
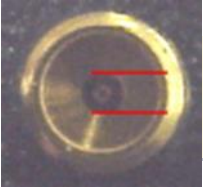
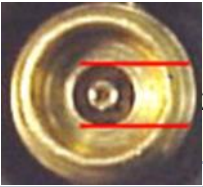

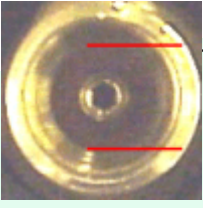
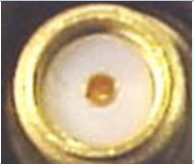


Connector Type	Frequency Range	Mates with...	Notes
 1.0 mm	To 110 GHz	1.0 mm	Much smaller connector than any of those below.
 1.85 mm	To 70 GHz	2.4 mm	The outer thread size of the 1.85 and 2.4 connectors is bigger than SMA, 3.5, and 2.92. This makes the area of the outer conductor mating surface look very large compared to the relatively small air dielectric.
 2.4 mm	To 50 GHz	1.85 mm	The 1.85 mm connector that is manufactured at Keysight has a groove in the male nut and female shoulder to distinguish these two connector types.
 mm	To 40 GHz	3.5mm and SMA	The 3.5 mm and 2.92 mm connectors use the same center pin.
 mm	To 34 GHz	2.92 mm and SMA	The 3.5 mm and 2.92 mm connectors use the same center pin.
 SMA	To 24 GHz	2.92 mm and 3.5 mm	Uses a PTFE dielectric.

Maximum mode free operation of precision connectors in air

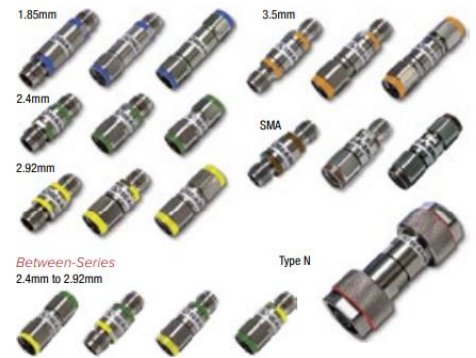
		Connector type	Torque lb-inch (N-cm)
APC-7 and Type-N	19.4 GHz	Precision 7 mm and Type-N	12 (136)
3.5 mm	38.8 GHz	Precision 3.5 mm	8 (90)
2.92 mm	46 GHz	SMA	8 (90)
2.4 mm	56.5 GHz	Precision 2.4 mm	8 (90)
1.85 mm	73.3 GHz	Precision 1.85 mm	8 (90)
1.0 mm	135.7 GHz	Precision 1.0 mm	4 (45)

!Keysight DCA 1.85 E-Heads use 5lb-in 5/16" wrench!

