, 2400.3150) (1300.7500, 2400.3250) 0.1605
trackA
        (1313.1100, 2400.3150) (1313.1600, 2400.5390) 0.0510
trackA
        (1312.9300, 2400.3150) (1313.1600, 2400.3250) 0.0510
trackA
trackA
        (1313.1100, 2400.1010) (1313.1600, 2400.3250) 0.0510
trackA
        (1313.1100, 2400.3150) (1313.3400, 2400.3250) 0.0510
trackA
        (1319.8600, 2400.3150) (1319.9100, 2400.5390) 0.0510
        (1319.6800, 2400.3150) (1319.9100, 2400.3250) 0.0510
trackA
trackA
        (1319.8600, 2400.1010) (1319.9100, 2400.3250) 0.0510
        (1319.8600, 2400.3150) (1320.0900, 2400.3250) 0.0510
trackA
trackA
        (1326.6100, 2400.3150) (1326.6600, 2400.5390) 0.0510
trackA
        (1326.4300, 2400.3150) (1326.6600, 2400.3250) 0.0510
trackA
        (1326.6100, 2400.1010) (1326.6600, 2400.3250) 0.0510
trackA
        (1326.6100, 2400.3150) (1326.8400, 2400.3250) 0.0510
trackA
        (1290.5200, 2406.2850) (1290.6800, 2406.4500) 0.1605
trackA
        (1290.4500, 2406.2850) (1290.6800, 2406.2950) 0.1605
trackA
        (1290.5200, 2406.1300) (1290.6800, 2406.2950) 0.1605
trackA
        (1290.5200, 2406.2850) (1290.7500, 2406.2950) 0.1605
trackA
        (1290.5200, 2412.2550) (1290.6800, 2412.4200) 0.1605
trackA
        (1290.4500, 2412.2550) (1290.6800, 2412.2650) 0.1605
trackA
        (1290.5200, 2412.1000) (1290.6800, 2412.2650) 0.1605
trackA
        (1290.5200, 2412.2550) (1290.7500, 2412.2650) 0.1605
trackA
        (1295.5200, 2406.2850) (1295.6800, 2406.4500) 0.1605
trackA
        (1295.4500, 2406.2850) (1295.6800, 2406.2950) 0.1605
trackA
        (1295.5200, 2406.1300) (1295.6800, 2406.2950) 0.1605
```

```
trackA
        (1295.5200, 2406.2850) (1295.7500, 2406.2950) 0.1605
trackA
       (1300.5200, 2406.2850) (1300.6800, 2406.4500) 0.1605
trackA
        (1300.4500, 2406.2850) (1300.6800, 2406.2950) 0.1605
trackA
        (1300.5200, 2406.1300) (1300.6800, 2406.2950) 0.1605
trackA
        (1300.5200, 2406.2850) (1300.7500, 2406.2950) 0.1605
        (1295.5200, 2412.2550) (1295.6800, 2412.4200) 0.1605
trackA
trackA
        (1295.4500, 2412.2550) (1295.6800, 2412.2650) 0.1605
trackA
        (1295.5200, 2412.1000) (1295.6800, 2412.2650) 0.1605
trackA
        (1295.5200, 2412.2550) (1295.7500, 2412.2650) 0.1605
trackA
        (1300.5200, 2412.2550) (1300.6800, 2412.4200) 0.1605
trackA
        (1300.4500, 2412.2550) (1300.6800, 2412.2650) 0.1605
trackA
        (1300.5200, 2412.1000) (1300.6800, 2412.2650) 0.1605
        (1300.5200, 2412.2550) (1300.7500, 2412.2650) 0.1605
trackA
trackA
        (1290.5200, 2418.2250) (1290.6800, 2418.3900) 0.1605
        (1290.4500, 2418.2250) (1290.6800, 2418.2350) 0.1605
trackA
trackA
        (1290.5200, 2418.0700) (1290.6800, 2418.2350) 0.1605
        (1290.5200, 2418.2250) (1290.7500, 2418.2350) 0.1605
trackA
trackA
        (1295.5200, 2418.2250) (1295.6800, 2418.3900) 0.1605
        (1295.4500, 2418.2250) (1295.6800, 2418.2350) 0.1605
trackA
        (1295.5200, 2418.0700) (1295.6800, 2418.2350) 0.1605
trackA
        (1295.5200, 2418.2250) (1295.7500, 2418.2350) 0.1605
trackA
trackA
        (1300.5200, 2418.2250) (1300.6800, 2418.3900) 0.1605
trackA
        (1300.4500, 2418.2250) (1300.6800, 2418.2350) 0.1605
        (1300.5200, 2418.0700) (1300.6800, 2418.2350) 0.1605
trackA
trackA
        (1300.5200, 2418.2250) (1300.7500, 2418.2350) 0.1605
trackA
        (1313.1100, 2406.2850) (1313.1600, 2406.5090) 0.0510
trackA
        (1312.9300, 2406.2850) (1313.1600, 2406.2950) 0.0510
trackA
        (1313.1100, 2406.0710) (1313.1600, 2406.2950) 0.0510
trackA
        (1313.1100, 2406.2850) (1313.3400, 2406.2950) 0.0510
        (1319.8600, 2406.2850) (1319.9100, 2406.5090) 0.0510
trackA
trackA
       (1319.6800, 2406.2850) (1319.9100, 2406.2950) 0.0510
        (1319.8600, 2406.0710) (1319.9100, 2406.2950) 0.0510
trackA
trackA
       (1319.8600, 2406.2850) (1320.0900, 2406.2950) 0.0510
```

M1.2a: Metal1 minimum space: 0.23

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:1818:external1

WARNING: The error count of 301 for this check exceeds the limit set in the runset. Details only available for the first 100.

Structure (lower left x, y) (upper right x, y) Distance

(1417.8720, 2363.6550) (1418.0150, 2363.8350) 0.1800 trackA (1417.8720, 2364.3850) (1418.0150, 2364.5650) 0.1800 trackA trackA (1425.1750, 2363.6550) (1425.3180, 2363.8350) 0.1800 trackA (1427.7120, 2363.6550) (1427.8550, 2363.8350) 0.1800 trackA (1425.1750, 2364.3850) (1425.3180, 2364.5650) 0.1800 trackA (1427.7120, 2364.3850) (1427.8550, 2364.5650) 0.1800 trackA (1425.1750, 2364.9450) (1425.2420, 2365.1650) 0.2200 (1423.4830, 2364.9450) (1423.5500, 2365.1650) 0.2200 trackA trackA (1433.3230, 2364.9450) (1433.3900, 2365.1650) 0.2200 (1417.8720, 2371.2650) (1418.0150, 2371.4450) 0.1800 trackA trackA (1417.8720, 2371.9950) (1418.0150, 2372.1750) 0.1800 (1425.1750, 2371.2650) (1425.3180, 2371.4450) 0.1800 trackA trackA (1427.7120, 2371.2650) (1427.8550, 2371.4450) 0.1800 (1425.1750, 2371.9950) (1425.3180, 2372.1750) 0.1800 trackA (1427.7120, 2371.9950) (1427.8550, 2372.1750) 0.1800 trackA (1425.1750, 2372.5550) (1425.2420, 2372.7750) 0.2200 trackA trackA (1423.4830, 2372.5550) (1423.5500, 2372.7750) 0.2200 trackA (1433.3230, 2372.5550) (1433.3900, 2372.7750) 0.2200 (1434.8300, 2363.6550) (1434.9730, 2363.8350) 0.1800 trackA trackA (1434.8300, 2364.3850) (1434.9730, 2364.5650) 0.1800 trackA (1434.8300, 2364.9450) (1434.8970, 2365.1650) 0.2200 trackA (1437.5520, 2363.6550) (1437.6950, 2363.8350) 0.1800 (1437.5520, 2364.3850) (1437.6950, 2364.5650) 0.1800 trackA trackA (1444.6700, 2363.6550) (1444.8130, 2363.8350) 0.1800 (1445.2670, 2363.6550) (1445.4100, 2363.8350) 0.1800 trackA trackA (1444.6700, 2364.3850) (1444.8130, 2364.5650) 0.1800 (1445.2670, 2364.3850) (1445.4100, 2364.5650) 0.1800 trackA trackA (1444.6700, 2364.9450) (1444.7370, 2365.1650) 0.2200 trackA (1443.1630, 2364.9450) (1443.2300, 2365.1650) 0.2200 trackA (1452.3850, 2363.6550) (1452.5280, 2363.8350) 0.1800 trackA (1452.3850, 2364.3850) (1452.5280, 2364.5650) 0.1800 trackA (1454.2300, 2364.9450) (1454.2970, 2365.1650) 0.2200 trackA (1453.0030, 2364.9450) (1453.0700, 2365.1650) 0.2200 trackA (1434.8300, 2371.2650) (1434.9730, 2371.4450) 0.1800 trackA (1434.8300, 2371.9950) (1434.9730, 2372.1750) 0.1800 trackA (1437.5520, 2371.2650) (1437.6950, 2371.4450) 0.1800 trackA (1437.5520, 2371.9950) (1437.6950, 2372.1750) 0.1800 trackA (1435.3900, 2372.5550) (1435.4570, 2372.7750) 0.2200 trackA (1444.6700, 2371.2650) (1444.8130, 2371.4450) 0.1800

```
trackA
        (1445.2670, 2371.2650) (1445.4100, 2371.4450) 0.1800
trackA
        (1444.6700, 2371.9950) (1444.8130, 2372.1750) 0.1800
        (1445.2670, 2371.9950) (1445.4100, 2372.1750) 0.1800
trackA
trackA
        (1445.2300, 2372.5550) (1445.2970, 2372.7750) 0.2200
trackA
        (1443.1630, 2372.5550) (1443.2300, 2372.7750) 0.2200
trackA
        (1452.3850, 2371.2650) (1452.5280, 2371.4450) 0.1800
trackA
        (1452.3850, 2371.9950) (1452.5280, 2372.1750) 0.1800
trackA
        (1454.2300, 2372.5550) (1454.2970, 2372.7750) 0.2200
trackA
        (1453.0030, 2372.5550) (1453.0700, 2372.7750) 0.2200
trackA
        (1290.3040, 2387.9250) (1290.5200, 2388.0050) 0.0800
trackA
        (1290.6800, 2387.9250) (1290.8960, 2388.0050) 0.0800
trackA
        (1290.3040, 2388.6350) (1290.5200, 2388.7150) 0.0800
trackA
        (1290.6800, 2388.6350) (1290.8960, 2388.7150) 0.0800
trackA
        (1295.3040, 2387.9250) (1295.5200, 2388.0050) 0.0800
        (1295.6800, 2387.9250) (1295.8960, 2388.0050) 0.0800
trackA
trackA
        (1295.3040, 2388.6350) (1295.5200, 2388.7150) 0.0800
trackA
        (1295.6800, 2388.6350) (1295.8960, 2388.7150) 0.0800
trackA
        (1300.3040, 2387.9250) (1300.5200, 2388.0050) 0.0800
        (1300.6800, 2387.9250) (1300.8960, 2388.0050) 0.0800
trackA
trackA
        (1300.3040, 2388.6350) (1300.5200, 2388.7150) 0.0800
        (1300.6800, 2388.6350) (1300.8960, 2388.7150) 0.0800
trackA
trackA
        (1305.0840, 2387.9250) (1305.3000, 2388.0050) 0.0800
trackA
        (1305.0840, 2388.6350) (1305.3000, 2388.7150) 0.0800
trackA
        (1305.6800, 2387.9250) (1305.8960, 2388.0050) 0.0800
trackA
        (1305.6800, 2388.6350) (1305.8960, 2388.7150) 0.0800
trackA
        (1358.7100, 2374.2050) (1358.8840, 2374.3550) 0.1500
trackA
        (1358.1560, 2374.2050) (1358.3300, 2374.3550) 0.1500
        (1365.1400, 2374.2050) (1365.2340, 2374.4150) 0.2100
trackA
trackA
        (1368.0200, 2374.2050) (1368.1940, 2374.3550) 0.1500
trackA
        (1367.4660, 2374.2050) (1367.6400, 2374.3550) 0.1500
trackA
        (1358.7100, 2389.4450) (1358.9060, 2389.5650) 0.1200
trackA
        (1358.1340, 2389.4450) (1358.3300, 2389.5650) 0.1200
trackA
        (1358.9260, 2390.1750) (1359.0200, 2390.3850) 0.2100
trackA
        (1359.4000, 2390.1750) (1359.4940, 2390.3850) 0.2100
trackA
        (1366.0170, 2389.4450) (1366.1600, 2389.6250) 0.1800
trackA
        (1365.1400, 2389.4450) (1365.2830, 2389.6250) 0.1800
trackA
        (1368.0200, 2389.4450) (1368.2160, 2389.5650) 0.1200
trackA
        (1367.4440, 2389.4450) (1367.6400, 2389.5650) 0.1200
trackA
        (1368.7100, 2390.1750) (1368.8040, 2390.3850) 0.2100
trackA
        (1368.2360, 2390.1750) (1368.3300, 2390.3850) 0.2100
trackA
        (1372.2900, 2389.4450) (1372.4330, 2389.6250) 0.1800
trackA
        (1377.3300, 2374.2050) (1377.5040, 2374.3550) 0.1500
trackA
        (1376.7760, 2374.2050) (1376.9500, 2374.3550) 0.1500
trackA
        (1374.3100, 2374.2050) (1374.4040, 2374.4150) 0.2100
```

```
trackA
        (1383.6200, 2374.2050) (1383.7140, 2374.4150) 0.2100
trackA
       (1386.6400, 2374.2050) (1386.8140, 2374.3550) 0.1500
        (1386.0860, 2374.2050) (1386.2600, 2374.3550) 0.1500
trackA
trackA
        (1392.9300, 2374.2050) (1393.0240, 2374.4150) 0.2100
trackA
        (1376.7540, 2389.4450) (1376.9500, 2389.5650) 0.1200
trackA
        (1375.4670, 2389.4450) (1375.6100, 2389.6250) 0.1800
trackA
        (1377.3300, 2389.4450) (1377.5260, 2389.5650) 0.1200
trackA
        (1378.0200, 2390.1750) (1378.1140, 2390.3850) 0.2100
trackA
        (1377.5460, 2390.1750) (1377.6400, 2390.3850) 0.2100
trackA
        (1381.6000, 2389.4450) (1381.7430, 2389.6250) 0.1800
trackA
        (1386.6400, 2389.4450) (1386.8360, 2389.5650) 0.1200
trackA
        (1386.0640, 2389.4450) (1386.2600, 2389.5650) 0.1200
        (1384.7770, 2389.4450) (1384.9200, 2389.6250) 0.1800
trackA
trackA
        (1387.3300, 2390.1750) (1387.4240, 2390.3850) 0.2100
        (1386.8560, 2390.1750) (1386.9500, 2390.3850) 0.2100
trackA
trackA
        (1390.9100, 2389.4450) (1391.0530, 2389.6250) 0.1800
trackA (1394.2950, 2389.4450) (1394.4380, 2389.6250) 0.1800
```

```
M2.1: Metal2 minimum width: 0.28
```

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:1813:internal1

```
-----
```

```
Structure (lower left x, y) (upper right x, y) Distance
```

```
-----
```

```
trackA (1785.2200, 2585.0000) (1785.4050, 2585.2100) 0.2510
       (1785.1830, 2585.0000) (1785.4050, 2585.1700) 0.2510
trackA
trackA
       (1847.5100, 2585.0000) (1847.7000, 2585.2060) 0.2550
       (1847.4780, 2585.0000) (1847.7000, 2585.1700) 0.2550
trackA
trackA
       (1785.2200, 2584.9600) (1785.4050, 2585.1700) 0.2510
trackA
       (1785.2200, 2585.0000) (1785.4420, 2585.1700) 0.2510
trackA
       (1847.5100, 2584.9640) (1847.7000, 2585.1700) 0.2550
trackA
       (1847.5100, 2585.0000) (1847.7320, 2585.1700) 0.2550
trackA
       (1784.4900, 2585.0000) (1784.6450, 2585.2330) 0.2300
trackA
       (1784.4230, 2585.0000) (1784.6450, 2585.1700) 0.2300
trackA
       (1784.4900, 2584.9370) (1784.6450, 2585.1700) 0.2300
trackA
       (1784.4900, 2585.0000) (1784.7120, 2585.1700) 0.2300
```

M2.2a: Metal2 minimum space: 0.28

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:1823:external1

WARNING: The error count of 301 for this check exceeds the limit set in the runset. Details only available for the first 100.

Check was stopped early because error limit was reached.

Structure (lower left x, y) (upper right x, y) Distance

-----(397.8800, 2587.9500) (398.1500, 2588.0240) 0.2700 (397.8800, 2587.0860) (398.1500, 2587.1600) 0.2700 trackA trackA (397.8800, 2587.1600) (398.1500, 2587.9500) 0.2700 trackA (597.8800, 2588.1950) (598.1400, 2588.2990) 0.2600 (597.8800, 2587.3010) (598.1400, 2587.4050) 0.2600 trackA trackA (597.8800, 2587.4050) (598.1400, 2588.1950) 0.2600 trackA (997.8800, 2588.3850) (998.1000, 2588.5580) 0.2200 (997.8800, 2587.4220) (998.1000, 2587.5950) 0.2200 trackA (997.8800, 2587.5950) (998.1000, 2588.3850) 0.2200 trackA (1784.1400, 2584.7400) (1784.2450, 2585.0000) 0.1050 trackA trackA (1784.1400, 2585.1700) (1784.2450, 2585.4300) 0.1050 (1784.1400, 2585.0000) (1784.2450, 2585.1700) 0.1050 trackA trackA (1784.8700, 2584.7550) (1785.0050, 2585.0000) 0.1350 trackA (1784.8700, 2585.1700) (1785.0050, 2585.4150) 0.1350 trackA (1784.8700, 2585.0000) (1785.0050, 2585.1700) 0.1350 trackA (1847.8900, 2584.7430) (1848.0000, 2585.0000) 0.1100 trackA (1847.8900, 2585.1700) (1848.0000, 2585.4270) 0.1100 (1847.8900, 2585.0000) (1848.0000, 2585.1700) 0.1100 trackA trackA (1786.3300, 2584.7400) (1786.4350, 2585.0000) 0.1050 trackA (1786.3300, 2585.1650) (1786.4350, 2585.4250) 0.1050 trackA (1786.3300, 2585.0000) (1786.4350, 2585.1650) 0.1050 trackA (1847.1800, 2584.7470) (1847.3000, 2585.0000) 0.1200 trackA (1847.1800, 2585.1700) (1847.3000, 2585.4230) 0.1200 trackA (1847.1800, 2585.0000) (1847.3000, 2585.1700) 0.1200 trackA (1849.0350, 2584.7450) (1849.1500, 2585.0000) 0.1150 trackA (1848.4000, 2584.8840) (1848.6550, 2585.0000) 0.2550 trackA (1848.4000, 2585.1700) (1848.6550, 2585.2860) 0.2550 trackA (1849.0350, 2585.1700) (1849.1500, 2585.4250) 0.1150 trackA (1848.4000, 2585.0000) (1848.6550, 2585.1700) 0.2550 trackA (1849.0350, 2585.0000) (1849.1500, 2585.1700) 0.1150 trackA (1851.6400, 2584.7430) (1851.7500, 2585.0000) 0.1100

(1851.6400, 2585.1700) (1851.7500, 2585.4270) 0.1100

trackA