Available Models

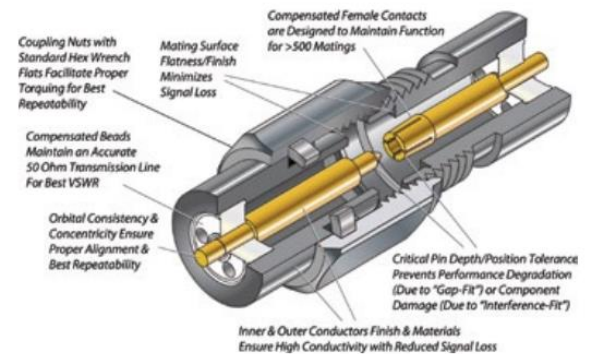
ColorConnect™ Precision Adapters				
Model	Connector 1	Connector 2	Frequency	VSWR
CC-A-SMA-FF	SMA Female	SMA Female	DC – 18.0	1.15
CC-A-SMA-MF	SMA Male	SMA Female	DC – 18.0	1.15
CC-A-SMA-MM	SMA Male	SMA Male	DC – 18.0	1.15
CC-A-SMAN-FF	SMA Female	N Female	DC – 18.0	1.14
CC-A-SMAN-MM	SMA Male	N Male	DC – 18.0	1.14
CC-A-SMAN-FM	SMA Female	N Male	DC – 18.0	1.14
CC-A-SMAN-MF	SMA Male	N Female	DC – 18.0	1.14
CC-A-N-FF	N Female	N Female	DC – 18.0	1.15
CC-A-N-MM	N Male	N Male	DC – 18.0	1.15
CC-A-N-MF	N Male	N Female	DC – 18.0	1.15
CC-A-35N-FF	3.5mm Female	N Female	DC – 18.0	1.14
CC-A-35N-MM	3.5mm Male	N Male	DC – 18.0	1.14
CC-A-35N-FM	3.5mm Female	N Male	DC – 18.0	1.14
CC-A-35N-MF	3.5mm Male	N Female	DC – 18.0	1.14
CC-A-35-FF	3.5mm Female	3.5mm Female	DC – 26.5	1.12
CC-A-35-MM	3.5mm Male	3.5mm Male	DC – 26.5	1.12
CC-A-35-MF	3.5mm Male	3.5mm Female	DC – 26.5	1.12
CC-A-2435-FF	2.4mm Female	3.5mm Female	DC – 26.5	1.10
CC-A-2435-MM	2.4mm Male	3.5mm Male	DC – 26.5	1.10
CC-A-2435-FM	2.4mm Female	3.5mm Male	DC – 26.5	1.10
CC-A-2435-MF	2.4mm Male	3.5mm Fem	DC – 26.5	1.10
CC-A-292-FF	2.92mm Female	2.92mm Female	DC – 40.0	1.14
CC-A-292-MM	2.92mm Male	2.92mm Male	DC – 40.0	1.14
CC-A-292-MF	2.92mm Male	2.92mm Female	DC – 40.0	1.14
CC-A-24292-FF	2.4mm Female	2.92mm Female	DC – 40.0	1.14
CC-A-24292-MM	2.4mm Male	2.92mm Male	DC – 40.0	1.14
CC-A-24292-FM	2.4mm Female	2.92mm Male	DC – 40.0	1.14
CC-A-24292-MF	2.4mm Male	2.92mm Female	DC – 40.0	1.14
CC-A-185292-FF	1.85mm Female	2.92mm Female	DC – 40.0	1.14
CC-A-185292-MM	1.85mm Male	2.92mm Male	DC – 40.0	1.14
CC-A-185292-FM	1.85mm Female	2.92mm Male	DC – 40.0	1.14
CC-A-185292-MF	1.85mm Male	2.92mm Female	DC – 40.0	1.14
CC-A-24-FF	2.4mm Female	2.4mm Female	DC – 50.0	1.17
CC-A-24-MM	2.4mm Male	2.4mm Male	DC – 50.0	1.17
CC-A-24-MF	2.4mm Male	2.4mm Female	DC – 50.0	1.17
CC-A-185-FF	1.85mm Female	1.85mm Female	DC – 67.0	1.20
CC-A-185-MM	1.85mm Male	1.85mm Male	DC – 67.0	1.20
CC-A-185-MF	1.85mm Male	1.85mm Female	DC – 67.0	1.20

ColorConnect™ Adapters — In-Series



BLACK	DC-18 GHz	Type N Connector
Brown	DC-18 GHz	SMA Connector
Red	DC-20 GHz	Precision Type N Connector
Orange	DC-26.5 GHz	3.5mm Connector
Yellow	DC-40 GHz	2.92mm (K) Connector
Green	DC-50 GHz	2.4mm Connector
Blue	DC-67 GHz	1.85mm (V) Connector
Violet	DC-18 GHz	GPC-7 Connector
Gray	DC- <Reserved for future use>	
White	DC-110 GHz	1.0mm (W) Connector

Fig. 1 Proposed color coding scheme.



Connector Pin Depth Specifications

Connector	Pin Depth (mm)	Pin Depth (inches)	Specification (1)
7mm	-.005/- .0635	-.0002/- .0025	IEEE STD 287 (2)
Type N 50 ohm male	-5.258/-5.360	-.207/- .211	IEEE STD 287 GPC & LPC (3)
Type N 50 ohm female	+5.182/+5.258	+.204/+ .207	IEEE STD 287 GPC & LPC (4)
Type N 50 ohm male	-5.283/-5.360	-.208/- .211	MIL-STD-348A Test Conn. (5)
Type N 50 ohm female	+5.182/+5.258	+.204/+ .207	MIL-STD-348A Test Conn.
Type N 50 ohm male	-5.334/-5.842	-.210/- .230	MIL-STD-348A Prod. Grade
Type N 50 ohm female	+4.750/+5.258	+.187/+ .207	MIL-STD-348A Prod. Grade
Type N 75 ohm male	-5.283/-5.360	-.208/- .211	IEC 169-16 Grade 1
Type N 75 ohm female	+5.182/+5.258	+.204/+ .207	IEC 169-16 Grade 1
Type N 75 ohm male	-5.334/ -	-.210/ -	IEC 169-16 Grade 2
Type N 75 ohm female	+4.750/+5.258	+.187/+ .207	IEC 169-16 Grade 2
3.5mm	0/- .013	0/- .0005	IEEE STD 287 LPC
3.5mm	0/- .076	0/- .0030	IEEE STD 287 GPC
2.92mm (K*)	0/- .013	0/- .0005	IEEE STD 287 GPC & LPC
2.4mm	0/- .013	0/- .0005	IEEE STD 287 LPC
2.4mm	0/- .050	0/- .0020	IEEE STD 287 GPC
1.85mm	0/- .013	0/- .0005	IEEE STD 287 LPC
1.85mm	0/- .050	0/- .0020	IEEE STD 287 GPC
1.0mm	0/- .013	0/- .0005	IEEE STD 287 LPC
1.0mm	0/- .050	0/- .0020	IEEE STD 287 GPC
SMA	0/- .076	0/- .003	MIL-STD-348A Test Conn.
SMA	0/- .254	0/- .010	MIL-STD-348A Prod. Grade
TNC male	-5.31/-5.38	-.209/- .212	MIL-STD-348A Test Conn.
TNC female	+5.21/+5.28	+.205/+ .208	MIL-STD-348A Test Conn.
TNC male	-5.33/-5.84	-.210/- .230	MIL-STD-348A Prod. Grade
TNC female	+4.72/+5.23	+.186/+ .206	MIL-STD-348A Prod. Grade
BNC male	-5.31/-5.38	-.209/- .212	MIL-STD-348A Test Conn.
BNC female	+5.21/+5.28	+.205/+ .208	MIL-STD-348A Test Conn.
BNC male	-5.33/-5.84	-.210/- .230	MIL-STD-348A Prod. Grade
BNC female	+4.72/+5.23	+.186/+ .206	MIL-STD-348A Prod. Grade
SMC pin contact (6)	-3.40/-3.51	-.134/- .138	MIL-STD-348A Test Conn.
SMC socket contact	+3.23/+3.40	+.127/+ .134	MIL-STD-348A Test Conn.
SMC pin contact	-3.40/ -	-.134/ -	MIL-STD-348A Prod. Grade
SMC socket contact	- /+3.40	- /+ .134	MIL-STD-348A Prod. Grade
SMB pin contact (6 & 7)	-	-	MIL-STD-348A & IEC 169-10
SMB socket contact	-	-	MIL-STD-348A & IEC 169-10
Type F (& FD) (8)	N/A	N/A	IEC 169-24 & ANSI/EIA 550
HP-F	0/- .2	0/- .008	HP Drawing A-1250-9059-1
Type 7-16 male	+1.47/+1.77	+.0579/+ .0697	IEC 169-4
Type 7-16 female	-1.77/-2.07	-.0697/- .0815	IEC 169-4