```
trackA
        (1851.6400, 2585.0000) (1851.7500, 2585.1700) 0.1100
trackA
        (1843.6150, 2584.7370) (1843.7100, 2585.0000) 0.0950
        (1843.6150, 2585.1700) (1843.7100, 2585.4330) 0.0950
trackA
trackA
        (1843.6150, 2585.0000) (1843.7100, 2585.1700) 0.0950
trackA
        (1844.6700, 2584.7600) (1844.8150, 2585.0000) 0.1450
        (1844.1100, 2584.7860) (1844.2900, 2585.0000) 0.1800
trackA
trackA
        (1844.1100, 2585.1700) (1844.2900, 2585.3840) 0.1800
trackA
        (1844.6700, 2585.1700) (1844.8150, 2585.4100) 0.1450
trackA
        (1844.1100, 2585.0000) (1844.2900, 2585.1700) 0.1800
trackA
        (1844.6700, 2585.0000) (1844.8150, 2585.1700) 0.1450
trackA
        (1844.1100, 2584.5650) (1844.2650, 2584.7980) 0.1550
trackA
        (1844.6650, 2584.5650) (1844.8150, 2584.8010) 0.1500
trackA
        (1844.1100, 2584.5550) (1844.2650, 2584.5650) 0.1550
trackA
        (1844.6650, 2584.5550) (1844.8150, 2584.5650) 0.1500
        (2130.6900, 2586.5250) (2130.9570, 2586.6100) 0.0850
trackA
trackA
        (2129.4230, 2586.5250) (2129.6900, 2586.6100) 0.0850
trackA
        (2129.6900, 2586.5250) (2130.6900, 2586.6100) 0.0850
trackA
        (2105.3100, 2586.5250) (2105.5770, 2586.6100) 0.0850
        (2104.0430, 2586.5250) (2104.3100, 2586.6100) 0.0850
trackA
trackA
        (2104.3100, 2586.5250) (2105.3100, 2586.6100) 0.0850
        (2118.8400, 2586.5250) (2119.1070, 2586.6100) 0.0850
trackA
trackA
        (2115.8930, 2586.5250) (2116.1600, 2586.6100) 0.0850
trackA
        (2116.1600, 2586.5250) (2118.8400, 2586.6100) 0.0850
trackA
        (343.4850, 2204.0100) (344.6550, 2204.1700) 0.1600
trackA
        (344.6550, 2204.0100) (350.0000, 2204.2800) 0.2700
trackA
        (350.0000, 2204.0100) (350.0740, 2204.2800) 0.2700
        (344.6550, 2204.0100) (344.8850, 2204.1700) 0.1600
trackA
        (343.4850, 2205.5700) (350.0000, 2205.6100) 0.0400
trackA
        (350.0000, 2205.5700) (350.2770, 2205.6100) 0.0400
trackA
trackA
        (343.1300, 2415.8600) (350.0000, 2416.0800) 0.2200
trackA
        (350.0000, 2415.8600) (350.1730, 2416.0800) 0.2200
        (340.9450, 2078.6000) (341.1150, 2078.8220) 0.1700
trackA
trackA
        (340.9450, 2077.9980) (341.1150, 2078.2200) 0.1700
trackA
        (340.9450, 2078.2200) (341.1150, 2078.6000) 0.1700
trackA
        (341.9050, 2076.7200) (342.0210, 2076.9750) 0.2550
trackA
        (340.9990, 2076.7200) (341.1150, 2076.9750) 0.2550
trackA
        (341.1150, 2076.7200) (341.9050, 2076.9750) 0.2550
trackA
        (343.4500, 1992.2000) (344.6200, 1992.3300) 0.1300
trackA
        (344.6200, 1992.2000) (344.8680, 1992.3300) 0.1300
trackA
        (341.0600, 1970.8050) (341.8500, 1970.9650) 0.1600
trackA
        (341.8500, 1970.8050) (342.0800, 1970.9650) 0.1600
trackA
        (340.8300, 1970.8050) (341.0600, 1970.9650) 0.1600
trackA
        (340.9450, 1978.6000) (341.0600, 1978.8550) 0.1150
trackA
        (340.9450, 1977.9650) (341.0600, 1978.2200) 0.1150
```

```
trackA
       (340.9450, 1978.2200) (341.0600, 1978.6000) 0.1150
trackA
       (340.9450, 1973.6000) (341.0600, 1973.8550) 0.1150
       (340.9450, 1972.9650) (341.0600, 1973.2200) 0.1150
trackA
       (340.9450, 1973.2200) (341.0600, 1973.6000) 0.1150
trackA
trackA
       (341.3000, 1903.6750) (341.7000, 1903.8600) 0.1850
       (341.7000, 1903.6750) (341.9100, 1903.8600) 0.1850
trackA
trackA
       (341.7000, 1897.9950) (342.1000, 1898.1800) 0.1850
trackA
        (342.1000, 1897.9950) (342.3100, 1898.1800) 0.1850
trackA
       (342.1000, 1892.3150) (342.5000, 1892.5000) 0.1850
trackA
       (342.5000, 1892.3150) (342.7100, 1892.5000) 0.1850
trackA
        (341.3000, 1909.3550) (341.5100, 1909.5400) 0.1850
trackA
       (340.3000, 1909.3550) (340.5100, 1909.5400) 0.1850
       (340.5100, 1909.3550) (341.3000, 1909.5400) 0.1850
trackA
trackA
       (342.4800, 1775.8050) (342.8800, 1775.9900) 0.1850
       (342.8800, 1775.8050) (343.0900, 1775.9900) 0.1850
trackA
trackA
       (343.2050, 1566.7200) (343.6050, 1566.8150) 0.0950
       (343.6050, 1566.7200) (343.8680, 1566.8150) 0.0950
trackA
trackA
       (343.2050, 1572.0550) (343.6050, 1572.2600) 0.2050
       (343.6050, 1572.0550) (343.7960, 1572.2600) 0.2050
trackA
       (340.9450, 1558.6000) (341.2150, 1558.6740) 0.2700
trackA
       (340.9450, 1558.1460) (341.2150, 1558.2200) 0.2700
trackA
trackA
       (340.9450, 1558.2200) (341.2150, 1558.6000) 0.2700
       (340.9450, 1563.6000) (341.2150, 1563.6740) 0.2700
trackA
       (340.9450, 1563.1460) (341.2150, 1563.2200) 0.2700
trackA
```

MIMTM.10: (a) There cannot be any Via3 touching MIM bottom plate Metal4 (b) MIM bottom plate Metal4 can only be connected through the higher Via (Via4)

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:4151:and

```
Structure
             (lower left x, y) (upper right x, y)
             (1397.7050, 2297.4850) (1397.9650, 2297.7450)
trackA
trackA
             (1520.8950, 2342.0550) (1521.1550, 2342.3150)
trackA
             (1520.8950, 2348.2850) (1521.1550, 2348.5450)
trackA
             (1520.8950, 2354.5150) (1521.1550, 2354.7750)
trackA
             (1520.8950, 2360.7450) (1521.1550, 2361.0050)
trackA
             (2315.1800, 483.1000) (2315.4400, 483.3600)
trackA
             (2315.9800, 483.1000) (2316.2400, 483.3600)
```

```
trackA
             (2316.7800, 483.1000) (2317.0400, 483.3600)
trackA
             (2317.5800, 483.1000) (2317.8400, 483.3600)
trackA
             (2318.3800, 483.1000) (2318.6400, 483.3600)
trackA
             (2319.1800, 483.1000) (2319.4400, 483.3600)
             (2319.9800, 483.1000) (2320.2400, 483.3600)
trackA
trackA
             (2528.7900, 451.4350) (2529.0500, 451.6950)
trackA
             (2528.7900, 452.2350) (2529.0500, 452.4950)
trackA
             (2529.5900, 451.4350) (2529.8500, 451.6950)
trackA
             (2529.5900, 452.2350) (2529.8500, 452.4950)
trackA
             (2530.3900, 451.4350) (2530.6500, 451.6950)
trackA
             (2530.3900, 452.2350) (2530.6500, 452.4950)
trackA
             (2531.1900, 451.4350) (2531.4500, 451.6950)
             (2531.1900, 452.2350) (2531.4500, 452.4950)
trackA
             (2531.9900, 451.4350) (2532.2500, 451.6950)
trackA
trackA
             (2531.9900, 452.2350) (2532.2500, 452.4950)
             (2532.7900, 451.4350) (2533.0500, 451.6950)
trackA
             (2532.7900, 452.2350) (2533.0500, 452.4950)
trackA
trackA
             (2533.5900, 451.4350) (2533.8500, 451.6950)
trackA
             (2533.5900, 452.2350) (2533.8500, 452.4950)
L route 9825ad4f$1 (-21.4300, -1.8050) (-21.1700, -1.5450)
L route 9825ad4f$1 (-20.6300, -1.8050)
                                        (-20.3700, -1.5450)
L route 9825ad4f$1 (-19.8300, -1.8050)
                                        (-19.5700, -1.5450)
L route 9825ad4f$1 (-19.0300, -1.8050)
                                       (-18.7700, -1.5450)
L route 9825ad4f$1 (-18.2300, -1.8050)
                                        (-17.9700, -1.5450)
L_route_9825ad4f$1 (-17.4300, -1.8050)
                                        (-17.1700, -1.5450)
L route 9825ad4f$1 (-16.6300, -1.8050)
                                        (-16.3700, -1.5450)
L_route_9825ad4f (-21.4300, -1.8050)
                                       (-21.1700, -1.5450)
L route 9825ad4f (-20.6300, -1.8050)
                                       (-20.3700, -1.5450)
L_route_9825ad4f (-19.8300, -1.8050)
                                       (-19.5700, -1.5450)
L_route_9825ad4f (-19.0300, -1.8050)
                                       (-18.7700, -1.5450)
L_route_9825ad4f (-18.2300, -1.8050)
                                       (-17.9700, -1.5450)
L route 9825ad4f (-17.4300, -1.8050)
                                       (-17.1700, -1.5450)
L_route_9825ad4f (-16.6300, -1.8050)
                                       (-16.3700, -1.5450)
```

MSLOT.1 Metal1: Maximum Metal1 width without slotting = 30.0

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu drc.rs:5822:or

(lower left x, y) (upper right x, y)

```
trackA
         (796.1650, 379.7200) (840.7200, 430.4700)
trackA
         (896.1550, 379.7200) (940.7100, 430.4700)
io secondary 5p0 (-42.3000, -8.1050) (14.7500, 36.4500)
MSLOT.1 Metal2: Maximum Metal2 width without slotting = 30.0
/evprj182/projects/GF180MCU/combined-pdk/dk synopsys/pdk-180/DRC ICV/DRC/ICV/gf180
mcu drc.rs:5828:or
Structure (lower left x, y) (upper right x, y)
_____
trackA (798.0700, 370.4200) (838.0700, 430.4700)
trackA (898.0600, 370.4200) (938.0600, 430.4700)
MSLOT.1 Metal3: Maximum Metal3 width without slotting = 30.0
 _____
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu_drc.rs:5834:or
-----
Structure (lower left x, y) (upper right x, y)
trackA (2195.1050, 356.9400) (2235.1550, 508.6250)
io_secondary_5p0 (-47.3500, -6.2000) (24.0500, 33.8000)
Mn.4 Metal1: Metal1 coverage over the entire die shall be > 30%
 -----
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu_drc.rs:2832:density
-----
Structure Window (x1,y1) (x2,y2)
                     Report = Value
-----
trackA (0.0000, 0.0000) (2935.0000, 2935.0000)
                       Min ratio = 0.2252
                       Max ratio = 0.2252
```

Avg ratio = 0.2252 Min areaL1 = 1940121.3014 Max areaL1 = 1940121.3014 Avg areaL1 = 1940121.3014 Min areaW = 8614225.0000 Max areaW = 8614225.0000 Avg areaW = 8614225.0000

```
Mn.4 Metal2 : Metal2 coverage over the entire die shall be > 30%
.....
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:2849:density
_____
Structure Window (x1,y1) (x2,y2)
                       Report = Value
trackA (0.0000, 0.0000) (2935.0000, 2935.0000)
                        Min ratio = 0.2735
                        Max ratio = 0.2735
                        Avg ratio = 0.2735
                        Min areaL1 = 2356217.4076
                        Max areaL1 = 2356217.4076
                        Avg areaL1 = 2356217.4076
                        Min areaW = 8614225.0000
                        Max areaW = 8614225.0000
                        Avg areaW = 8614225.0000
NP.11: Butting Nplus and PCOMP is forbidden within 0.43 of well (Nwell
and LVPWELL) edge (for inside DNWELL case)
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:2494:and
-----
Structure (lower left x, y) (upper right x, y)
-----
trackA (1351.8510, 2366.3550) (1352.7090, 2366.3560)
trackA (1351.8510, 2372.2050) (1352.7090, 2372.2060)
trackA (1351.8510, 2378.0550) (1352.7090, 2378.0560)
```

```
trackA (1351.8510, 2383.9050) (1352.7090, 2383.9060)
trackA (1351.8510, 2389.7550) (1352.7090, 2389.7560)
NP.3a: Nplus space to PCOMP (1) inside Nwell (2) outside LVPWELL
but inside DNWELL: 0.16
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:2372:external2
Structure (lower left x, y) (upper right x, y) Distance
-----
trackA (1358.7400, 2374.9350) (1358.8560, 2375.0450) 0.1100
trackA (1358.1840, 2374.9350) (1358.3000, 2375.0450) 0.1100
trackA (1358.3000, 2374.9350) (1358.7400, 2375.0450) 0.1100
trackA (1368.0500, 2374.9350) (1368.1660, 2375.0450) 0.1100
trackA (1367.4940, 2374.9350) (1367.6100, 2375.0450) 0.1100
trackA (1367.6100, 2374.9350) (1368.0500, 2375.0450) 0.1100
      (1377.3600, 2374.9350) (1377.4760, 2375.0450) 0.1100
trackA
trackA
      (1376.8040, 2374.9350) (1376.9200, 2375.0450) 0.1100
trackA (1376.9200, 2374.9350) (1377.3600, 2375.0450) 0.1100
trackA (1386.6700, 2374.9350) (1386.7860, 2375.0450) 0.1100
trackA (1386.1140, 2374.9350) (1386.2300, 2375.0450) 0.1100
trackA (1386.2300, 2374.9350) (1386.6700, 2375.0450) 0.1100
NP.4a: Nplus space to related P-channel gate at a butting edge parallel
to gate : 0.32
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:2404:external2
-----
Structure (lower left x, y) (upper right x, y) Distance
-----
trackA (1358.9800, 2367.6250) (1359.2510, 2367.7950) 0.1700
trackA (1357.7890, 2367.6250) (1358.0600, 2367.7950) 0.1700
trackA (1358.0600, 2367.6250) (1358.9800, 2367.7950) 0.1700
trackA (1368.2900, 2367.6250) (1368.5610, 2367.7950) 0.1700
trackA (1367.0990, 2367.6250) (1367.3700, 2367.7950) 0.1700
trackA (1367.3700, 2367.6250) (1368.2900, 2367.7950) 0.1700
```

```
trackA
        (1377.6000, 2367.6250) (1377.8710, 2367.7950) 0.1700
trackA
       (1376.4090, 2367.6250) (1376.6800, 2367.7950) 0.1700
        (1376.6800, 2367.6250) (1377.6000, 2367.7950) 0.1700
trackA
trackA
        (1386.9100, 2367.6250) (1387.1810, 2367.7950) 0.1700
trackA
        (1385.7190, 2367.6250) (1385.9900, 2367.7950) 0.1700
        (1385.9900, 2367.6250) (1386.9100, 2367.7950) 0.1700
trackA
trackA
        (1358.9800, 2384.5250) (1359.2630, 2384.6750) 0.1500
trackA
        (1357.7770, 2384.5250) (1358.0600, 2384.6750) 0.1500
trackA
        (1358.0600, 2384.5250) (1358.9800, 2384.6750) 0.1500
trackA
        (1368.2900, 2384.5250) (1368.5730, 2384.6750) 0.1500
trackA
        (1367.0870, 2384.5250) (1367.3700, 2384.6750) 0.1500
trackA
        (1367.3700, 2384.5250) (1368.2900, 2384.6750) 0.1500
        (1377.6000, 2384.5250) (1377.8830, 2384.6750) 0.1500
trackA
trackA
        (1376.3970, 2384.5250) (1376.6800, 2384.6750) 0.1500
        (1376.6800, 2384.5250) (1377.6000, 2384.6750) 0.1500
trackA
trackA
        (1386.9100, 2384.5250) (1387.1930, 2384.6750) 0.1500
        (1385.7070, 2384.5250) (1385.9900, 2384.6750) 0.1500
trackA
trackA
       (1385.9900, 2384.5250) (1386.9100, 2384.6750) 0.1500
```

NP.5a: Nplus overlap of N-channel gate: 0.23

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:2422:enclose

```
Structure (lower left x, y) (upper right x, y) Distance
```

trackA

```
trackA (1358.0100, 2383.0050) (1358.0600, 2383.1750) 0.1700
trackA
       (1358.0600, 2383.0050) (1358.2150, 2383.1750) 0.1700
       (1357.8550, 2383.0050) (1358.0100, 2383.1750) 0.1700
trackA
trackA
        (1358.9800, 2383.0050) (1359.3900, 2383.1750) 0.1700
trackA
       (1358.8250, 2383.0050) (1358.9800, 2383.1750) 0.1700
trackA
       (1359.3900, 2383.0050) (1359.5450, 2383.1750) 0.1700
trackA
        (1367.3200, 2383.0050) (1367.3700, 2383.1750) 0.1700
trackA
        (1367.3700, 2383.0050) (1367.5250, 2383.1750) 0.1700
trackA
        (1367.1650, 2383.0050) (1367.3200, 2383.1750) 0.1700
trackA
        (1368.2900, 2383.0050) (1368.7000, 2383.1750) 0.1700
trackA
        (1368.1350, 2383.0050) (1368.2900, 2383.1750) 0.1700
trackA
        (1368.7000, 2383.0050) (1368.8550, 2383.1750) 0.1700
trackA
        (1376.6300, 2383.0050) (1376.6800, 2383.1750) 0.1700
trackA
        (1376.6800, 2383.0050) (1376.8350, 2383.1750) 0.1700
```

(1376.4750, 2383.0050) (1376.6300, 2383.1750) 0.1700

```
trackA
       (1377.6000, 2383.0050) (1378.0100, 2383.1750) 0.1700
trackA
       (1377.4450, 2383.0050) (1377.6000, 2383.1750) 0.1700
       (1378.0100, 2383.0050) (1378.1650, 2383.1750) 0.1700
trackA
       (1385.9400, 2383.0050) (1385.9900, 2383.1750) 0.1700
trackA
trackA
       (1385.9900, 2383.0050) (1386.1450, 2383.1750) 0.1700
       (1385.7850, 2383.0050) (1385.9400, 2383.1750) 0.1700
trackA
       (1386.9100, 2383.0050) (1387.3200, 2383.1750) 0.1700
trackA
trackA
       (1386.7550, 2383.0050) (1386.9100, 2383.1750) 0.1700
trackA
       (1387.3200, 2383.0050) (1387.4750, 2383.1750) 0.1700
```

.....

NP.5d(i): Nplus extension beyond COMP inside DNWELL for Nwell overlap of Nplus < 0.43: 0.16

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu drc.rs:2447:enclose

WARNING: The error count of 302 for this check exceeds the limit set in the runset. Details only available for the first 100.

Check was stopped early because error limit was reached.

```
Structure (lower left x, y) (upper right x, y) Distance
```

```
gf180mcu_fd_sc_mcu7t5v0__endcap (0.2000, 1.8560) (0.2595, 2.0280) 0.0000
gf180mcu fd sc mcu7t5v0 endcap (0.2000, 1.8560) (0.3600, 1.9200) 0.0000
                         (35.8300, -7.2500) (35.8700, 34.9100) 0.0400
io secondary 5p0
                         (35.8300, 34.9100) (35.8700, 34.9500) 0.0400
io_secondary_5p0
io secondary 5p0
                         (35.8300, 34.9100) (35.8700, 34.9500) 0.0400
                          (35.8300, -7.2900) (35.8700, -7.2500) 0.0400
io secondary 5p0
io secondary 5p0
                          (35.8300, -7.2900) (35.8700, -7.2500) 0.0400
io secondary 5p0
                          (22.6100, -7.2500) (22.6500, 34.9100) 0.0400
                          (22.6100, -7.2900) (22.6500, -7.2500) 0.0400
io secondary 5p0
```

```
io_secondary_5p0 (22.6100, -7.2900) (22.6500, -7.2500) 0.0400 io_secondary_5p0 (22.6100, 34.9100) (22.6500, 34.9500) 0.0400 io_secondary_5p0 (22.6100, 34.9100) (22.6500, 34.9500) 0.0400 io_secondary_5p0 (22.6500, -7.2900) (35.8300, -7.2500) 0.0400 io_secondary_5p0 (22.6500, 34.9100) (35.8300, 34.9500) 0.0400
```

comp018green esd rc v5p0\$2 comp018green_esd_rc_v5p0\$2 comp018green esd rc v5p0\$2 nmos clamp 20 50 4\$2 nmos clamp 20 50 4\$2 nmos clamp 20 50 4\$2 nmos_clamp_20_50_4\$2 nmos_clamp_20_50_4\$2 nmos clamp 20 50 4\$2 nmos_clamp_20_50_4\$2 nmos clamp 20 50 4\$2 nmos clamp 20 50 4\$2 nmos_clamp_20_50_4\$2 nmos clamp 20 50 4\$2 nmos clamp 20 50 4\$2 nmos clamp 20 50 4\$2 nmos_clamp_20_50_4\$2 nmos_clamp_20_50_4\$2 nmos clamp 20 50 4\$2 nmos clamp 20 50 4\$2 nmos_clamp_20_50_4\$2 nmos clamp 20 50 4\$2 nmos clamp 20 50 4\$2 nmos clamp 20 50 4\$2 nmos_clamp_20_50_4\$2 nmos clamp 20 50 4\$2 nmos_clamp_20_50_4\$2 nmos clamp 20 50 4\$2 nmos clamp 20 50 4\$2

(0.0000, 22.0635) (0.1380, 22.1800) 0.1205(68.2320, 22.0635) (68.3700, 22.1800) 0.1205 (68.2320, 2.7100) (68.3700, 2.8265) 0.1205 (68.2535, 2.7100) (68.3700, 2.8480) 0.1205 (68.2535, 22.0420) (68.3700, 22.1800) 0.1205 (68.2220, 22.0635) (68.3700, 22.1800) 0.1165 (68.2220, 2.7100) (68.3700, 2.8265) 0.1165 (68.2535, 2.7100) (68.3700, 2.8580) 0.1165 (0.0000, 2.7100) (0.1165, 2.8580) 0.1165 (68.2535, 22.0320) (68.3700, 22.1800) 0.1165 (0.0000, 22.0320) (0.1165, 22.1800) 0.1165 (2.2295, 2.2900) (2.2700, 2.4555) 0.0000 (2.2295, 124.3145) (2.2700, 124.4800) 0.0000 (2.1100, 2.4120) (2.2700, 2.4555) 0.0000 (2.1100, 124.3145) (2.2700, 124.3580) 0.0000 (62.3545, 2.2280) (62.5200, 2.2700) 0.0000 (2.2900, 2.2280) (2.4555, 2.2700) 0.0000 (2.4120, 2.1100) (2.4555, 2.2700) 0.0000 (62.3545, 2.1100) (62.3980, 2.2700) 0.0000 (62.3545, 124.5000) (62.5200, 124.5420) 0.0000 (2.2900, 124.5000) (2.4555, 124.5420) 0.0000 (2.4120, 124.5000) (2.4555, 124.6600) 0.0000 (62.3545, 124.5000) (62.3980, 124.6600) 0.0000 (62.5400, 2.2900) (62.5805, 2.4555) 0.0000 (62.5400, 124.3145) (62.5805, 124.4800) 0.0000 (62.5400, 124.3145) (62.7000, 124.3580) 0.0000 (62.5400, 2.4120) (62.7000, 2.4555) 0.0000 (0.0000, 0.0000) (0.1380, 0.1165) 0.1205(64.6720, 0.0000) (64.8100, 0.1165) 0.1205 (64.6935, 0.0000) (64.8100, 0.1480) 0.1165 (0.0000, 0.0000) (0.1165, 0.1480) 0.1165(0.0000, 0.0000) (0.1165, 0.1380)0.1205 (64.6935, 0.0000) (64.8100, 0.1380) 0.1205 (64.6935, 126.6320) (64.8100, 126.7700) 0.1205 (0.0000, 126.6320) (0.1165, 126.7700) 0.1205 (0.0000, 126.6535) (0.1380, 126.7700) 0.1205 (64.6720, 126.6535) (64.8100, 126.7700) 0.1205 (64.6935, 126.6220) (64.8100, 126.7700) 0.1165 (0.0000, 126.6220) (0.1165, 126.7700) 0.1165 (0.0000, 126.6535) (0.1480, 126.7700) 0.1165 (0.0000, 0.0000) (0.1480, 0.1165) 0.1165(64.6620, 126.6535) (64.8100, 126.7700) 0.1165 (64.6620, 0.0000) (64.8100, 0.1165) 0.1165

(0.0000, 2.7100)

(0.1380, 2.8265) 0.1205

```
comp018green sigbuf$1
                            (6.2400, 7.1500)
                                              (6.4205, 7.3040)
                                                               0.1205
comp018green_sigbuf$1
                            (6.2400, 7.1500)
                                             (6.4000, 7.3100)
                                                               0.1165
comp018green sigbuf$1
                            (3.8495, 7.1500)
                                              (4.0300, 7.3040)
                                                               0.1205
comp018green sigbuf$1
                            (3.8700, 7.1500)
                                             (4.0300, 7.3100)
                                                               0.1165
comp018green sigbuf$1
                            (3.8920, 12.5035)
                                             (4.0300, 12.6200) 0.1205
comp018green sigbuf$1
                            (6.2400, 12.5035) (6.3780, 12.6200) 0.1205
comp018green sigbuf$1
                                             (4.0300, 12.6200) 0.1165
                            (3.9135, 12.4720)
comp018green sigbuf$1
                            (6.2400, 12.4720)
                                              (6.3565, 12.6200) 0.1165
comp018green sigbuf$1
                            (6.2400, 12.4820)
                                              (6.3565, 12.6200) 0.1205
                            (3.9135, 12.4820) (4.0300, 12.6200) 0.1205
comp018green sigbuf$1
comp018green sigbuf$1
                            (6.2400, 12.5035) (6.3880, 12.6200) 0.1165
comp018green sigbuf$1
                            (3.8820, 12.5035) (4.0300, 12.6200) 0.1165
                                                 (7.8305, 6.6340)
comp018green out sigbuf oe$1
                                (7.6500, 6.4800)
                                                                  0.1205
                                (7.6500, 6.4800)
                                                 (7.8100, 6.6400)
comp018green out sigbuf oe$1
                                                                  0.1165
comp018green out sigbuf oe$1
                                (5.2595, 6.4800)
                                                 (5.4400, 6.6340)
                                                                  0.1205
comp018green_out_sigbuf_oe$1
                                (5.2800, 6.4800)
                                                 (5.4400, 6.6400)
                                                                  0.1165
comp018green_out_sigbuf_oe$1
                                (5.3020, 14.1835) (5.4400, 14.3000) 0.1205
                                (7.6500, 14.1835) (7.7880, 14.3000) 0.1205
comp018green out sigbuf oe$1
comp018green_out_sigbuf_oe$1
                                (5.3235, 14.1520) (5.4400, 14.3000) 0.1165
comp018green out sigbuf oe$1
                                (7.6500, 14.1520) (7.7665, 14.3000) 0.1165
                                (7.6500, 14.1620) (7.7665, 14.3000) 0.1205
comp018green out sigbuf oe$1
comp018green_out_sigbuf_oe$1
                                (5.3235, 14.1620) (5.4400, 14.3000) 0.1205
comp018green out sigbuf oe$1
                                (7.6500, 14.1835) (7.7980, 14.3000) 0.1165
comp018green out sigbuf oe$1
                                (5.2920, 14.1835) (5.4400, 14.3000) 0.1165
                              (10.1050, 71.0100) (10.2430, 71.1265) 0.1205
gf180mcu_fd_io_asig_5p0$1
gf180mcu fd io asig 5p0$1
                              (10.1050, 71.0100) (10.2215, 71.1580) 0.1165
gf180mcu_fd_io_asig_5p0$1
                              (10.1050, 71.0100) (10.2215, 71.1480) 0.1205
gf180mcu fd io asig 5p0$1
                              (10.1050, 71.0100) (10.2530, 71.1265) 0.1165
gf180mcu fd io asig 5p0$1
                              (64.7570, 71.0100) (64.8950, 71.1265) 0.1205
gf180mcu_fd_io_asig_5p0$1
                              (64.7785, 71.0100) (64.8950, 71.1580) 0.1165
gf180mcu_fd_io__asig_5p0$1
                              (64.7785, 71.0100) (64.8950, 71.1480) 0.1205
gf180mcu fd io asig 5p0$1
                              (64.7470, 71.0100) (64.8950, 71.1265) 0.1165
gf180mcu_fd_io__asig_5p0$1
                              (10.1050, 99.7220) (10.2215, 99.8600) 0.1205
gf180mcu fd io asig 5p0$1
                              (10.1050, 99.7435) (10.2430, 99.8600) 0.1205
                              (10.1050, 99.7120) (10.2215, 99.8600) 0.1165
gf180mcu_fd_io_asig_5p0$1
gf180mcu fd io asig 5p0$1
                              (6.8450, 104.8350) (6.9830, 104.9515) 0.1205
gf180mcu fd io asig 5p0$1
                              (6.8450, 104.8350) (6.9615, 104.9830) 0.1165
gf180mcu_fd_io__asig 5p0$1
                              (6.8450, 104.8350) (6.9615, 104.9730) 0.1205
```

NP.6: Nplus overlap with NCOMP butted to PCOMP: 0.22

```
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu_drc.rs:2459:internal1
-----
Structure (lower left x, y) (upper right x, y) Distance
trackA (1376.7600, 2389.5450) (1377.5200, 2389.7550) 0.2100
trackA (1376.6940, 2389.5450) (1376.7600, 2389.7550) 0.2100
trackA
       (1377.5200, 2389.5450) (1377.5860, 2389.7550) 0.2100
trackA
       (1358.1400, 2389.5450) (1358.9000, 2389.7550) 0.2100
trackA
       (1358.0740, 2389.5450) (1358.1400, 2389.7550) 0.2100
trackA
       (1358.9000, 2389.5450) (1358.9660, 2389.7550) 0.2100
trackA
       (1386.0700, 2389.5450) (1386.8300, 2389.7550) 0.2100
       (1386.0040, 2389.5450) (1386.0700, 2389.7550) 0.2100
trackA
trackA
       (1386.8300, 2389.5450) (1386.8960, 2389.7550) 0.2100
       (1367.4500, 2389.5450) (1368.2100, 2389.7550) 0.2100
trackA
trackA
       (1367.3840, 2389.5450) (1367.4500, 2389.7550) 0.2100
       (1368.2100, 2389.5450) (1368.2760, 2389.7550) 0.2100
trackA
trackA
       (1497.0600, 2363.7950) (1497.2100, 2364.5250) 0.1500
trackA
       (1497.0600, 2379.0150) (1497.2100, 2379.7450) 0.1500
       (1497.0600, 2371.4050) (1497.2100, 2372.1350) 0.1500
trackA
       (1497.0600, 2394.2350) (1497.2100, 2394.9650) 0.1500
trackA
trackA
       (1497.0600, 2386.6250) (1497.2100, 2387.3550) 0.1500
trackA (1497.0600, 2401.8450) (1497.2100, 2402.5750) 0.1500
trackA (1497.0600, 2409.4550) (1497.2100, 2410.1850) 0.1500
NW.2: Min. Nwell Space: 1.4
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:2047:external1
Structure (lower left x, y) (upper right x, y) Distance
gf180mcu fd io bi t$1 (58.9910, 294.9550) (59.3800, 296.3000) 1.3450
gf180mcu_fd_io__bi_t$1 (68.1450, 294.9550) (68.5340, 296.3000) 1.3450
gf180mcu fd io bi t$1 (59.3800, 294.9550) (68.1450, 296.3000) 1.3450
gf180mcu_fd_io__bi_t$1 (46.1000, 317.8650) (47.3450, 318.5050) 1.2450
gf180mcu fd io bi t$1 (46.1000, 312.7450) (47.3450, 317.8650) 1.2450
```

NW.3: Min. Nwell to DNWELL space: 3.1

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu drc.rs:2073:external2 Structure (lower left x, y) (upper right x, y) Distance ----trackA (1497.9000, 2360.3920) (1499.4000, 2363.1050) 1.5000 (1497.9000, 2367.2550) (1499.4000, 2369.9680) 1.5000 trackA trackA (1497.9000, 2368.0020) (1499.4000, 2370.7150) 1.5000 trackA (1497.9000, 2374.8650) (1499.4000, 2377.5780) 1.5000 trackA (1497.9000, 2375.6120) (1499.4000, 2378.3250) 1.5000 trackA (1497.9000, 2382.4750) (1499.4000, 2385.1880) 1.5000 trackA (1497.9000, 2383.2220) (1499.4000, 2385.9350) 1.5000 trackA (1497.9000, 2390.0850) (1499.4000, 2392.7980) 1.5000 trackA (1497.9000, 2390.8320) (1499.4000, 2393.5450) 1.5000 (1497.9000, 2397.6950) (1499.4000, 2400.4080) 1.5000 trackA trackA (1497.9000, 2398.4420) (1499.4000, 2401.1550) 1.5000 trackA (1497.9000, 2405.3050) (1499.4000, 2408.0180) 1.5000 (1497.9000, 2406.0520) (1499.4000, 2408.7650) 1.5000 trackA trackA (1497.9000, 2412.9150) (1499.4000, 2414.1750) 1.5000 trackA (1497.9000, 2414.1750) (1499.4000, 2416.8880) 2.6625 trackA (1497.2160, 2414.1750) (1499.4000, 2416.3750) 2.6625 (1497.9000, 2413.6620) (1499.4000, 2416.3750) 2.6625 trackA trackA (1497.9000, 2414.1750) (1500.0840, 2416.3750) 2.6625 trackA (1497.9000, 2393.5450) (1499.4000, 2397.6950) 1.5000 trackA (1497.9000, 2401.1550) (1499.4000, 2405.3050) 1.5000 trackA (1497.9000, 2385.9350) (1499.4000, 2390.0850) 1.5000 trackA (1497.9000, 2408.7650) (1499.4000, 2412.9150) 1.5000 (1497.9000, 2378.3250) (1499.4000, 2382.4750) 1.5000 trackA trackA (1497.9000, 2370.7150) (1499.4000, 2374.8650) 1.5000 trackA (1497.9000, 2363.1050) (1499.4000, 2367.2550) 1.5000 trackA (2115.0900, 2027.8700) (2117.2800, 2030.0500) 2.1800 trackA (2076.8300, 2027.8700) (2079.0200, 2030.0500) 2.1800 trackA (2079.0200, 2027.8700) (2115.0900, 2030.0500) 2.1800 trackA (2117.2800, 2027.0580) (2118.0900, 2030.0500) 2.3255 trackA (2117.2800, 2027.8700) (2118.0900, 2030.8620) 2.3255 trackA (2115.8860, 2027.8700) (2118.0900, 2030.0500) 2.3255 trackA (2117.2800, 2027.8700) (2119.4840, 2030.0500) 2.3255

PAD.16: Max pad opening space to nearest S/L guard ring (Inner edge of GUARD_RING_MK marking) = 200.0

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu drc.rs:4549:not interacting -----Structure (lower left x, y) (upper right x, y) Bondpad 5LM\$1 (2.0000, 2.0000) (62.0000, 62.0000)

PAD.17: Pad opening space to active circuit COMP = 15.0

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:4555:external2

WARNING: The error count of 301 for this check exceeds the limit set in the runset. Details only available for the first 100.

Check was stopped early because error limit was reached.

trackA

trackA

(lower left x, y) (upper right x, y) Distance trackA (375.4650, 2864.0470) (387.5000, 2877.5180) 12.8260 trackA (447.5000, 2864.0470) (459.5350, 2877.5180) 12.8260 (475.4650, 2864.0470) (487.5000, 2877.5180) 12.8260 trackA (372.9100, 2869.5150) (462.0900, 2873.0000) 3.4850 trackA (378.6450, 2864.4000) (387.5000, 2878.0070) 11.3500 trackA trackA (376.2650, 2865.9000) (391.8580, 2873.0000) 11.3500 trackA (378.6450, 2860.9400) (387.5000, 2874.5470) 13.7815 (376.8470, 2862.4400) (389.2980, 2873.0000) 13.7815 trackA trackA (447.5000, 2864.4000) (456.2650, 2878.0730) 11.2800 trackA (443.0520, 2865.9000) (458.6450, 2873.0000) 11.2800 trackA (447.5000, 2860.9400) (456.2650, 2874.6130) 13.7235 trackA (445.6120, 2862.4400) (458.1530, 2873.0000) 13.7235 trackA (472.9100, 2869.5150) (562.0900, 2873.0000) 3.4850 trackA (478.6450, 2864.4000) (487.5000, 2878.0070) 11.3500 trackA (476.2650, 2865.9000) (491.8580, 2873.0000) 11.3500 trackA (478.6450, 2860.9400) (487.5000, 2874.5470) 13.7815 trackA (476.8470, 2862.4400) (489.2980, 2873.0000) 13.7815 trackA (575.4650, 2864.0470) (587.5000, 2877.5180) 12.8260

(647.5000, 2864.0470) (659.5350, 2877.5180) 12.8260

(547.5000, 2864.0470) (559.5350, 2877.5180) 12.8260

```
trackA
                  (675.4650, 2864.0470) (687.5000, 2877.5180) 12.8260
trackA
                  (572.9100, 2869.5150) (662.0900, 2873.0000) 3.4850
                  (578.6450, 2864.4000) (587.5000, 2878.0070) 11.3500
trackA
                  (576.2650, 2865.9000) (591.8580, 2873.0000) 11.3500
trackA
trackA
                  (578.6450, 2860.9400) (587.5000, 2874.5470) 13.7815
                  (576.8470, 2862.4400) (589.2980, 2873.0000) 13.7815
trackA
trackA
                  (647.5000, 2864.4000) (656.2650, 2878.0730) 11.2800
trackA
                  (643.0520, 2865.9000) (658.6450, 2873.0000) 11.2800
trackA
                  (647.5000, 2860.9400) (656.2650, 2874.6130) 13.7235
trackA
                  (645.6120, 2862.4400) (658.1530, 2873.0000) 13.7235
trackA
                  (547.5000, 2864.4000) (556.2650, 2878.0730) 11.2800
trackA
                  (543.0520, 2865.9000) (558.6450, 2873.0000) 11.2800
                  (547.5000, 2860.9400) (556.2650, 2874.6130) 13.7235
trackA
                  (545.6120, 2862.4400) (558.1530, 2873.0000) 13.7235
trackA
                  (672.9100, 2869.5150) (762.0900, 2873.0000) 3.4850
trackA
trackA
                  (678.6450, 2864.4000) (687.5000, 2878.0070) 11.3500
                  (676.2650, 2865.9000) (691.8580, 2873.0000) 11.3500
trackA
trackA
                  (678.6450, 2860.9400) (687.5000, 2874.5470) 13.7815
                  (676.8470, 2862.4400) (689.2980, 2873.0000) 13.7815
trackA
                  (775.4650, 2864.0470) (787.5000, 2877.5180) 12.8260
trackA
                  (847.5000, 2864.0470) (859.5350, 2877.5180) 12.8260
trackA
                  (747.5000, 2864.0470) (759.5350, 2877.5180) 12.8260
trackA
                  (772.9100, 2869.5150) (862.0900, 2873.0000) 3.4850
trackA
                  (778.6450, 2864.4000) (787.5000, 2878.0070) 11.3500
trackA
trackA
                  (776.2650, 2865.9000) (791.8580, 2873.0000) 11.3500
trackA
                  (778.6450, 2860.9400) (787.5000, 2874.5470) 13.7815
                  (776.8470, 2862.4400) (789.2980, 2873.0000) 13.7815
trackA
                  (847.5000, 2864.4000) (856.2650, 2878.0730) 11.2800
trackA
                  (843.0520, 2865.9000) (858.6450, 2873.0000) 11.2800
trackA
                  (847.5000, 2860.9400) (856.2650, 2874.6130) 13.7235
trackA
trackA
                  (845.6120, 2862.4400) (858.1530, 2873.0000) 13.7235
                  (747.5000, 2864.4000) (756.2650, 2878.0730) 11.2800
trackA
trackA
                  (743.0520, 2865.9000) (758.6450, 2873.0000) 11.2800
trackA
                  (747.5000, 2860.9400) (756.2650, 2874.6130) 13.7235
trackA
                  (745.6120, 2862.4400) (758.1530, 2873.0000) 13.7235
trackA
                  (975.4650, 2864.0470) (987.5000, 2877.5180) 12.8260
trackA
                  (875.4650, 2864.0470) (887.5000, 2877.5180) 12.8260
trackA
                  (947.5000, 2864.0470) (959.5350, 2877.5180) 12.8260
trackA
                  (972.9100, 2869.5150) (1062.0900, 2873.0000) 3.4850
trackA
                  (978.6450, 2864.4000) (987.5000, 2878.0070) 11.3500
trackA
                  (976.2650, 2865.9000) (991.8580, 2873.0000) 11.3500
trackA
                  (978.6450, 2860.9400) (987.5000, 2874.5470) 13.7815
trackA
                  (976.8470, 2862.4400) (989.2980, 2873.0000) 13.7815
trackA
                  (872.9100, 2869.5150) (962.0900, 2873.0000) 3.4850
```

```
trackA
                  (878.6450, 2864.4000) (887.5000, 2878.0070) 11.3500
trackA
                  (876.2650, 2865.9000) (891.8580, 2873.0000) 11.3500
                  (878.6450, 2860.9400) (887.5000, 2874.5470) 13.7815
trackA
                          (7.5000, 62.0000)
                                              (67.5000, 74.4150)
gf180mcu fd io dvss$1
                                                                  12.4150
gf180mcu fd io dvss$1
                          (1.2850, 62.0000)
                                              (17.5280, 67.8950)
                                                                  6.9945
gf180mcu fd io dvss$1
                          (3.7350, 53.3750)
                                              (7.5000, 76.5200)
                                                                  6.9945
gf180mcu fd io dvss$1
                          (57.4720, 62.0000)
                                              (73.7150, 67.8950)
                                                                   6.9945
gf180mcu fd io dvss$1
                          (67.5000, 53.3750)
                                              (71.2650, 76.5200)
                                                                   6.9945
gf180mcu fd io dvss$1
                          (0.0000, 62.0000)
                                              (75.0000, 65.4850)
                                                                  3.4850
                                              (69.7450, 67.6100)
gf180mcu fd io dvss$1
                          (5.2550, 62.0000)
                                                                  5.6100
gf180mcu fd io dvss$1
                          (7.5000, 62.0000)
                                              (67.5000, 70.6100)
                                                                  8.6100
gf180mcu fd io dvdd$1
                                              (67.5000, 74.7000)
                           (7.5000, 62.0000)
                                                                   12,7000
gf180mcu fd io dvdd$1
                          (57.4720, 62.0000)
                                              (73.7150, 67.8950)
                                                                   6.9945
gf180mcu_fd_io__dvdd$1
                           (67.5000, 53.3750)
                                              (71.2650, 76.5200)
                                                                   6.9945
gf180mcu fd io dvdd$1
                           (1.2850, 62.0000)
                                              (17.5280, 67.8950)
                                                                   6.9945
gf180mcu_fd_io__dvdd$1
                           (3.7350, 53.3750)
                                              (7.5000, 76.5200)
                                                                  6.9945
gf180mcu fd io dvdd$1
                           (0.0000, 62.0000)
                                              (75.0000, 65.4850)
                                                                   3.4850
gf180mcu fd io dvdd$1
                          (5.2550, 62.0000)
                                              (69.7450, 67.8950)
                                                                  5.8950
gf180mcu_fd_io__dvdd$1
                          (7.5000, 62.0000)
                                              (67.5000, 70.8950)
                                                                  8.8950
gf180mcu fd io bi t$1
                         (0.0000, 62.0000)
                                             (75.0000, 65.4850)
                                                                 3.4850
gf180mcu fd io bi t$1
                         (7.5990, 62.0000)
                                             (67.1810, 75.6900)
                                                                 13.6900
gf180mcu_fd_io__bi_t$1
                         (67.5000, 55.0580)
                                             (73.4550, 75.7670)
                                                                  9.0575
gf180mcu fd io bi t$1
                         (60.0980, 62.0000)
                                             (73.9050, 68.8250)
                                                                  9.0575
gf180mcu fd io bi t$1
                         (1.1650, 62.0000)
                                             (73.5350, 67.2200)
                                                                 5.2200
gf180mcu_fd_io__bi_t$1
                         (4.0850, 62.0000)
                                             (70.7350, 69.3100)
                                                                 7.3100
gf180mcu fd io bi t$1
                         (7.5000, 62.0000)
                                             (67.5000, 71.9700)
                                                                 9.9700
gf180mcu_fd_io_bi_t$1
                         (1.2350, 55.1960)
                                             (7.5000, 75.6290)
                                                                 9.2645
gf180mcu fd io bi t$1
                         (0.7850, 62.0000)
                                             (14.5920, 68.8250)
                                                                 9.2645
gf180mcu_fd_io__asig_5p0$1 (0.0000, 62.0000)
                                                (75.0000, 65.4850)
                                                                    3.4850
gf180mcu_fd_io__asig_5p0$1 (7.5000, 62.0000)
                                                (67.5000, 73.4050)
                                                                    11.4050
gf180mcu_fd_io__asig_5p0$1 (5.2350, 53.1320)
                                                (7.5000, 76.8280)
                                                                    6.3760
gf180mcu fd io asig 5p0$1 (1.2850, 62.0000)
                                                (19.0000, 67.9600)
                                                                    6.3760
gf180mcu_fd_io__asig_5p0$1 (7.0050, 62.0000)
                                                (67.9950, 67.9600)
                                                                    5.9600
gf180mcu_fd_io__asig_5p0$1 (7.5000, 62.0000)
                                                (67.5000, 71.1700)
                                                                    9.1700
gf180mcu_fd_io__asig_5p0$1 (67.5000, 53.1320)
                                                (69.7650, 76.8280)
                                                                     6.3760
gf180mcu fd io asig 5p0$1 (56.0000, 62.0000)
                                                (73.7150, 67.9600)
                                                                     6.3760
```

DAD 40 - Dad an anima and a satisfaction site of Dalace 45.0

PAD.18 : Pad opening space to active circuit Poly2 = 15.0

.....

WARNING: The error count of 301 for this check exceeds the limit set in the runset. Details only available for the first 100.

Check was stopped early because error limit was reached.

Structure	(lower left x, y) (up	per right x, y) Distance	:
trackA	(378.2050, 2863.9400)	(387.5000, 2878.1330)	11.4230
trackA	(376.7050, 2866.3600)	(391.6550, 2873.0000)	11.4230
trackA	(378.2050, 2861.2270)	(387.5000, 2874.6730)	13.7260
trackA	(376.7050, 2862.9000)	(389.2950, 2873.0000)	13.7260
trackA	(447.5000, 2863.9400)	(456.7050, 2878.2030)	11.3500
trackA	(443.2550, 2866.3600)	(458.2050, 2873.0000)	11.3500
trackA	(447.5000, 2861.1570)	(456.7050, 2874.7430)	13.6655
trackA	(445.6150, 2862.9000)	(458.2050, 2873.0000)	13.6655
trackA	,	(487.5000, 2878.1330)	11.4230
trackA	(476.7050, 2866.3600)	(491.6550, 2873.0000)	11.4230
trackA	(478.2050, 2861.2270)	(487.5000, 2874.6730)	13.7260
trackA	(476.7050, 2862.9000)	(489.2950, 2873.0000)	13.7260
trackA	(578.2050, 2863.9400)	(587.5000, 2878.1330)	11.4230
trackA	(576.7050, 2866.3600)	(591.6550, 2873.0000)	11.4230
trackA	(578.2050, 2861.2270)	(587.5000, 2874.6730)	13.7260
trackA	(576.7050, 2862.9000)	(589.2950, 2873.0000)	13.7260
trackA	(647.5000, 2863.9400)	(656.7050, 2878.2030)	11.3500
trackA	(643.2550, 2866.3600)	(658.2050, 2873.0000)	11.3500
trackA	(647.5000, 2861.1570)	(656.7050, 2874.7430)	13.6655
trackA	(645.6150, 2862.9000)	(658.2050, 2873.0000)	13.6655
trackA	(547.5000, 2863.9400)	(556.7050, 2878.2030)	11.3500
trackA	(543.2550, 2866.3600)	(558.2050, 2873.0000)	11.3500
trackA	(547.5000, 2861.1570)	(556.7050, 2874.7430)	13.6655
trackA	(545.6150, 2862.9000)	(558.2050, 2873.0000)	13.6655
trackA	(678.2050, 2863.9400)	(687.5000, 2878.1330)	11.4230
trackA	(676.7050, 2866.3600)	(691.6550, 2873.0000)	11.4230
trackA	(678.2050, 2861.2270)	(687.5000, 2874.6730)	13.7260
trackA	(676.7050, 2862.9000)	(689.2950, 2873.0000)	13.7260
trackA	(778.2050, 2863.9400)	(787.5000, 2878.1330)	11.4230
trackA	(776.7050, 2866.3600)	(791.6550, 2873.0000)	11.4230
trackA	(778.2050, 2861.2270)	(787.5000, 2874.6730)	13.7260
trackA	(776.7050, 2862.9000)	(789.2950, 2873.0000)	13.7260
trackA	(847.5000, 2863.9400)	(856.7050, 2878.2030)	11.3500
trackA	(843.2550, 2866.3600)	(858.2050, 2873.0000)	11.3500
trackA	(847.5000, 2861.1570)	(856.7050, 2874.7430)	13.6655
trackA	(845.6150, 2862.9000)	(858.2050, 2873.0000)	13.6655

```
trackA
                (878.2050, 2863.9400) (887.5000, 2878.1330) 11.4230
trackA
                (876.7050, 2866.3600) (891.6550, 2873.0000) 11.4230
                (878.2050, 2861.2270) (887.5000, 2874.6730) 13.7260
trackA
                (876.7050, 2862.9000) (889.2950, 2873.0000) 13.7260
trackA
                (747.5000, 2863.9400) (756.7050, 2878.2030) 11.3500
trackA
                (743.2550, 2866.3600) (758.2050, 2873.0000) 11.3500
trackA
trackA
                (747.5000, 2861.1570) (756.7050, 2874.7430) 13.6655
trackA
                (745.6150, 2862.9000) (758.2050, 2873.0000) 13.6655
trackA
                (978.2050, 2863.9400) (987.5000, 2878.1330) 11.4230
trackA
                (976.7050, 2866.3600) (991.6550, 2873.0000) 11.4230
                (978.2050, 2861.2270) (987.5000, 2874.6730) 13.7260
trackA
                (976.7050, 2862.9000) (989.2950, 2873.0000) 13.7260
trackA
                (1047.5000, 2863.9400) (1056.7050, 2878.2030) 11.3500
trackA
                (1043.2550, 2866.3600) (1058.2050, 2873.0000) 11.3500
trackA
                (1047.5000, 2861.1570) (1056.7050, 2874.7430) 13.6655
trackA
trackA
                (1045.6150, 2862.9000) (1058.2050, 2873.0000) 13.6655
                (1078.2050, 2863.9400) (1087.5000, 2878.1330) 11.4230
trackA
trackA
                (1076.7050, 2866.3600) (1091.6550, 2873.0000) 11.4230
                (1078.2050, 2861.2270) (1087.5000, 2874.6730) 13.7260
trackA
                (1076.7050, 2862.9000) (1089.2950, 2873.0000) 13.7260
trackA
                (947.5000, 2863.9400) (956.7050, 2878.2030) 11.3500
trackA
trackA
                (943.2550, 2866.3600) (958.2050, 2873.0000) 11.3500
                (947.5000, 2861.1570) (956.7050, 2874.7430) 13.6655
trackA
                (945.6150, 2862.9000) (958.2050, 2873.0000) 13.6655
trackA
trackA
                (1178.2050, 2863.9400) (1187.5000, 2878.1330) 11.4230
trackA
                (1176.7050, 2866.3600) (1191.6550, 2873.0000) 11.4230
                (1178.2050, 2861.2270) (1187.5000, 2874.6730) 13.7260
trackA
                (1176.7050, 2862.9000) (1189.2950, 2873.0000) 13.7260
trackA
                (1247.5000, 2863.9400) (1256.7050, 2878.2030) 11.3500
trackA
                (1243.2550, 2866.3600) (1258.2050, 2873.0000) 11.3500
trackA
trackA
                (1247.5000, 2861.1570) (1256.7050, 2874.7430) 13.6655
                (1245.6150, 2862.9000) (1258.2050, 2873.0000) 13.6655
trackA
trackA
                (1147.5000, 2863.9400) (1156.7050, 2878.2030) 11.3500
trackA
                (1143.2550, 2866.3600) (1158.2050, 2873.0000) 11.3500
trackA
                (1147.5000, 2861.1570) (1156.7050, 2874.7430) 13.6655
trackA
                (1145.6150, 2862.9000) (1158.2050, 2873.0000) 13.6655
trackA
                (1378.2050, 2863.9400) (1387.5000, 2878.1330) 11.4230
trackA
                (1376.7050, 2866.3600) (1391.6550, 2873.0000) 11.4230
trackA
                (1378.2050, 2861.2270) (1387.5000, 2874.6730) 13.7260
trackA
                (1376.7050, 2862.9000) (1389.2950, 2873.0000) 13.7260
trackA
                (1447.5000, 2863.9400) (1456.7050, 2878.2030) 11.3500
trackA
                (1443.2550, 2866.3600) (1458.2050, 2873.0000) 11.3500
trackA
                (1447.5000, 2861.1570) (1456.7050, 2874.7430) 13.6655
trackA
                (1445.6150, 2862.9000) (1458.2050, 2873.0000) 13.6655
```

```
trackA
               (1278.2050, 2863.9400) (1287.5000, 2878.1330) 11.4230
trackA
               (1276.7050, 2866.3600) (1291.6550, 2873.0000) 11.4230
               (1278.2050, 2861.2270) (1287.5000, 2874.6730) 13.7260
trackA
               (1276.7050, 2862.9000) (1289.2950, 2873.0000) 13.7260
trackA
trackA
               (1347.5000, 2863.9400) (1356.7050, 2878.2030) 11.3500
               (1343.2550, 2866.3600) (1358.2050, 2873.0000) 11.3500
trackA
               (1347.5000, 2861.1570) (1356.7050, 2874.7430) 13.6655
trackA
trackA
               (1345.6150, 2862.9000) (1358.2050, 2873.0000) 13.6655
gf180mcu fd io dvss$1 (7.5000, 62.0000)
                                            (67.5000, 76.0750)
                                                                14.0750
gf180mcu fd io dvss$1 (7.5000, 62.0000)
                                            (67.5000, 74.8550)
                                                                12.8550
gf180mcu fd io dvdd$1 (7.8650, 62.0000)
                                            (67.1350, 76.3600)
                                                                14.3600
gf180mcu fd io dvdd$1 (7.5000, 62.0000)
                                            (67.5000, 75.1400)
                                                                13.1400
gf180mcu fd io bi t$1 (16.0210, 62.0000)
                                           (32.9090, 74.7700)
                                                                12.7700
gf180mcu fd io bi t$1 (7.5000, 62.0000)
                                           (23.5390, 74.7700)
                                                                12.7700
gf180mcu fd io bi t$1 (27.7610, 62.0000)
                                           (44.6490, 74.7700)
                                                                12.7700
gf180mcu_fd_io__bi_t$1 (18.3910, 62.0000)
                                           (35.2790, 74.7700)
                                                                12.7700
gf180mcu fd io bi t$1 (39.5010, 62.0000)
                                           (56.3890, 74.7700)
                                                                12.7700
gf180mcu fd io bi t$1 (30.1310, 62.0000)
                                           (47.0190, 74.7700)
                                                                12.7700
gf180mcu_fd_io__bi_t$1 (51.2410, 62.0000)
                                           (67.5000, 74.7700)
                                                                12.7700
gf180mcu fd io bi t$1 (41.8710, 62.0000)
                                           (58.7590, 74.7700)
                                                                12.7700
```

PAD.19a_M1 : Pad opening to non-pad circuit Metal1, 2, 3, 4,5 up to Top Metal-1 = 6.0

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu drc.rs:4578:external2

(lower left x, y) (upper right x, y) Distance _____ trackA (2869.4600, 2192.7630) (2873.0000, 2209.7390) 3.5400 trackA (62.0000, 2192.7630) (65.5400, 2209.7390) 3.5400 (62.0000, 2192.7630) (67.6650, 2209.7390) 5.6650 trackA trackA (62.0000, 1703.5970) (65.5400, 1720.5730) 3.5400 trackA (2869.4600, 1703.5970) (2873.0000, 1720.5730) 3.5400 (2867.3350, 1703.5970) (2873.0000, 1720.5730) 5.6650 trackA trackA (2869.4600, 1214.4310) (2873.0000, 1231.4070) 3.5400 (62.0000, 1214.4310) (65.5400, 1231.4070) 3.5400 trackA trackA (62.0000, 725.2650) (65.5400, 742.2410) 3.5400 trackA (2869.4600, 725.2650) (2873.0000, 742.2410) 3.5400 gf180mcu fd io dvss\$1 (2.6560, 62.0000) (72.3440, 65.5400) 3.5400 (5.5230, 62.0000) gf180mcu fd io dvss\$1 (69.4770, 67.6650) 5.6650

```
gf180mcu_fd_io__dvdd$1 (2.6560, 62.0000) (72.3440, 65.5400) 3.5400 gf180mcu_fd_io__dvdd$1 (6.7270, 62.0000) (68.2730, 67.9500) 5.9500 gf180mcu_fd_io__bi_t$1 (2.6560, 62.0000) (72.3440, 65.5400) 3.5400 gf180mcu_fd_io__asig_5p0$1 (2.6560, 62.0000) (72.3440, 65.5400) 3.5400
```

PAD.19a_M2 : Pad opening to non-pad circuit Metal1, 2, 3, 4,5 up to Top Metal-1 = 6.0

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:4582:external2

WARNING: The error count of 227 for this check exceeds the limit set in the runset. Details only available for the first 100.

```
Structure (lower left x, y) (upper right x, y) Distance
```

----trackA (2141.6870, 2867.0500) (2143.3130, 2873.0000) 5.9500 (2141.5400, 2867.0500) (2142.5400, 2873.0000) 5.9500 trackA trackA (2140.7670, 2867.0500) (2142.5400, 2873.0000) 5.9500 trackA (2129.6900, 2867.0500) (2131.4630, 2873.0000) 5.9500 (2129.6900, 2867.0500) (2130.6900, 2873.0000) 5.9500 trackA trackA (2128.9170, 2867.0500) (2130.6900, 2873.0000) 5.9500 trackA (2117.6870, 2867.0500) (2119.6130, 2873.0000) 5.9500 (2117.3870, 2867.0500) (2118.8400, 2873.0000) 5.9500 trackA

trackA (2116.1600, 2867.0500) (2118.8400, 2873.0000) 5.9500 trackA (2116.1600, 2867.0500) (2117.2330, 2873.0000) 5.9500

trackA (2115.3870, 2867.0500) (2116.9330, 2873.0000) 5.9500 trackA (2104.3100, 2867.0500) (2106.0830, 2873.0000) 5.9500

trackA (2104.1600, 2867.0500) (2105.2330, 2873.0000) 5.9500

trackA (2103.5370, 2867.0500) (2104.9330, 2873.0000) 5.9520

trackA (2093.3870, 2867.0500) (2094.2330, 2873.0000) 5.9910 trackA (2092.4600, 2867.0500) (2094.1600, 2873.0000) 5.9500

trackA (2092.1600, 2867.0500) (2093.2330, 2873.0000) 5.9500

trackA (2091.6870, 2867.0500) (2092.9330, 2873.0000) 5.9575

trackA (2441.6870, 2867.0500) (2443.3130, 2873.0000) 5.9500

trackA (2441.5400, 2867.0500) (2442.5400, 2873.0000) 5.9500

trackA (2440.7670, 2867.0500) (2442.5400, 2873.0000) 5.9500

trackA (2393.3870, 2867.0500) (2394.2330, 2873.0000) 5.9910

trackA (2392.4600, 2867.0500) (2394.1600, 2873.0000) 5.9500

trackA (2392.1600, 2867.0500) (2393.2330, 2873.0000) 5.9500

trackA (2391.6870, 2867.0500) (2392.9330, 2873.0000) 5.9575

```
trackA
        (2541.6870, 2867.0500) (2543.3130, 2873.0000) 5.9500
trackA
        (2541.5400, 2867.0500) (2542.5400, 2873.0000) 5.9500
        (2540.7670, 2867.0500) (2542.5400, 2873.0000) 5.9500
trackA
trackA
        (2529.6900, 2867.0500) (2531.4630, 2873.0000) 5.9500
trackA
        (2529.6900, 2867.0500) (2530.6900, 2873.0000) 5.9500
        (2528.9170, 2867.0500) (2530.6900, 2873.0000) 5.9500
trackA
trackA
        (2517.6870, 2867.0500) (2519.6130, 2873.0000) 5.9500
trackA
        (2517.3870, 2867.0500) (2518.8400, 2873.0000) 5.9500
trackA
        (2516.1600, 2867.0500) (2518.8400, 2873.0000) 5.9500
trackA
        (2516.1600, 2867.0500) (2517.2330, 2873.0000) 5.9500
trackA
        (2515.3870, 2867.0500) (2516.9330, 2873.0000) 5.9500
trackA
        (2504.3100, 2867.0500) (2506.0830, 2873.0000) 5.9500
trackA
        (2504.1600, 2867.0500) (2505.2330, 2873.0000) 5.9500
trackA
        (2503.5370, 2867.0500) (2504.9330, 2873.0000) 5.9520
        (2493.3870, 2867.0500) (2494.2330, 2873.0000) 5.9910
trackA
trackA
        (2492.4600, 2867.0500) (2494.1600, 2873.0000) 5.9500
trackA
        (2492.1600, 2867.0500) (2493.2330, 2873.0000) 5.9500
trackA
        (2491.6870, 2867.0500) (2492.9330, 2873.0000) 5.9575
        (2342.4830, 2867.3350) (2344.5170, 2873.0000) 5.9815
trackA
        (2342.1830, 2867.3350) (2344.4600, 2873.0000) 5.8920
trackA
        (2341.5400, 2867.3350) (2344.1600, 2873.0000) 5.6650
trackA
trackA
        (2341.5400, 2867.3350) (2342.5400, 2873.0000) 5.6650
trackA
        (2340.4600, 2867.3350) (2342.5400, 2873.0000) 5.6650
trackA
        (2340.1600, 2867.3350) (2342.4370, 2873.0000) 5.7670
trackA
        (2339.5630, 2867.3350) (2342.1370, 2873.0000) 5.8305
trackA
        (2292.4830, 2867.3350) (2295.4370, 2873.0000) 5.7525
        (2292.4600, 2867.3350) (2294.4600, 2873.0000) 5.7080
trackA
        (2292.4600, 2867.3350) (2294.1600, 2873.0000) 5.6650
trackA
trackA
        (2292.1600, 2867.3350) (2293.4600, 2873.0000) 5.6650
        (2290.4830, 2867.3350) (2293.4600, 2873.0000) 5.6730
trackA
trackA
        (62.0000, 2493.3870) (67.9500, 2494.2330) 5.9910
trackA
        (62.0000, 2492.4600) (67.9500, 2494.1600) 5.9500
trackA
        (62.0000, 2492.1600)
                              (67.9500, 2493.2330) 5.9500
trackA
        (62.0000, 2491.6870) (67.9500, 2492.9330) 5.9575
trackA
        (62.0000, 2341.6870)
                              (67.9500, 2343.3130) 5.9500
trackA
        (62.0000, 2341.5400)
                              (67.9500, 2342.5400) 5.9500
trackA
        (62.0000, 2340.7670)
                              (67.9500, 2342.5400) 5.9500
trackA
        (62.0000, 2442.4830)
                              (67.6650, 2444.5170) 5.9815
trackA
        (62.0000, 2442.1830)
                              (67.6650, 2444.4600) 5.8920
trackA
        (62.0000, 2441.5400)
                              (67.6650, 2444.1600) 5.6650
                              (67.6650, 2442.5400) 5.6650
trackA
        (62.0000, 2441.5400)
trackA
        (62.0000, 2440.4600)
                              (67.6650, 2442.5400) 5.6650
trackA
        (62.0000, 2440.1600)
                              (67.6650, 2442.4370) 5.7670
trackA
        (62.0000, 2439.5630) (67.6650, 2442.1370) 5.8305
```

```
(62.0000, 2392.4830) (67.6650, 2395.4370) 5.7525
trackA
trackA
       (62.0000, 2392.4600) (67.6650, 2394.4600) 5.7080
trackA
        (62.0000, 2392.4600) (67.6650, 2394.1600) 5.6650
trackA
        (62.0000, 2392.1600)
                             (67.6650, 2393.4600) 5.6650
        (62.0000, 2390.4830) (67.6650, 2393.4600) 5.6730
trackA
trackA
        (62.0000, 2242.4830) (67.6650, 2244.5170) 5.9815
trackA
        (62.0000, 2242.1830) (67.6650, 2244.4600) 5.8920
trackA
        (62.0000, 2241.5400) (67.6650, 2244.1600) 5.6650
        (62.0000, 2241.5400) (67.6650, 2242.5400) 5.6650
trackA
trackA
        (62.0000, 2240.4600) (67.6650, 2242.5400) 5.6650
trackA
        (62.0000, 2240.1600) (67.6650, 2242.4370) 5.7670
trackA
        (62.0000, 2239.5630) (67.6650, 2242.1370) 5.8305
trackA
        (62.0000, 2230.4830) (67.6650, 2232.6670) 5.9350
        (62.0000, 2230.1830) (67.6650, 2232.4600) 5.8525
trackA
trackA
        (62.0000, 2229.6900) (67.6650, 2232.1600) 5.6650
trackA
        (62.0000, 2229.6900) (67.6650, 2230.6900) 5.6650
trackA
        (62.0000, 2228.4600) (67.6650, 2230.6900) 5.6650
trackA
        (62.0000, 2228.1600) (67.6650, 2230.4370) 5.7970
trackA
        (62.0000, 2227.7130) (67.6650, 2230.1370) 5.8680
        (2867.3350, 1714.1830) (2873.0000, 1716.5170) 5.8920
trackA
trackA
        (2867.3350, 1714.5400) (2873.0000, 1716.8170) 5.8170
trackA
        (2867.3350, 1714.8400) (2873.0000, 1718.5170) 5.6650
trackA
        (2867.3350, 1716.1600) (2873.0000, 1718.8170) 5.6650
        (2867.3350, 1716.1600) (2873.0000, 1718.8400) 5.6650
trackA
trackA
        (2867.3350, 1716.5630) (2873.0000, 1718.8400) 5.6650
       (2867.3350, 1716.8630) (2873.0000, 1720.5400) 5.6650
trackA
trackA
       (2867.3350, 1718.5630) (2873.0000, 1720.8170) 5.9145
trackA
       (2867.3350, 1727.7130) (2873.0000, 1730.5170) 5.7805
trackA
       (2867.3350, 1728.5400) (2873.0000, 1730.6900) 5.7285
       (2867.3350, 1728.8400) (2873.0000, 1730.6900) 5.6650
trackA
trackA
       (2867.3350, 1729.6900) (2873.0000, 1730.8400) 5.6650
```

```
PL.12 : V5_Xtor enclose 5V COMP
```

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:2354:not

```
Structure (lower left x, y) (upper right x, y)
```

trackA (1280.5250, 2287.7250) (1463.2250, 2428.7950) trackA (1462.8450, 2413.4150) (1463.2250, 2415.8750)

```
trackA
       (1462.8450, 2405.8050) (1463.2250, 2408.2650)
trackA
       (1462.8450, 2398.1950) (1463.2250, 2400.6550)
trackA
       (1462.8450, 2390.5850) (1463.2250, 2393.0450)
trackA
       (1462.8450, 2382.9750) (1463.2250, 2385.4350)
trackA
       (1462.8450, 2375.3650) (1463.2250, 2377.8250)
trackA
       (1462.8450, 2367.7550) (1463.2250, 2370.2150)
trackA
       (1496.5400, 2329.1250) (1548.8300, 2417.0350)
trackA
       (1496.5400, 2413.4150) (1496.9000, 2415.8750)
       (1496.5400, 2405.8050) (1496.9000, 2408.2650)
trackA
trackA
       (1496.5400, 2398.1950) (1496.9000, 2400.6550)
trackA
       (1496.5400, 2390.5850) (1496.9000, 2393.0450)
trackA
       (1496.5400, 2382.9750) (1496.9000, 2385.4350)
trackA
       (1496.5400, 2375.3650) (1496.9000, 2377.8250)
trackA
       (1496.5400, 2367.7550) (1496.9000, 2370.2150)
trackA
       (1356.6500, 2358.4650) (1411.8900, 2421.9750)
trackA
       (1356.6500, 2387.1350) (1357.0300, 2387.8350)
trackA
       (1356.6500, 2381.2850) (1357.0300, 2381.9850)
trackA
       (1356.6500, 2375.4350) (1357.0300, 2376.1350)
trackA
       (1356.6500, 2369.5850) (1357.0300, 2370.2850)
trackA
       (1341.1100, 2363.4850) (1349.6300, 2394.4950)
trackA
       (1349.2500, 2387.1350) (1349.6300, 2387.8350)
trackA
       (1349.2500, 2381.2850) (1349.6300, 2381.9850)
trackA
       (1349.2500, 2375.4350) (1349.6300, 2376.1350)
trackA
       (1349.2500, 2369.5850) (1349.6300, 2370.2850)
trackA
       (1415.5500, 2361.1550) (1455.1300, 2421.9750)
trackA
       (1454.7500, 2413.4150) (1455.1300, 2415.8750)
trackA
       (1454.7500, 2405.8050) (1455.1300, 2408.2650)
trackA
       (1454.7500, 2398.1950) (1455.1300, 2400.6550)
trackA
       (1454.7500, 2390.5850) (1455.1300, 2393.0450)
trackA
       (1454.7500, 2382.9750) (1455.1300, 2385.4350)
trackA (1454.7500, 2375.3650) (1455.1300, 2377.8250)
trackA
       (1454.7500, 2367.7550) (1455.1300, 2370.2150)
PL.3: Min. Poly2 Spacing: 0.24
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:2299:external1
  Structure (lower left x, y) (upper right x, y) Distance
```

trackA (1395.0500, 2390.3920) (1395.2500, 2390.5250) 0.2000

```
trackA (1395.0500, 2390.8750) (1395.2500, 2391.0080) 0.2000
trackA (1395.0500, 2390.5250) (1395.2500, 2390.8750) 0.2000
PL.3b MV: Min Poly2 space on COMP for low active sheet resistivity
(guideline)
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:2312:outside
-----
                   (lower left x, y) (upper right x, y)
                   (494.2900, 1175.4050) (495.1100, 1175.7250)
gf180mcu_fd_sc_mcu7t5v0__dffrnq_1 (7.2800, 0.7800)
                                                 (7.5200, 1.1400)
gf180mcu_fd_sc_mcu7t5v0__dffrnq_1 (6.4400, 0.7800)
                                                 (6.6800, 1.1400)
PL.4: Min. Polv2 Extension beyond COMP to form end cap: 0.22
_____
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:2324:internal1
-----
Structure (lower left x, y) (upper right x, y) Distance
trackA (1358.0100, 2368.5250) (1358.0900, 2368.6150) 0.0900
trackA (1358.0900, 2368.5250) (1358.2910, 2368.6150) 0.0900
trackA (1358.9500, 2368.5250) (1359.3900, 2368.6150) 0.0900
      (1358.7490, 2368.5250) (1358.9500, 2368.6150) 0.0900
trackA
trackA
      (1367.3200, 2368.5250) (1367.4000, 2368.6150) 0.0900
trackA
      (1367.4000, 2368.5250) (1367.6010, 2368.6150) 0.0900
trackA
      (1368.2600, 2368.5250) (1368.7000, 2368.6150) 0.0900
trackA
      (1368.0590, 2368.5250) (1368.2600, 2368.6150) 0.0900
trackA
      (1376.6300, 2368.5250) (1376.7100, 2368.6150) 0.0900
trackA
      (1376.7100, 2368.5250) (1376.9110, 2368.6150) 0.0900
trackA
      (1377.5700, 2368.5250) (1378.0100, 2368.6150) 0.0900
      (1377.3690, 2368.5250) (1377.5700, 2368.6150) 0.0900
trackA
trackA
      (1385.9400, 2368.5250) (1386.0200, 2368.6150) 0.0900
trackA
      (1386.0200, 2368.5250) (1386.2210, 2368.6150) 0.0900
trackA
      (1386.8800, 2368.5250) (1387.3200, 2368.6150) 0.0900
trackA
      (1386.6790, 2368.5250) (1386.8800, 2368.6150) 0.0900
```

```
trackA
      (1358.7300, 2383.0250) (1359.3900, 2383.1750) 0.1500
       (1367.3200, 2383.0250) (1367.6200, 2383.1750) 0.1500
trackA
       (1368.0400, 2383.0250) (1368.7000, 2383.1750) 0.1500
trackA
trackA
       (1376.6300, 2383.0250) (1376.9300, 2383.1750) 0.1500
       (1377.3500, 2383.0250) (1378.0100, 2383.1750) 0.1500
trackA
trackA
      (1385.9400, 2383.0250) (1386.2400, 2383.1750) 0.1500
trackA (1386.6600, 2383.0250) (1387.3200, 2383.1750) 0.1500
PL.6: (Poly2 gate not touching YMTP MK) with 90 degree bends are
not allowed.
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu_drc.rs:2336:external1_error
_____
Structure (lower left x, y) (upper right x, y) Distance
_____
trackA (1358.0000, 2390.5150) (1358.0100, 2390.5250) 0.0000
trackA (1359.3900, 2390.5150) (1359.4000, 2390.5250) 0.0000
trackA (1367.3100, 2390.5150) (1367.3200, 2390.5250) 0.0000
      (1368.7000, 2390.5150) (1368.7100, 2390.5250) 0.0000
trackA
trackA (1376.6200, 2390.5150) (1376.6300, 2390.5250) 0.0000
trackA (1378.0100, 2390.5150) (1378.0200, 2390.5250) 0.0000
trackA (1385.9300, 2390.5150) (1385.9400, 2390.5250) 0.0000
trackA (1387.3200, 2390.5150) (1387.3300, 2390.5250) 0.0000
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:2337:internal1 error
-----
Structure (lower left x, y) (upper right x, y) Distance
-----
trackA (1358.0100, 2383.6150) (1358.0200, 2383.6250) 0.0000
trackA (1358.0100, 2390.2750) (1358.0200, 2390.2850) 0.0000
trackA
       (1359.3800, 2383.6150) (1359.3900, 2383.6250) 0.0000
       (1359.3800, 2390.2750) (1359.3900, 2390.2850) 0.0000
trackA
trackA
       (1367.3200, 2383.6150) (1367.3300, 2383.6250) 0.0000
trackA
       (1367.3200, 2390.2750) (1367.3300, 2390.2850) 0.0000
trackA
       (1368.6900, 2383.6150) (1368.7000, 2383.6250) 0.0000
trackA
      (1368.6900, 2390.2750) (1368.7000, 2390.2850) 0.0000
trackA
       (1376.6300, 2383.6150) (1376.6400, 2383.6250) 0.0000
trackA
       (1376.6300, 2390.2750) (1376.6400, 2390.2850) 0.0000
```

(1358.0100, 2383.0250) (1358.3100, 2383.1750) 0.1500

trackA

```
trackA (1378.0000, 2383.6150) (1378.0100, 2383.6250) 0.0000
trackA (1378.0000, 2390.2750) (1378.0100, 2390.2850) 0.0000
trackA (1385.9400, 2383.6150) (1385.9500, 2383.6250) 0.0000
trackA (1385.9400, 2390.2750) (1385.9500, 2390.2850) 0.0000
trackA (1387.3100, 2383.6150) (1387.3200, 2383.6250) 0.0000
trackA (1387.3100, 2390.2750) (1387.3200, 2390.2850) 0.0000
PL.8 : Poly2 coverage over the entire die shall be >= 14%
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu_drc.rs:2815:density
-----
Structure Window (x1,y1) (x2,y2)
                         Report = Value
_____
trackA (0.0000, 0.0000) (2935.0000, 2935.0000)
                         Min ratio = 0.1036
                         Max ratio = 0.1036
                         Avg ratio = 0.1036
                         Min areaL1 = 892830.6962
                         Max areal1 = 892830.6962
                         Avg areaL1 = 892830.6962
                         Min areaW = 8614225.0000
                          Max areaW = 8614225.0000
                          Avg areaW = 8614225.0000
PP.11: Butting Pplus and NCOMP is forbidden within 0.43um of Nwell
edge (for outside DNWELL) and of LVPWELL edge (for inside DNWELL case)
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:2646:and
-----
Structure (lower left x, y) (upper right x, y)
______
trackA (1351.8510, 2366.3540) (1352.7090, 2366.3550)
trackA (1351.8510, 2372.2040) (1352.7090, 2372.2050)
trackA (1351.8510, 2378.0540) (1352.7090, 2378.0550)
trackA (1351.8510, 2383.9040) (1352.7090, 2383.9050)
```

PP.12 : Pplus overlap with N-channel Poly2 gate extension is forbidden within 0.32um of N-channel gate

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:2654:and

Structure (lower left x, y) (upper right x, y)

```
-----
trackA (1348.7600, 2367.1250) (1349.0800, 2367.6250)
trackA
      (1349.8000, 2367.1250) (1350.1200, 2367.6250)
       (1348.7600, 2372.9750) (1349.0800, 2373.4750)
trackA
trackA
       (1348.7600, 2378.8250) (1349.0800, 2379.3250)
trackA
      (1348.7600, 2384.6750) (1349.0800, 2385.1750)
trackA
       (1348.7600, 2390.5250) (1349.0800, 2391.0250)
trackA
       (1349.8000, 2372.9750) (1350.1200, 2373.4750)
trackA
       (1349.8000, 2378.8250) (1350.1200, 2379.3250)
```

trackA (1349.8000, 2376.6250) (1350.1200, 2379.3250) trackA (1349.8000, 2384.6750) (1350.1200, 2385.1750) trackA (1349.8000, 2300.5350) (1350.1200, 2301.0350)

trackA (1349.8000, 2390.5250) (1350.1200, 2391.0250) trackA (1358.0100, 2368.5250) (1358.3100, 2368.5650)

trackA (1358.7300, 2368.5250) (1359.0500, 2368.5650)

trackA (1367.3200, 2368.5250) (1367.6200, 2368.5650) trackA (1368.0400, 2368.5250) (1368.3600, 2368.5650)

trackA (1376.6300, 2368.5250) (1376.9300, 2368.5650)

trackA (1377.3500, 2368.5250) (1377.6700, 2368.5650)

trackA (1385.9400, 2368.5250) (1386.2400, 2368.5650)

trackA (1386.6600, 2368.5250) (1386.9800, 2368.5650) trackA (1357.7400, 2390.2750) (1358.0600, 2391.0250)

trackA (1357.7400, 2390.2750) (1358.0600, 2391.0250) trackA (1358.9800, 2390.2750) (1359.3000, 2391.0250)

trackA (1367.0500, 2390.2750) (1367.3700, 2391.0250)

trackA (1368.2900, 2390.2750) (1368.6100, 2391.0250)

trackA (1376.3600, 2390.2750) (1376.6800, 2391.0250)

trackA (1377.6000, 2390.2750) (1377.9200, 2391.0250)

trackA (1385.6700, 2390.2750) (1385.9900, 2391.0250)

trackA (1386.9100, 2390.2750) (1387.2300, 2391.0250)

trackA (1454.2600, 2365.2950) (1454.5800, 2365.7950)

trackA (1455.3000, 2365.2950) (1455.6200, 2365.7950)

trackA (1454.2600, 2372.9050) (1454.5800, 2373.4050)

trackA (1454.2600, 2380.5150) (1454.5800, 2381.0150)

trackA (1454.2600, 2388.1250) (1454.5800, 2388.6250)

```
trackA
        (1454.2600, 2395.7350) (1454.5800, 2396.2350)
trackA
       (1454.2600, 2403.3450) (1454.5800, 2403.8450)
trackA
        (1454.2600, 2410.9550) (1454.5800, 2411.4550)
trackA
        (1454.2600, 2418.5650) (1454.5800, 2419.0650)
trackA
       (1455.3000, 2372.9050) (1455.6200, 2373.4050)
trackA
        (1455.3000, 2380.5150) (1455.6200, 2381.0150)
trackA
        (1455.3000, 2388.1250) (1455.6200, 2388.6250)
trackA
        (1455.3000, 2395.7350) (1455.6200, 2396.2350)
trackA
        (1455.3000, 2403.3450) (1455.6200, 2403.8450)
trackA
       (1455.3000, 2410.9550) (1455.6200, 2411.4550)
trackA
       (1455.3000, 2418.5650) (1455.6200, 2419.0650)
```

PP.2: Min. Pplus Space: 0.4

trackA

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu drc.rs:2514:external1

WARNING: The error count of 132 for this check exceeds the limit set in the runset. Details only available for the first 100.

```
Structure (lower left x, y) (upper right x, y) Distance
```

trackA (1357.8000, 2389.5450) (1358.1400, 2389.7550) 0.2100 trackA (1358.9000, 2389.5450) (1359.2400, 2389.7550) 0.2100 trackA (1367.1100, 2389.5450) (1367.4500, 2389.7550) 0.2100 trackA (1368.2100, 2389.5450) (1368.5500, 2389.7550) 0.2100 (1385.7300, 2389.5450) (1386.0700, 2389.7550) 0.2100 trackA trackA (1386.8300, 2389.5450) (1387.1700, 2389.7550) 0.2100 trackA (1376.4200, 2389.5450) (1376.7600, 2389.7550) 0.2100 trackA (1377.5200, 2389.5450) (1377.8600, 2389.7550) 0.2100 trackA (1358.1400, 2389.5450) (1358.9000, 2389.7550) 0.2100 trackA (1367.4500, 2389.5450) (1368.2100, 2389.7550) 0.2100 trackA (1376.7600, 2389.5450) (1377.5200, 2389.7550) 0.2100 trackA (1386.0700, 2389.5450) (1386.8300, 2389.7550) 0.2100 trackA (516.4350, 1226.4260) (516.8250, 1226.5150) 0.3900 trackA (516.4350, 1226.1250) (516.5240, 1226.5150) 0.3900 trackA (510.9860, 1226.1250) (511.0750, 1226.5150) 0.3900 (510.6850, 1226.4260) (511.0750, 1226.5150) 0.3900 trackA trackA (581.4860, 1226.1250) (581.5750, 1226.5150) 0.3900 trackA (581.1850, 1226.4260) (581.5750, 1226.5150) 0.3900

(586.9350, 1226.4260) (587.3250, 1226.5150) 0.3900

```
trackA
        (586.9350, 1226.1250) (587.0240, 1226.5150) 0.3900
trackA
        (511.0750, 1226.1250) (516.4350, 1226.5150) 0.3900
trackA
        (510.6850, 1226.5150) (511.0750, 1254.8750) 0.3900
trackA
        (516.4350, 1226.5150) (516.8250, 1254.8750) 0.3900
trackA
        (581.5750, 1226.1250) (586.9350, 1226.5150) 0.3900
trackA
        (581.1850, 1226.5150) (581.5750, 1254.8750) 0.3900
trackA
        (586.9350, 1226.5150) (587.3250, 1254.8750) 0.3900
trackA
        (651.9860, 1226.1250) (652.0750, 1226.5150) 0.3900
trackA
        (651.6850, 1226.4260) (652.0750, 1226.5150) 0.3900
trackA
        (657.4350, 1226.4260) (657.8250, 1226.5150) 0.3900
trackA
        (657.4350, 1226.1250) (657.5240, 1226.5150) 0.3900
trackA
        (727.9350, 1226.4260) (728.3250, 1226.5150) 0.3900
        (727.9350, 1226.1250) (728.0240, 1226.5150) 0.3900
trackA
trackA
        (722.4860, 1226.1250) (722.5750, 1226.5150) 0.3900
        (722.1850, 1226.4260) (722.5750, 1226.5150) 0.3900
trackA
trackA
        (652.0750, 1226.1250) (657.4350, 1226.5150) 0.3900
        (651.6850, 1226.5150) (652.0750, 1254.8750) 0.3900
trackA
trackA
        (657.4350, 1226.5150) (657.8250, 1254.8750) 0.3900
        (722.5750, 1226.1250) (727.9350, 1226.5150) 0.3900
trackA
        (722.1850, 1226.5150) (722.5750, 1254.8750) 0.3900
trackA
        (727.9350, 1226.5150) (728.3250, 1254.8750) 0.3900
trackA
trackA
        (510.6850, 1254.8750) (511.0750, 1254.9640) 0.3900
trackA
        (516.4350, 1254.8750) (516.8250, 1254.9640) 0.3900
        (516.4350, 1260.3260) (516.8250, 1260.4150) 0.3900
trackA
trackA
        (510.6850, 1260.3260) (511.0750, 1260.4150) 0.3900
trackA
        (510.6850, 1288.7750) (511.0750, 1288.8640) 0.3900
trackA
        (510.9860, 1288.7750) (511.0750, 1289.1650) 0.3900
trackA
        (516.4350, 1288.7750) (516.5240, 1289.1650) 0.3900
trackA
        (516.4350, 1288.7750) (516.8250, 1288.8640) 0.3900
        (581.1850, 1254.8750) (581.5750, 1254.9640) 0.3900
trackA
trackA
        (581.1850, 1260.3260) (581.5750, 1260.4150) 0.3900
        (586.9350, 1254.8750) (587.3250, 1254.9640) 0.3900
trackA
trackA
        (586.9350, 1260.3260) (587.3250, 1260.4150) 0.3900
trackA
        (581.1850, 1288.7750) (581.5750, 1288.8640) 0.3900
trackA
        (581.4860, 1288.7750) (581.5750, 1289.1650) 0.3900
trackA
        (586.9350, 1288.7750) (587.0240, 1289.1650) 0.3900
trackA
        (586.9350, 1288.7750) (587.3250, 1288.8640) 0.3900
trackA
        (511.0750, 1288.7750) (516.4350, 1289.1650) 0.3900
trackA
        (510.6850, 1260.4150) (511.0750, 1288.7750) 0.3900
trackA
        (516.4350, 1260.4150) (516.8250, 1288.7750) 0.3900
trackA
        (581.5750, 1288.7750) (586.9350, 1289.1650) 0.3900
trackA
        (581.1850, 1260.4150) (581.5750, 1288.7750) 0.3900
trackA
        (586.9350, 1260.4150) (587.3250, 1288.7750) 0.3900
trackA
        (651.6850, 1254.8750) (652.0750, 1254.9640) 0.3900
```

```
trackA
        (651,6850, 1260,3260) (652,0750, 1260,4150) 0,3900
trackA
        (657.4350, 1254.8750) (657.8250, 1254.9640) 0.3900
        (657.4350, 1260.3260) (657.8250, 1260.4150) 0.3900
trackA
trackA
        (722.1850, 1254.8750) (722.5750, 1254.9640) 0.3900
        (727.9350, 1254.8750) (728.3250, 1254.9640) 0.3900
trackA
        (727.9350, 1260.3260) (728.3250, 1260.4150) 0.3900
trackA
trackA
        (722.1850, 1260.3260) (722.5750, 1260.4150) 0.3900
trackA
        (651.6850, 1288.7750) (652.0750, 1288.8640) 0.3900
trackA
        (651.9860, 1288.7750) (652.0750, 1289.1650) 0.3900
trackA
        (657.4350, 1288.7750) (657.5240, 1289.1650) 0.3900
trackA
        (657.4350, 1288.7750) (657.8250, 1288.8640) 0.3900
trackA
        (722.1850, 1288.7750) (722.5750, 1288.8640) 0.3900
        (722.4860, 1288.7750) (722.5750, 1289.1650) 0.3900
trackA
trackA
        (727.9350, 1288.7750) (728.0240, 1289.1650) 0.3900
        (727.9350, 1288.7750) (728.3250, 1288.8640) 0.3900
trackA
trackA
        (652.0750, 1288.7750) (657.4350, 1289.1650) 0.3900
        (651.6850, 1260.4150) (652.0750, 1288.7750) 0.3900
trackA
trackA
        (657.4350, 1260.4150) (657.8250, 1288.7750) 0.3900
        (722.5750, 1288.7750) (727.9350, 1289.1650) 0.3900
trackA
        (722.1850, 1260.4150) (722.5750, 1288.7750) 0.3900
trackA
        (727.9350, 1260.4150) (728.3250, 1288.7750) 0.3900
trackA
trackA
        (537.3900, 1306.7150) (537.4790, 1307.1050) 0.3900
trackA
        (531.4410, 1306.7150) (531.5300, 1307.1050) 0.3900
        (545.3900, 1306.7150) (545.4790, 1307.1050) 0.3900
trackA
trackA
        (539.4410, 1306.7150) (539.5300, 1307.1050) 0.3900
trackA
        (561.3500, 1306.7150) (561.4390, 1307.1050) 0.3900
trackA
        (555.4010, 1306.7150) (555.4900, 1307.1050) 0.3900
        (563.4010, 1306.7150) (563.4900, 1307.1050) 0.3900
trackA
trackA
        (561.3500, 1358.4750) (561.4390, 1358.8650) 0.3900
        (555.4010, 1358.4750) (555.4900, 1358.8650) 0.3900
trackA
trackA
        (563.4010, 1358.4750) (563.4900, 1358.8650) 0.3900
op buffer (6.7000, -73.2400)
                             (6.9650, -72.9400)
                                                 0.3000
op buffer (-6.9650, -73.2400)
                             (-6.7000, -72.9400)
                                                 0.3000
op buffer (-6.9650, -41.0000)
                            (-6.7000, -40.7000)
                                                 0.3000
op_buffer (6.7000, -41.0000)
                             (6.9650, -40.7000)
                                                 0.3000
op buffer (-6.7000, -73.2400)
                             (6.7000, -72.9400)
                                                 0.3000
op_buffer (-6.7000, -41.0000)
                             (6.7000, -40.7000)
                                                 0.3000
```

PP.3c(ii): Pplus space to NCOMP outside DNWELL for NCOMP space to Nwell < 0.43: 0.16

 $/ evprj 182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180mcu_drc.rs: 2539: external 2$

WARNING: The error count of 108 for this check exceeds the limit set in the runset. Details only available for the first 100.

Structure	(lower left x, y) (upper right x, y) Distance
trackA	(458.1060, 1158.0255) (458.2780, 1158.0850) 0.0000
trackA	(458.1060, 1157.9250) (458.1700, 1158.0850) 0.0000
trackA	(462.0620, 1158.0255) (462.2340, 1158.0850) 0.0000
trackA	(462.1700, 1157.9250) (462.2340, 1158.0850) 0.0000
trackA	(465.9460, 1158.0255) (466.1180, 1158.0850) 0.0000
trackA	(465.9460, 1157.9250) (466.0100, 1158.0850) 0.0000
trackA	(469.9020, 1158.0255) (470.0740, 1158.0850) 0.0000
trackA	(470.0100, 1157.9250) (470.0740, 1158.0850) 0.0000
trackA	(473.7860, 1158.0255) (473.9580, 1158.0850) 0.0000
trackA	(473.7860, 1157.9250) (473.8500, 1158.0850) 0.0000
trackA	(477.7420, 1158.0255) (477.9140, 1158.0850) 0.0000
trackA	(477.8500, 1157.9250) (477.9140, 1158.0850) 0.0000
trackA	(481.6260, 1158.0255) (481.7980, 1158.0850) 0.0000
trackA	(481.6260, 1157.9250) (481.6900, 1158.0850) 0.0000
trackA	(485.5820, 1158.0255) (485.7540, 1158.0850) 0.0000
trackA	(485.6900, 1157.9250) (485.7540, 1158.0850) 0.0000
trackA	(489.4660, 1158.0255) (489.6380, 1158.0850) 0.0000
trackA	(489.4660, 1157.9250) (489.5300, 1158.0850) 0.0000
trackA	(493.4220, 1158.0255) (493.5940, 1158.0850) 0.0000
trackA	(493.5300, 1157.9250) (493.5940, 1158.0850) 0.0000
trackA	(497.3060, 1158.0255) (497.4780, 1158.0850) 0.0000
trackA	(497.3060, 1157.9250) (497.3700, 1158.0850) 0.0000
trackA	(458.1060, 1162.4450) (458.2780, 1162.5045) 0.0000
trackA	(458.1060, 1162.4450) (458.1700, 1162.6050) 0.0000
trackA	(458.1060, 1163.1055) (458.2780, 1163.1650) 0.0000
trackA	(458.1060, 1163.0050) (458.1700, 1163.1650) 0.0000
trackA	(462.0620, 1161.8850) (462.2340, 1161.9445) 0.0000
trackA	(462.1700, 1161.8850) (462.2340, 1162.0450) 0.0000
trackA	(462.0620, 1162.5455) (462.2340, 1162.6050) 0.0000
trackA	(462.1700, 1162.4450) (462.2340, 1162.6050) 0.0000
trackA	(469.9020, 1161.8850) (470.0740, 1161.9445) 0.0000
trackA	(470.0100, 1161.8850) (470.0740, 1162.0450) 0.0000
trackA	(469.9020, 1162.5455) (470.0740, 1162.6050) 0.0000
trackA	(470.0100, 1162.4450) (470.0740, 1162.6050) 0.0000
trackA	(477.7420, 1161.8850) (477.9140, 1161.9445) 0.0000
trackA	(477.8500, 1161.8850) (477.9140, 1162.0450) 0.0000

4	(477 7400 4400 5455) (477 0440 4400 0050) 0 0000
trackA	(477.7420, 1162.5455) (477.9140, 1162.6050) 0.0000
trackA	(477.8500, 1162.4450) (477.9140, 1162.6050) 0.0000
trackA	(485.5820, 1161.8850) (485.7540, 1161.9445) 0.0000
trackA	(485.6900, 1161.8850) (485.7540, 1162.0450) 0.0000
trackA	(485.5820, 1162.5455) (485.7540, 1162.6050) 0.0000
trackA	(485.6900, 1162.4450) (485.7540, 1162.6050) 0.0000
trackA	(493.4220, 1161.8850) (493.5940, 1161.9445) 0.0000
trackA	(493.5300, 1161.8850) (493.5940, 1162.0450) 0.0000
trackA	(493.4220, 1162.5455) (493.5940, 1162.6050) 0.0000
trackA	(493.5300, 1162.4450) (493.5940, 1162.6050) 0.0000
trackA	(497.3060, 1162.4450) (497.4780, 1162.5045) 0.0000
trackA	(497.3060, 1162.4450) (497.3700, 1162.6050) 0.0000
trackA	(497.3060, 1163.1055) (497.4780, 1163.1650) 0.0000
trackA	(497.3060, 1163.0050) (497.3700, 1163.1650) 0.0000
trackA	(458.1060, 1182.0450) (458.2780, 1182.1045) 0.0000
trackA	(458.1060, 1182.0450) (458.1700, 1182.2050) 0.0000
trackA	(465.9460, 1182.0450) (466.1180, 1182.1045) 0.0000
trackA	(465.9460, 1182.0450) (466.0100, 1182.2050) 0.0000
trackA	(458.1060, 1182.7055) (458.2780, 1182.7650) 0.0000
trackA	(458.1060, 1182.6050) (458.1700, 1182.7650) 0.0000
trackA	(465.9460, 1182.7055) (466.1180, 1182.7650) 0.0000
trackA	(465.9460, 1182.6050) (466.0100, 1182.7650) 0.0000
trackA	(473.7860, 1182.0450) (473.9580, 1182.1045) 0.0000
trackA	(473.7860, 1182.0450) (473.8500, 1182.2050) 0.0000
trackA	(481.6260, 1182.0450) (481.7980, 1182.1045) 0.0000
trackA	(481.6260, 1182.0450) (481.6900, 1182.2050) 0.0000
trackA	(473.7860, 1182.7055) (473.9580, 1182.7650) 0.0000
trackA	(473.7860, 1182.6050) (473.8500, 1182.7650) 0.0000
trackA	(481.6260, 1182.7055) (481.7980, 1182.7650) 0.0000
trackA	(481.6260, 1182.6050) (481.6900, 1182.7650) 0.0000
trackA	(489.4660, 1182.0450) (489.6380, 1182.1045) 0.0000
trackA	(489.4660, 1182.0450) (489.5300, 1182.2050) 0.0000
trackA	(497.3060, 1182.0450) (497.4780, 1182.1045) 0.0000
trackA	(497.3060, 1182.0450) (497.3700, 1182.2050) 0.0000
trackA	(489.4660, 1182.7055) (489.6380, 1182.7650) 0.0000
trackA	(489.4660, 1182.6050) (489.5300, 1182.7650) 0.0000
trackA	(497.3060, 1182.7055) (497.4780, 1182.7650) 0.0000
trackA	(497.3060, 1182.6050) (497.3700, 1182.7650) 0.0000
trackA	(458.1060, 1201.6850) (458.2780, 1201.7445) 0.0000
trackA trackA	(458.1060, 1201.6850) (458.1700, 1201.8450) 0.0000 (462.0620, 1201.6850) (462.2340, 1201.7445) 0.0000
	(462.0620, 1201.6850) (462.2340, 1201.7445) 0.0000
trackA	(462.1700, 1201.6850) (462.2340, 1201.8450) 0.0000
trackA	(465.9460, 1201.6850) (466.1180, 1201.7445) 0.0000
trackA	(465.9460, 1201.6850) (466.0100, 1201.8450) 0.0000

```
trackA
                    (469,9020, 1201,6850) (470,0740, 1201,7445) 0.0000
trackA
                    (470.0100, 1201.6850) (470.0740, 1201.8450) 0.0000
                    (473.7860, 1201.6850) (473.9580, 1201.7445) 0.0000
trackA
                    (473.7860, 1201.6850) (473.8500, 1201.8450) 0.0000
trackA
trackA
                    (477.7420, 1201.6850) (477.9140, 1201.7445) 0.0000
                    (477.8500, 1201.6850) (477.9140, 1201.8450) 0.0000
trackA
trackA
                    (481.6260, 1201.6850) (481.7980, 1201.7445) 0.0000
trackA
                    (481.6260, 1201.6850) (481.6900, 1201.8450) 0.0000
gf180mcu fd sc mcu7t5v0 endcap (0.2000, 1.8560)
                                                    (0.2595, 2.0280)
                                                                       0.0000
gf180mcu fd sc mcu7t5v0 endcap (0.2000, 1.8560)
                                                    (0.3600, 1.9200)
                                                                       0.0000
gf180mcu fd io bi t$1
                            (6.6350, 199.3000) (6.7740, 199.3800) 0.0800
gf180mcu fd io bi t$1
                            (68.2260, 199.3000) (68.3650, 199.3800) 0.0800
gf180mcu fd io bi t$1
                            (68.4600, 199.0230) (68.5550, 199.1520) 0.0950
gf180mcu fd io bi t$1
                            (6.4450, 199.0230) (6.5400, 199.1520) 0.0950
                            (6.4450, 132.1980) (6.5400, 132.3270) 0.0950
af180mcu fd io bi t$1
gf180mcu fd io bi t$1
                            (68.4600, 132.1980) (68.5550, 132.3270) 0.0950
gf180mcu fd io bi t$1
                            (6.7740, 199.3000) (68.2260, 199.3800) 0.0800
gf180mcu fd io bi t$1
                            (68.4600, 132.3270) (68.5550, 199.0230) 0.0950
                            (6.4450, 132.3270) (6.5400, 199.0230) 0.0950
gf180mcu_fd_io__bi_t$1
gf180mcu fd io bi t$1
                            (9.8200, 71.7350)
                                              (65.1850, 71.8100) 0.0750
```

PP.4a: Pplus space to related N-channel gate at a butting edge parallel

to gate: 0.32

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu drc.rs:2562:external2

```
-----
```

Structure (lower left x, y) (upper right x, y) Distance

```
trackA (1368.7000, 2383.6250) (1368.8550, 2383.9050) 0.2800
trackA
       (1367.1650, 2383.6250) (1367.3200, 2383.9050) 0.2800
trackA
       (1357.8550, 2383.6250) (1358.0100, 2383.9050) 0.2800
trackA
       (1378.0100, 2383.6250) (1378.1650, 2383.9050) 0.2800
trackA
       (1385.7850, 2383.6250) (1385.9400, 2383.9050) 0.2800
trackA
       (1359.3900, 2383.6250) (1359.5450, 2383.9050) 0.2800
trackA
       (1387.3200, 2383.6250) (1387.4750, 2383.9050) 0.2800
trackA
       (1376.4750, 2383.6250) (1376.6300, 2383.9050) 0.2800
trackA
       (1358.0100, 2383.6250) (1359.3900, 2383.9050) 0.2800
trackA
       (1367.3200, 2383.6250) (1368.7000, 2383.9050) 0.2800
trackA
       (1376.6300, 2383.6250) (1378.0100, 2383.9050) 0.2800
trackA
       (1385.9400, 2383.6250) (1387.3200, 2383.9050) 0.2800
```

Structure (lower left x, y) (upper right x, y) Distance

Unnamed 02d9ae27 (-8.5400, 18.3550) (-8.4920, 18.5800) 0.2250 Unnamed 02d9ae27 (-8.8680, 18.3550) (-8.8200, 18.5800) 0.2250 Unnamed_02d9ae27 (-8.8200, 18.3550) (-8.5400, 18.5800) 0.2250 Unnamed 02d9ae27 (-5.9200, 18.3550) (-5.8720, 18.5800) 0.2250 Unnamed 02d9ae27 (-6.2480, 18.3550) (-6.2000, 18.5800) 0.2250 Unnamed 02d9ae27 (-6.2000, 18.3550) (-5.9200, 18.5800) 0.2250 Unnamed 02d9ae27 (-4.7800, 18.3550) (-4.7320, 18.5800) 0.2250 Unnamed 02d9ae27 (-5.1080, 18.3550) (-5.0600, 18.5800) 0.2250 Unnamed 02d9ae27 (-5.0600, 18.3550) (-4.7800, 18.5800) 0.2250 Unnamed 02d9ae27 (-2.2600, 18.3550) (-2.2120, 18.5800) 0.2250 Unnamed_02d9ae27 (-2.5880, 18.3550) (-2.5400, 18.5800) 0.2250 Unnamed 02d9ae27 (-2.5400, 18.3550) (-2.2600, 18.5800) 0.2250 Unnamed 02d9ae27 (-1.1200, 18.3550) (-1.0720, 18.5800) 0.2250 Unnamed_02d9ae27 (-1.4480, 18.3550) (-1.4000, 18.5800) 0.2250 Unnamed 02d9ae27 (-1.4000, 18.3550) (-1.1200, 18.5800) 0.2250 Unnamed 02d9ae27 (1.4000, 18.3550) (1.4480, 18.5800) 0.2250 Unnamed 02d9ae27 (1.0720, 18.3550) (1.1200, 18.5800) 0.2250 Unnamed 02d9ae27 (1.1200, 18.3550) (1.4000, 18.5800) 0.2250 Unnamed_02d9ae27 (2.5400, 18.3550) (2.5880, 18.5800) 0.2250 Unnamed 02d9ae27 (2.2120, 18.3550) (2.2600, 18.5800) 0.2250 Unnamed 02d9ae27 (2.2600, 18.3550) (2.5400, 18.5800) 0.2250 Unnamed 02d9ae27 (5.0600, 18.3550) (5.1080, 18.5800) 0.2250 Unnamed 02d9ae27 (4.7320, 18.3550) (4.7800, 18.5800) 0.2250 Unnamed 02d9ae27 (4.7800, 18.3550) (5.0600, 18.5800) 0.2250 Unnamed 02d9ae27 (6.2000, 18.3550) (6.2480, 18.5800) 0.2250 Unnamed 02d9ae27 (5.8720, 18.3550) (5.9200, 18.5800) 0.2250 Unnamed 02d9ae27 (5.9200, 18.3550) (6.2000, 18.5800) 0.2250 Unnamed 02d9ae27 (8.8200, 18.3550) (8.8680, 18.5800) 0.2250 Unnamed 02d9ae27 (8.4920, 18.3550) (8.5400, 18.5800) 0.2250 Unnamed_02d9ae27 (8.5400, 18.3550) (8.8200, 18.5800) 0.2250

```
(2) outside LVPWELL but inside DNWELL: 0.16
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:2587:enclose
Structure (lower left x, y) (upper right x, y) Distance
-----
trackA (1358.3000, 2374.9350) (1358.7400, 2375.0450) 0.1100
trackA
       (1358.1840, 2374.9350) (1358.3000, 2375.0450) 0.1100
trackA (1358.7400, 2374.9350) (1358.8560, 2375.0450) 0.1100
       (1367.6100, 2374.9350) (1368.0500, 2375.0450) 0.1100
trackA
trackA
       (1367.4940, 2374.9350) (1367.6100, 2375.0450) 0.1100
       (1368.0500, 2374.9350) (1368.1660, 2375.0450) 0.1100
trackA
trackA
       (1376.9200, 2374.9350) (1377.3600, 2375.0450) 0.1100
       (1376.8040, 2374.9350) (1376.9200, 2375.0450) 0.1100
trackA
trackA
       (1377.3600, 2374.9350) (1377.4760, 2375.0450) 0.1100
       (1386.2300, 2374.9350) (1386.6700, 2375.0450) 0.1100
trackA
       (1386.1140, 2374.9350) (1386.2300, 2375.0450) 0.1100
trackA
trackA (1386.6700, 2374.9350) (1386.7860, 2375.0450) 0.1100
PP.5c(ii): Pplus extension beyond COMP inside DNWELL for LVPWELL
overlap of Pplus < 0.43 : 0.16
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180
mcu drc.rs:2594:enclose
Structure (lower left x, y) (upper right x, y) Distance
-----
trackA (1502.5650, 2335.1450) (1502.5815, 2335.1765) 0.0165
trackA (1523.3985, 2335.1450) (1523.4150, 2335.1765) 0.0165
trackA (1523.3985, 2371.5835) (1523.4150, 2371.6150) 0.0165
trackA
       (1502.5650, 2371.5835) (1502.5815, 2371.6150) 0.0165
trackA
       (1514.2235, 2374.5450) (1514.2400, 2374.5765) 0.0165
trackA
       (1502.5600, 2374.5450) (1502.5765, 2374.5765) 0.0165
trackA
       (1502.5600, 2374.5450) (1502.5915, 2374.5615) 0.0165
       (1502.5650, 2371.5985) (1502.5965, 2371.6150) 0.0165
trackA
trackA
      (1502.5650, 2335.1450) (1502.5965, 2335.1615) 0.0165
trackA
       (1514.2085, 2374.5450) (1514.2400, 2374.5615) 0.0165
trackA
       (1523.3835, 2335.1450) (1523.4150, 2335.1615) 0.0165
```

PP.5b: Pplus extension beyond COMP for the COMP (1) inside NWELL

```
trackA (1523.3835, 2371.5985) (1523.4150, 2371.6150) 0.0165
trackA (1502.5600, 2410.9835) (1502.5765, 2411.0150) 0.0165
trackA (1514.2235, 2410.9835) (1514.2400, 2411.0150) 0.0165
trackA (1502.5600, 2410.9985) (1502.5915, 2411.0150) 0.0165
trackA (1514.2085, 2410.9985) (1514.2400, 2411.0150) 0.0165
```

PP.5d(ii): Pplus extension beyond COMP outside DNWELL for Pplus space

to Nwell < 0.43 : 0.16

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:2605:enclose

WARNING: The error count of 176 for this check exceeds the limit set in the runset. Details only available for the first 100.

the runset. Details only available for the first 100.

Structure	(lower left x, y) (upper	right x, y) Distance	
io_secondary_5p0	(12.9105, 36.5980)	(12.9800, 36.6300)	0.0000
io_secondary_5p0	(12.9800, 36.4730)	(13.0130, 36.6300)	0.1065
io_secondary_5p0	(-32.4200, 36.5980)	(-32.3505, 36.6300)	0.0000
io_secondary_5p0	(-32.4530, 36.4730)	(-32.4200, 36.6300)	0.1065
io_secondary_5p0	(-32.4200, 36.5235)	(-32.3505, 36.6300)	0.0000
io_secondary_5p0	(12.9105, 36.5235)	(12.9800, 36.6300)	0.0000
io_secondary_5p0	(12.9800, 48.7205)	(13.0120, 48.7900)	0.0000
io_secondary_5p0	(12.9800, 36.6300)	(13.0120, 36.6995)	0.0000
io_secondary_5p0	(12.9800, 36.6300)	(13.0865, 36.6995)	0.0000
io_secondary_5p0	(12.9800, 48.7205)	(13.0865, 48.7900)	0.0000
io_secondary_5p0	(12.9800, 48.7900)	(13.1370, 48.8230)	0.1065
io_secondary_5p0	(12.9800, 36.5970)	(13.1370, 36.6300)	0.1065
io_secondary_5p0	(-32.4520, 48.7205)	(-32.4200, 48.7900)	0.0000
io_secondary_5p0	(-32.4520, 36.6300)	(-32.4200, 36.6995)	0.0000
io_secondary_5p0	(-32.5265, 36.6300)	(-32.4200, 36.6995)	0.0000
io_secondary_5p0	(-32.5265, 48.7205)	(-32.4200, 48.7900)	0.0000
io_secondary_5p0	(-32.5770, 36.5970)	(-32.4200, 36.6300)	0.1065
io_secondary_5p0	(-32.5770, 48.7900)	(-32.4200, 48.8230)	0.1065
io_secondary_5p0	(12.9105, 48.7900)	(12.9800, 48.8220)	0.0000
io_secondary_5p0	(12.9800, 48.7900)	(13.0130, 48.9470)	0.1065
io_secondary_5p0	(-32.4200, 48.7900)	(-32.3505, 48.8220)	0.0000
io_secondary_5p0	(-32.4530, 48.7900)	(-32.4200, 48.9470)	0.1065
io_secondary_5p0	(-32.4200, 48.7900)	(-32.3505, 48.8965)	0.0000
io_secondary_5p0	(12.9105, 48.7900)	(12.9800, 48.8965)	0.0000

```
gf180mcu fd io dvss$1
                          (15.3650, 322.2645)
                                               (15.5520, 322.4150)
                                                                    0.1095
gf180mcu_fd_io__dvss$1
                          (15.3650, 302.9650)
                                               (15.5520, 303.1155)
                                                                    0.1095
                          (15.3650, 322.2550)
                                               (15.5250, 322.4150)
gf180mcu fd io dvss$1
                                                                    0.1030
gf180mcu fd io dvss$1
                          (15.3650, 302.9650)
                                               (15.5250, 303.1250)
                                                                    0.1030
gf180mcu fd io dvss$1
                          (59.4480, 322.2645)
                                               (59.6350, 322.4150)
                                                                    0.1095
gf180mcu fd io dvss$1
                          (59.4480, 302.9650)
                                               (59.6350, 303.1155)
                                                                    0.1095
gf180mcu fd io dvss$1
                          (59.4750, 322.2550)
                                               (59.6350, 322.4150)
                                                                    0.1030
gf180mcu fd io dvss$1
                          (59.4750, 302.9650)
                                               (59.6350, 303.1250)
                                                                    0.1030
gf180mcu fd io dvss$1
                          (66.9575, 191.0770)
                                               (67.1550, 191.2200)
                                                                    0.0895
gf180mcu fd io dvss$1
                          (66.9575, 70.4500)
                                              (67.1550, 70.5930)
                                                                   0.0895
gf180mcu fd io dvss$1
                          (66.9950, 191.0600)
                                               (67.1550, 191.2200)
                                                                    0.0800
gf180mcu fd io dvss$1
                                              (67.1550, 70.6100)
                          (66.9950, 70.4500)
                                                                   0.0800
                                              (8.0425, 191.2200)
gf180mcu fd io dvss$1
                          (7.8450, 191.0770)
                                                                   0.0895
gf180mcu fd io dvss$1
                          (7.8450, 70.4500)
                                              (8.0425, 70.5930)
                                                                  0.0895
gf180mcu fd io dvss$1
                          (7.8450, 191.0600)
                                              (8.0050, 191.2200)
                                                                   0.0800
gf180mcu_fd_io__dvss$1
                          (7.8450, 70.4500)
                                              (8.0050, 70.6100)
                                                                  0.0800
gf180mcu fd io dvdd$1
                          (15.3650, 322.2645)
                                               (15.5520, 322.4150)
                                                                    0.1095
gf180mcu fd io dvdd$1
                          (15.3650, 302.9650)
                                               (15.5520, 303.1155)
                                                                    0.1095
gf180mcu fd io dvdd$1
                          (15.3650, 322.2550)
                                               (15.5250, 322.4150)
                                                                    0.1030
gf180mcu fd io dvdd$1
                          (15.3650, 302.9650)
                                               (15.5250, 303.1250)
                                                                    0.1030
gf180mcu fd io dvdd$1
                          (59.4480, 322.2645)
                                               (59.6350, 322.4150)
                                                                    0.1095
gf180mcu_fd_io__dvdd$1
                          (59.4480, 302.9650)
                                               (59.6350, 303.1155)
                                                                    0.1095
gf180mcu fd io dvdd$1
                          (59.4750, 322.2550)
                                               (59.6350, 322.4150)
                                                                    0.1030
gf180mcu fd io dvdd$1
                          (59.4750, 302.9650)
                                               (59.6350, 303.1250)
                                                                    0.1030
gf180mcu_fd_io__dvdd$1
                          (66.9575, 191.3620)
                                               (67.1550, 191.5050)
                                                                    0.0895
gf180mcu fd io dvdd$1
                          (66.9575, 70.7350)
                                               (67.1550, 70.8780)
                                                                   0.0895
gf180mcu_fd_io__dvdd$1
                          (66.9950, 191.3450)
                                               (67.1550, 191.5050)
                                                                    0.0800
gf180mcu fd io dvdd$1
                          (66.9950, 70.7350)
                                               (67.1550, 70.8950)
                                                                   0.0800
gf180mcu fd io dvdd$1
                          (7.8450, 191.3620)
                                               (8.0425, 191.5050)
                                                                   0.0895
gf180mcu_fd_io__dvdd$1
                          (7.8450, 70.7350)
                                              (8.0425, 70.8780)
                                                                  0.0895
gf180mcu fd io dvdd$1
                          (7.8450, 191.3450)
                                               (8.0050, 191.5050)
                                                                   0.0800
gf180mcu fd io dvdd$1
                          (7.8450, 70.7350)
                                              (8.0050, 70.8950)
                                                                  0.0800
nmos_clamp_20_50_4$2
                           (61.8625, 3.0000)
                                               (62.0600, 3.1430)
                                                                  0.0895
nmos clamp 20 50 4$2
                           (61.9000, 3.0000)
                                               (62.0600, 3.1600)
                                                                  0.0800
                           (61.8625, 123.6270)
nmos_clamp_20_50_4$2
                                                (62.0600, 123.7700)
                                                                     0.0895
nmos clamp 20 50 4$2
                           (61.9000, 123.6100)
                                                (62.0600, 123.7700)
                                                                    0.0800
nmos_clamp_20_50_4$2
                           (2.7500, 3.0000)
                                              (2.9475, 3.1430)
                                                                 0.0895
nmos clamp 20 50 4$2
                                              (2.9100, 3.1600)
                           (2.7500, 3.0000)
                                                                 0.0800
nmos_clamp_20_50_4$2
                           (2.7500, 123.6270)
                                               (2.9475, 123.7700)
                                                                    0.0895
nmos clamp 20 50 4$2
                           (2.7500, 123.6100)
                                               (2.9100, 123.7700)
                                                                    0.0800
gf180mcu fd io bi t$1
                         (52.2865, 293.1990)
                                              (52.4050, 293.4200)
                                                                   0.0225
gf180mcu_fd_io__bi_t$1
                         (22.5950, 293.1990)
                                              (22.7135, 293.4200)
                                                                   0.0225
gf180mcu fd io bi t$1
                         (52.2450, 293.2600)
                                              (52.4050, 293.4200)
                                                                   0.0165
gf180mcu_fd_io__bi_t$1
                         (22.5950, 293.2600)
                                              (22.7550, 293.4200)
                                                                   0.0165
```

```
gf180mcu fd io asig 5p0$1 (9.5845, 70.5700)
                                               (9.6150, 70.6540)
                                                                   0.0000
gf180mcu_fd_io__asig_5p0$1 (9.5845, 100.2160)
                                                (9.6150, 100.3000)
                                                                    0.0000
gf180mcu fd io asig 5p0$1 (9.4550, 70.5850)
                                               (9.6150, 70.6540)
                                                                   0.0000
gf180mcu fd io asig 5p0$1 (9.4550, 100.2160)
                                                (9.6150, 100.2850)
                                                                    0.0000
gf180mcu_fd_io__asig_5p0$1 (65.2880, 70.5235)
                                                (65.3850, 70.5700)
                                                                    0.0000
gf180mcu fd io asig 5p0$1 (9.6150, 70.5235)
                                               (9.7120, 70.5700)
                                                                   0.0000
gf180mcu fd io asig 5p0$1 (9.6150, 70.4395)
                                               (9.7120, 70.5700)
                                                                   0.0000
gf180mcu fd io asig 5p0$1 (65.2880, 70.4395)
                                                (65.3850, 70.5700)
                                                                    0.0000
gf180mcu_fd_io__asig_5p0$1 (65.3850, 70.4115)
                                                (65.4060, 70.5700)
                                                                    0.1305
gf180mcu fd io asig 5p0$1 (9.5940, 70.4115)
                                               (9.6150, 70.5700)
                                                                   0.1305
gf180mcu fd io asig 5p0$1 (65.2880, 100.3000)
                                                (65.3850, 100.3465) 0.0000
gf180mcu_fd_io__asig_5p0$1 (9.6150, 100.3000)
                                                (9.7120, 100.3465)
                                                                    0.0000
gf180mcu fd io asig 5p0$1 (9.6150, 100.3000)
                                                (9.7120, 100.4305)
                                                                    0.0000
gf180mcu_fd_io__asig_5p0$1 (65.2880, 100.3000)
                                                (65.3850, 100.4305) 0.0000
gf180mcu fd io asig 5p0$1 (9.5940, 100.3000)
                                                (9.6150, 100.4585)
                                                                    0.1305
gf180mcu_fd_io__asig_5p0$1 (65.3850, 100.3000)
                                                (65.4060, 100.4585)
                                                                     0.1305
gf180mcu_fd_io__asig_5p0$1 (65.3850, 70.5700)
                                                (65.4155, 70.6540)
                                                                    0.0000
gf180mcu fd io asig 5p0$1 (65.3850, 100.2160)
                                                (65.4155, 100.3000)
                                                                     0.0000
gf180mcu_fd_io__asig_5p0$1 (65.3850, 100.2160)
                                                (65.5450, 100.2850)
                                                                     0.0000
gf180mcu fd io asig 5p0$1 (65.3850, 70.5850)
                                                (65.5450, 70.6540)
                                                                    0.0000
gf180mcu_fd_io__asig_5p0$1 (10.1050, 108.0450)
                                                (10.1750, 108.1360)
                                                                     0.0510
gf180mcu_fd_io__asig_5p0$1 (64.8250, 108.0450)
                                                (64.8950, 108.1360)
                                                                     0.0510
gf180mcu_fd_io__asig_5p0$1 (10.1050, 108.0450)
                                                (10.1460, 108.1540)
                                                                     0.0910
gf180mcu fd io asig 5p0$1 (64.8540, 108.0450)
                                                 (64.8950, 108.1540)
                                                                     0.0910
gf180mcu_fd_io__asig_5p0$1 (10.1050, 136.8040)
                                                (10.1750, 136.8950)
                                                                     0.0510
gf180mcu_fd_io__asig_5p0$1 (64.8250, 136.8040)
                                                (64.8950, 136.8950)
                                                                     0.0510
gf180mcu_fd_io__asig_5p0$1 (10.1050, 136.7860)
                                                (10.1460, 136.8950)
                                                                     0.0910
gf180mcu fd io asig 5p0$1 (64.8540, 136.7860)
                                                (64.8950, 136.8950)
                                                                     0.0910
gf180mcu_fd_io__asig_5p0$1 (10.1050, 136.8040)
                                                (10.2135, 136.8950)
                                                                     0.0410
gf180mcu_fd_io__asig_5p0$1 (10.1050, 108.0450)
                                                (10.2135, 108.1360)
                                                                     0.0410
gf180mcu_fd_io__asig_5p0$1 (64.7865, 136.8040)
                                                (64.8950, 136.8950)
                                                                     0.0410
gf180mcu fd io asig 5p0$1 (64.7865, 108.0450)
                                                 (64.8950, 108.1360)
                                                                     0.0410
```

PP.6 : Pplus overlap with PCOMP butted to NCOMP : 0.22

```
/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:2617:internal1 _______
Structure ( lower left x, y ) ( upper right x, y) Distance
```

trackA (1367.3700, 2391.7750) (1368.2900, 2391.7950) 0.0200

```
trackA
       (1367.1510, 2391.7750) (1367.3700, 2391.7950) 0.0200
trackA
       (1368.2900, 2391.7750) (1368.5090, 2391.7950) 0.0200
       (1376.6800, 2391.7750) (1377.6000, 2391.7950) 0.0200
trackA
       (1376.4610, 2391.7750) (1376.6800, 2391.7950) 0.0200
trackA
trackA
       (1377.6000, 2391.7750) (1377.8190, 2391.7950) 0.0200
       (1358.0600, 2391.7750) (1358.9800, 2391.7950) 0.0200
trackA
       (1357.8410, 2391.7750) (1358.0600, 2391.7950) 0.0200
trackA
trackA
       (1358.9800, 2391.7750) (1359.1990, 2391.7950) 0.0200
trackA
       (1385.9900, 2391.7750) (1386.9100, 2391.7950) 0.0200
trackA
       (1385.7710, 2391.7750) (1385.9900, 2391.7950) 0.0200
trackA
       (1386.9100, 2391.7750) (1387.1290, 2391.7950) 0.0200
trackA
       (1358.3000, 2388.8350) (1358.7400, 2388.8550) 0.0200
       (1367.6100, 2388.8350) (1368.0500, 2388.8550) 0.0200
trackA
trackA
       (1376.9200, 2388.8350) (1377.3600, 2388.8550) 0.0200
       (1386.2300, 2388.8350) (1386.6700, 2388.8550) 0.0200
trackA
```

V1.1: Min/max Via1 size : 0.26

/evprj182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180 mcu_drc.rs:2765:not_length_edge

WARNING: The error count of 102 for this check exceeds the limit set in the runset. Details only available for the first 100.

Check was stopped early because error limit was reached.

Structure (lower left x, y) (upper right x, y) Distance

Unnamed_02d9ae27 (-10.5300, 14.1250) (-10.5300, 14.3900) 0.2650 Unnamed_02d9ae27 (-10.2700, 14.1250) (-10.2700, 14.3900) 0.2650 Unnamed_02d9ae27 (-9.3300, 14.1250) (-9.3300, 14.3900) 0.2650 Unnamed_02d9ae27 (-9.0700, 14.1250) (-9.0700, 14.3900) 0.2650 Unnamed_02d9ae27 (-8.5300, 14.1250) (-8.5300, 14.3900) 0.2650 Unnamed_02d9ae27 (-8.2700, 14.1250) (-8.2700, 14.3900) 0.2650 Unnamed_02d9ae27 (-7.7300, 14.1250) (-7.7300, 14.3900) 0.2650 Unnamed_02d9ae27 (-7.4700, 14.1250) (-7.4700, 14.3900) 0.2650 Unnamed_02d9ae27 (-6.9300, 14.1250) (-6.9300, 14.3900) 0.2650 Unnamed_02d9ae27 (-6.6700, 14.1250) (-6.6700, 14.3900) 0.2650 Unnamed_02d9ae27 (-6.7600, 10.2850) (-6.7600, 10.5500) 0.2650 Unnamed_02d9ae27 (-6.5000, 10.2850) (-6.5000, 10.5500) 0.2650 Unnamed_02d9ae27 (-6.5000, 10.2850) (-6.5000, 10.5500) 0.2650 Unnamed_02d9ae27 (-6.1300, 14.1250) (-6.1300, 14.3900) 0.2650

```
Unnamed 02d9ae27 (-5.8700, 14.1250) (-5.8700, 14.3900) 0.2650
Unnamed_02d9ae27 (-5.6200, 17.6600) (-5.6200, 17.9250) 0.2650
Unnamed 02d9ae27 (-5.3600, 17.6600) (-5.3600, 17.9250) 0.2650
Unnamed 02d9ae27 (-5.3300, 14.1250) (-5.3300, 14.3900) 0.2650
Unnamed 02d9ae27 (-5.0700, 14.1250) (-5.0700, 14.3900) 0.2650
Unnamed 02d9ae27 (-4.5300, 14.1250) (-4.5300, 14.3900) 0.2650
Unnamed 02d9ae27 (-4.2700, 14.1250) (-4.2700, 14.3900) 0.2650
Unnamed 02d9ae27 (-4.4800, 10.2850) (-4.4800, 10.5500) 0.2650
Unnamed 02d9ae27 (-4.2200, 10.2850) (-4.2200, 10.5500) 0.2650
Unnamed 02d9ae27 (-3.7300, 14.1250) (-3.7300, 14.3900) 0.2650
Unnamed 02d9ae27 (-3.4700, 14.1250) (-3.4700, 14.3900) 0.2650
Unnamed 02d9ae27 (-2.9300, 14.1250) (-2.9300, 14.3900) 0.2650
Unnamed 02d9ae27 (-2.6700, 14.1250) (-2.6700, 14.3900) 0.2650
Unnamed 02d9ae27 (-2.1300, 14.1250) (-2.1300, 14.3900) 0.2650
Unnamed 02d9ae27 (-1.8700, 14.1250) (-1.8700, 14.3900) 0.2650
Unnamed 02d9ae27 (-1.9600, 13.2400) (-1.9600, 13.4950) 0.2550
Unnamed 02d9ae27 (-1.7000, 13.2400) (-1.7000, 13.4950) 0.2550
Unnamed 02d9ae27 (-1.3300, 14.1250) (-1.3300, 14.3900) 0.2650
Unnamed 02d9ae27 (-1.0700, 14.1250) (-1.0700, 14.3900) 0.2650
Unnamed 02d9ae27 (-0.5300, 14.1250) (-0.5300, 14.3900) 0.2650
Unnamed 02d9ae27 (-0.2700, 14.1250) (-0.2700, 14.3900) 0.2650
Unnamed_02d9ae27 (0.2700, 14.1250) (0.2700, 14.3900) 0.2650
Unnamed 02d9ae27 (0.5300, 14.1250) (0.5300, 14.3900) 0.2650
Unnamed 02d9ae27 (0.5600, 10.2850) (0.5600, 10.5500) 0.2650
Unnamed 02d9ae27 (0.8200, 10.2850) (0.8200, 10.5500) 0.2650
Unnamed 02d9ae27 (1.0700, 14.1250) (1.0700, 14.3900) 0.2650
Unnamed 02d9ae27 (1.3300, 14.1250) (1.3300, 14.3900) 0.2650
Unnamed 02d9ae27 (1.7000, 17.6600) (1.7000, 17.9250) 0.2650
Unnamed 02d9ae27 (1.9600, 17.6600) (1.9600, 17.9250) 0.2650
Unnamed_02d9ae27 (1.8700, 14.1250) (1.8700, 14.3900) 0.2650
Unnamed 02d9ae27 (2.1300, 14.1250) (2.1300, 14.3900) 0.2650
Unnamed 02d9ae27 (2.6700, 14.1250) (2.6700, 14.3900) 0.2650
Unnamed 02d9ae27 (2.9300, 14.1250) (2.9300, 14.3900) 0.2650
Unnamed 02d9ae27 (2.8400, 10.2850) (2.8400, 10.5500) 0.2650
Unnamed 02d9ae27 (3.1000, 10.2850) (3.1000, 10.5500) 0.2650
Unnamed 02d9ae27 (3.4700, 14.1250)
                                    (3.4700, 14.3900) 0.2650
Unnamed 02d9ae27 (3.7300, 14.1250)
                                    (3.7300, 14.3900) 0.2650
Unnamed 02d9ae27 (4.2700, 14.1250) (4.2700, 14.3900) 0.2650
Unnamed 02d9ae27 (4.5300, 14.1250) (4.5300, 14.3900) 0.2650
Unnamed 02d9ae27 (5.0700, 14.1250) (5.0700, 14.3900) 0.2650
Unnamed 02d9ae27 (5.3300, 14.1250) (5.3300, 14.3900) 0.2650
Unnamed 02d9ae27 (5.3600, 13.2400) (5.3600, 13.4950) 0.2550
Unnamed 02d9ae27 (5.6200, 13.2400) (5.6200, 13.4950) 0.2550
Unnamed 02d9ae27 (5.8700, 14.1250) (5.8700, 14.3900) 0.2650
```

```
Unnamed 02d9ae27 (6.1300, 14.1250) (6.1300, 14.3900) 0.2650
Unnamed_02d9ae27 (6.6700, 14.1250) (6.6700, 14.3900) 0.2650
Unnamed 02d9ae27 (6.9300, 14.1250) (6.9300, 14.3900) 0.2650
Unnamed 02d9ae27 (7.4700, 14.1250) (7.4700, 14.3900) 0.2650
Unnamed 02d9ae27 (7.7300, 14.1250) (7.7300, 14.3900) 0.2650
Unnamed 02d9ae27 (8.2700, 14.1250) (8.2700, 14.3900) 0.2650
Unnamed 02d9ae27 (8.5300, 14.1250) (8.5300, 14.3900) 0.2650
Unnamed 02d9ae27 (9.0700, 14.1250) (9.0700, 14.3900) 0.2650
Unnamed 02d9ae27 (9.3300, 14.1250) (9.3300, 14.3900) 0.2650
Unnamed 02d9ae27 (10.2700, 14.1250) (10.2700, 14.3900) 0.2650
Unnamed 02d9ae27 (10.5300, 14.1250) (10.5300, 14.3900) 0.2650
Unnamed 02d9ae27 (-10.5300, 26.3300) (-10.5300, 26.5950) 0.2650
Unnamed 02d9ae27 (-10.2700, 26.3300) (-10.2700, 26.5950) 0.2650
Unnamed 02d9ae27 (-9.3300, 26.3300) (-9.3300, 26.5950) 0.2650
Unnamed 02d9ae27 (-9.0700, 26.3300) (-9.0700, 26.5950) 0.2650
Unnamed 02d9ae27 (-8.5300, 26.3300) (-8.5300, 26.5950) 0.2650
Unnamed 02d9ae27 (-8.2700, 26.3300) (-8.2700, 26.5950) 0.2650
Unnamed 02d9ae27 (-7.7300, 26.3300) (-7.7300, 26.5950) 0.2650
Unnamed 02d9ae27 (-7.4700, 26.3300) (-7.4700, 26.5950) 0.2650
Unnamed 02d9ae27 (-6.9300, 26.3300) (-6.9300, 26.5950) 0.2650
Unnamed 02d9ae27 (-6.6700, 26.3300) (-6.6700, 26.5950) 0.2650
Unnamed_02d9ae27 (-6.7600, 19.2700) (-6.7600, 19.5350) 0.2650
Unnamed_02d9ae27 (-6.5000, 19.2700) (-6.5000, 19.5350) 0.2650
Unnamed 02d9ae27 (-6.7600, 20.8700) (-6.7600, 21.1350) 0.2650
Unnamed 02d9ae27 (-6.5000, 20.8700) (-6.5000, 21.1350) 0.2650
Unnamed 02d9ae27 (-6.1300, 26.3300) (-6.1300, 26.5950) 0.2650
Unnamed 02d9ae27 (-5.8700, 26.3300) (-5.8700, 26.5950) 0.2650
Unnamed 02d9ae27 (-5.6200, 19.2700) (-5.6200, 19.5350) 0.2650
Unnamed 02d9ae27 (-5.3600, 19.2700) (-5.3600, 19.5350) 0.2650
Unnamed_02d9ae27 (-5.6200, 20.8700) (-5.6200, 21.1350) 0.2650
Unnamed 02d9ae27 (-5.3600, 20.8700) (-5.3600, 21.1350) 0.2650
Unnamed 02d9ae27 (-5.3300, 26.3300) (-5.3300, 26.5950) 0.2650
Unnamed 02d9ae27 (-5.0700, 26.3300) (-5.0700, 26.5950) 0.2650
Unnamed 02d9ae27 (-4.5300, 26.3300) (-4.5300, 26.5950) 0.2650
Unnamed 02d9ae27 (-4.2700, 26.3300) (-4.2700, 26.5950) 0.2650
Unnamed 02d9ae27 (-4.4800, 19.2700) (-4.4800, 19.5350) 0.2650
Unnamed 02d9ae27 (-4.2200, 19.2700) (-4.2200, 19.5350) 0.2650
Unnamed 02d9ae27 (-4.4800, 20.8700) (-4.4800, 21.1350) 0.2650
Unnamed 02d9ae27 (-4.2200, 20.8700) (-4.2200, 21.1350) 0.2650
Unnamed 02d9ae27 (-3.7300, 26.3300) (-3.7300, 26.5950) 0.2650
Unnamed 02d9ae27 (-3.4700, 26.3300) (-3.4700, 26.5950) 0.2650
Unnamed 02d9ae27 (-3.1000, 19.2700) (-3.1000, 19.5350) 0.2650
Unnamed 02d9ae27 (-2.8400, 19.2700) (-2.8400, 19.5350) 0.2650
```

V2.1: Min/max Via2 size : 0.26

 $/ evprj 182/projects/GF180MCU/combined-pdk/dk_synopsys/pdk-180/DRC_ICV/DRC/ICV/gf180mcu_drc.rs: 2765:not_length_edge$

WARNING: The error count of 102 for this check exceeds the limit set in the runset. Details only available for the first 100.

Check was stopped early because error limit was reached.

Structure	(lower left x, y) (upper right x, y) Distance
trackA	(2004.0700, 346.6150) (2004.1150, 346.6150) 0.0450
trackA	(2004.1150, 346.4050) (2004.1150, 346.6150) 0.2100
trackA	(2004.0700, 347.2350) (2004.1150, 347.2350) 0.0450
trackA	(2004.1150, 347.0250) (2004.1150, 347.2350) 0.2100
trackA	(2004.0700, 347.8550) (2004.1150, 347.8550) 0.0450
trackA	(2004.1150, 347.6450) (2004.1150, 347.8550) 0.2100
trackA	(2004.3300, 346.6650) (2004.3300, 346.8750) 0.2100
trackA	(2004.3300, 346.6650) (2004.3750, 346.6650) 0.0450
trackA	(2004.3300, 347.2850) (2004.3300, 347.4950) 0.2100
trackA	(2004.3300, 347.2850) (2004.3750, 347.2850) 0.0450
trackA	(2004.3300, 347.9050) (2004.3300, 348.1150) 0.2100
trackA	(2004.3300, 347.9050) (2004.3750, 347.9050) 0.0450
trackA	(2004.6900, 346.6150) (2004.7350, 346.6150) 0.0450
trackA	(2004.7350, 346.4050) (2004.7350, 346.6150) 0.2100
trackA	(2004.6900, 347.2350) (2004.7350, 347.2350) 0.0450
trackA	(2004.7350, 347.0250) (2004.7350, 347.2350) 0.2100
trackA	(2004.6900, 347.8550) (2004.7350, 347.8550) 0.0450
trackA	(2004.7350, 347.6450) (2004.7350, 347.8550) 0.2100
trackA	(2004.9500, 346.6650) (2004.9500, 346.8750) 0.2100
trackA	(2004.9500, 346.6650) (2004.9950, 346.6650) 0.0450
trackA	(2004.9500, 347.2850) (2004.9500, 347.4950) 0.2100
trackA	(2004.9500, 347.2850) (2004.9950, 347.2850) 0.0450
trackA	(2004.9500, 347.9050) (2004.9500, 348.1150) 0.2100
trackA	(2004.9500, 347.9050) (2004.9950, 347.9050) 0.0450
trackA	(2005.3100, 346.6150) (2005.3550, 346.6150) 0.0450
trackA	(2005.3550, 346.4050) (2005.3550, 346.6150) 0.2100
trackA	(2005.3100, 347.2350) (2005.3550, 347.2350) 0.0450
trackA	(2005.3550, 347.0250) (2005.3550, 347.2350) 0.2100
trackA	(2005.3100, 347.8550) (2005.3550, 347.8550) 0.0450

```
trackA
            (2005.3550, 347.6450) (2005.3550, 347.8550) 0.2100
trackA
            (2005.5700, 346.6650) (2005.5700, 346.8750) 0.2100
            (2005.5700, 346.6650) (2005.6150, 346.6650) 0.0450
trackA
            (2005.5700, 347.2850) (2005.5700, 347.4950) 0.2100
trackA
trackA
            (2005.5700, 347.2850) (2005.6150, 347.2850) 0.0450
            (2005.5700, 347.9050) (2005.5700, 348.1150) 0.2100
trackA
            (2005.5700, 347.9050) (2005.6150, 347.9050) 0.0450
trackA
trackA
            (2005.9300, 346.6150) (2005.9750, 346.6150) 0.0450
trackA
            (2005.9750, 346.4050) (2005.9750, 346.6150) 0.2100
trackA
            (2005.9300, 347.2350) (2005.9750, 347.2350) 0.0450
            (2005.9750, 347.0250) (2005.9750, 347.2350) 0.2100
trackA
            (2005.9300, 347.8550) (2005.9750, 347.8550) 0.0450
trackA
            (2005.9750, 347.6450) (2005.9750, 347.8550) 0.2100
trackA
            (2006.1900, 346.6650) (2006.1900, 346.8750) 0.2100
trackA
            (2006.1900, 346.6650) (2006.2350, 346.6650) 0.0450
trackA
trackA
            (2006.1900, 347.2850) (2006.1900, 347.4950) 0.2100
trackA
            (2006.1900, 347.2850) (2006.2350, 347.2850) 0.0450
trackA
            (2006.1900, 347.9050) (2006.1900, 348.1150) 0.2100
            (2006.1900, 347.9050) (2006.2350, 347.9050) 0.0450
trackA
            (2015.5350, 346.6650) (2015.5350, 346.8750) 0.2100
trackA
            (2015.5350, 346.4050) (2015.5350, 346.6150) 0.2100
trackA
            (2015.5350, 347.2850) (2015.5350, 347.4950) 0.2100
trackA
            (2015.5350, 347.0250) (2015.5350, 347.2350) 0.2100
trackA
            (2016.1550, 346.6650) (2016.1550, 346.8750) 0.2100
trackA
trackA
            (2016.1550, 346.4050) (2016.1550, 346.6150) 0.2100
trackA
            (2016.1550, 347.2850) (2016.1550, 347.4950) 0.2100
            (2016.1550, 347.0250) (2016.1550, 347.2350) 0.2100
trackA
            (2015.5350, 347.9050) (2015.5350, 348.1150) 0.2100
trackA
            (2015.5350, 347.6450) (2015.5350, 347.8550) 0.2100
trackA
trackA
            (2016.1550, 347.9050) (2016.1550, 348.1150) 0.2100
trackA
            (2016.1550, 347.6450) (2016.1550, 347.8550) 0.2100
            (2016.7750, 346.6650) (2016.7750, 346.8750) 0.2100
trackA
trackA
            (2016.7750, 347.2850) (2016.7750, 347.4950) 0.2100
trackA
            (2016.7750, 347.9050) (2016.7750, 348.1150) 0.2100
trackA
            (2016.7750, 346.4050) (2016.7750, 346.6150) 0.2100
trackA
            (2016.7750, 347.0250) (2016.7750, 347.2350) 0.2100
trackA
            (2016.7750, 347.6450) (2016.7750, 347.8550) 0.2100
            (2017.9650, 346.6650) (2017.9650, 346.8750) 0.2100
trackA
trackA
            (2017.7550, 346.6650) (2017.9650, 346.6650) 0.2100
            (2018.0150, 346.4050) (2018.0150, 346.6150) 0.2100
trackA
trackA
            (2018.0150, 346.6150) (2018.2250, 346.6150) 0.2100
trackA
            (2017.9650, 347.2850) (2017.9650, 347.4950) 0.2100
trackA
            (2017.7550, 347.2850) (2017.9650, 347.2850) 0.2100
trackA
            (2018.0150, 347.0250) (2018.0150, 347.2350) 0.2100
```

```
trackA
            (2018.0150, 347.2350) (2018.2250, 347.2350) 0.2100
trackA
            (2017.9650, 347.9050) (2017.9650, 348.1150) 0.2100
            (2017.7550, 347.9050) (2017.9650, 347.9050) 0.2100
trackA
            (2018.0150, 347.6450) (2018.0150, 347.8550) 0.2100
trackA
trackA
            (2018.0150, 347.8550) (2018.2250, 347.8550) 0.2100
            (2018.5850, 346.6650) (2018.5850, 346.8750) 0.2100
trackA
            (2018.3750, 346.6650) (2018.5850, 346.6650) 0.2100
trackA
trackA
            (2018.6350, 346.4050) (2018.6350, 346.6150) 0.2100
trackA
            (2018.6350, 346.6150) (2018.8450, 346.6150) 0.2100
trackA
            (2018.5850, 347.2850) (2018.5850, 347.4950) 0.2100
            (2018.3750, 347.2850) (2018.5850, 347.2850) 0.2100
trackA
             (-37.8950, -37.7050) (-37.8950, -37.4400) 0.2650
op buffer
op buffer
             (-37.6350, -37.7050) (-37.6350, -37.4400) 0.2650
op_buffer
             (-8.6850, -38.8050) (-8.6850, -38.5400) 0.2650
op buffer
             (-8.4250, -38.8050) (-8.4250, -38.5400) 0.2650
op buffer
             (6.7350, -37.7050)
                                 (6.7350, -37.4400)
                                                    0.2650
op buffer
             (6.9950, -37.7050)
                                 (6.9950, -37.4400)
                                                    0.2650
op buffer
             (9.7350, -38.8050)
                                 (9.7350, -38.5400)
                                                    0.2650
op buffer
             (9.9950, -38.8050)
                                 (9.9950, -38.5400)
                                                    0.2650
Unnamed 02d9ae27 (-11.5300, 26.3350) (-11.5300, 26.5900) 0.2550
Unnamed_02d9ae27 (-11.2700, 26.3350) (-11.2700, 26.5900) 0.2550
Unnamed_02d9ae27 (7.5000, 10.2850)
                                       (7.5000, 10.5500)
                                                           0.2650
Unnamed 02d9ae27 (7.7600, 10.2850)
                                       (7.7600, 10.5500)
                                                           0.2650
Unnamed 02d9ae27 (7.5000, 12.4350)
                                       (7.5000, 12.7000)
                                                           0.2650
Unnamed_02d9ae27 (7.7600, 12.4350)
                                       (7.7600, 12.7000)
                                                           0.2650
Unnamed 02d9ae27 (12.0000, 25.4450)
                                        (12.0000, 25.7000)
                                                            0.2550
Unnamed 02d9ae27 (12.2600, 25.4450)
                                        (12.2600, 25.7000)
                                                            0.2550
```