Connector	Coupling Torque (N-cm/in-lb.)	Width Across Coupling Nut Wrench Flats	Open Ended Wrench Size
7 mm	135/12	3/4"	1/2"
Type N 50 ohm(2)	135/12	3/4"	9/16"
Type N 75 ohm(2)	135/12	3/4"	9/16"
3.5 mm standard(3)	90/8	5/16"	7 mm
			5/16"(8 mm)
3.5 mm m test prt	90/8	20 mm	9/16"
3.5 mm f test prt.			Spanner Wr.
2.92 mm standard	90/8	5/16"	7 mm
2.4 mm standard(3)	90/8	5/16"	7 mm
			5/16"(8 mm)
2.4 mm m test prt.	90/8	20 mm	1/2"
2.4 mm f test prt			Spanner Wr.
1.85 mm	90/8	5/16"	5/16"(8 mm)
1.0 mm	34/3	6 mm	
SMA(4)	56/5	5/16"	
TNC	56/5	no spec.	
BNC	N/A	N/A	
SMC	34-45/3-4	no spec.	
SMB	N/A	N/A	
Type F	168/15	12 mm	
Type FD	168/15	12 mm	
Type 7-16	2500-3000/222-267	no spec.	

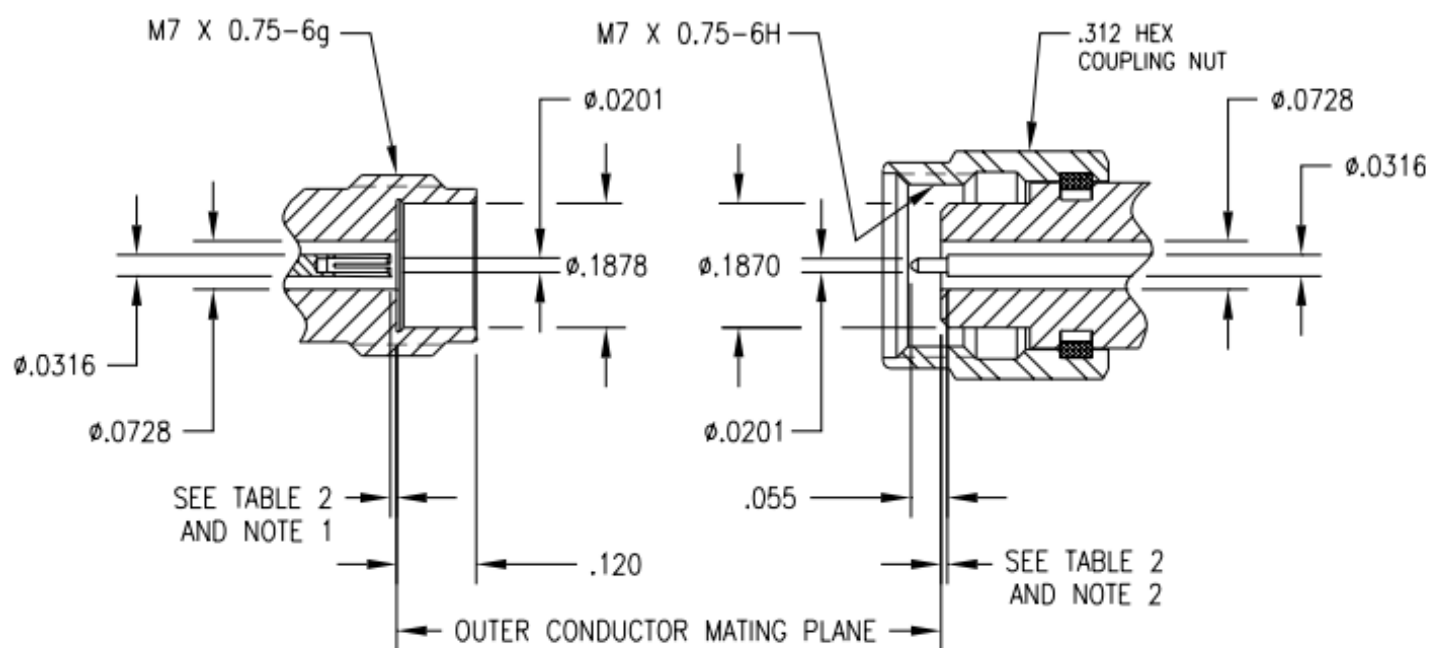


Figure 3. Critical Contact Pin Location
Dimensions of 1.85mm Precision Connectors

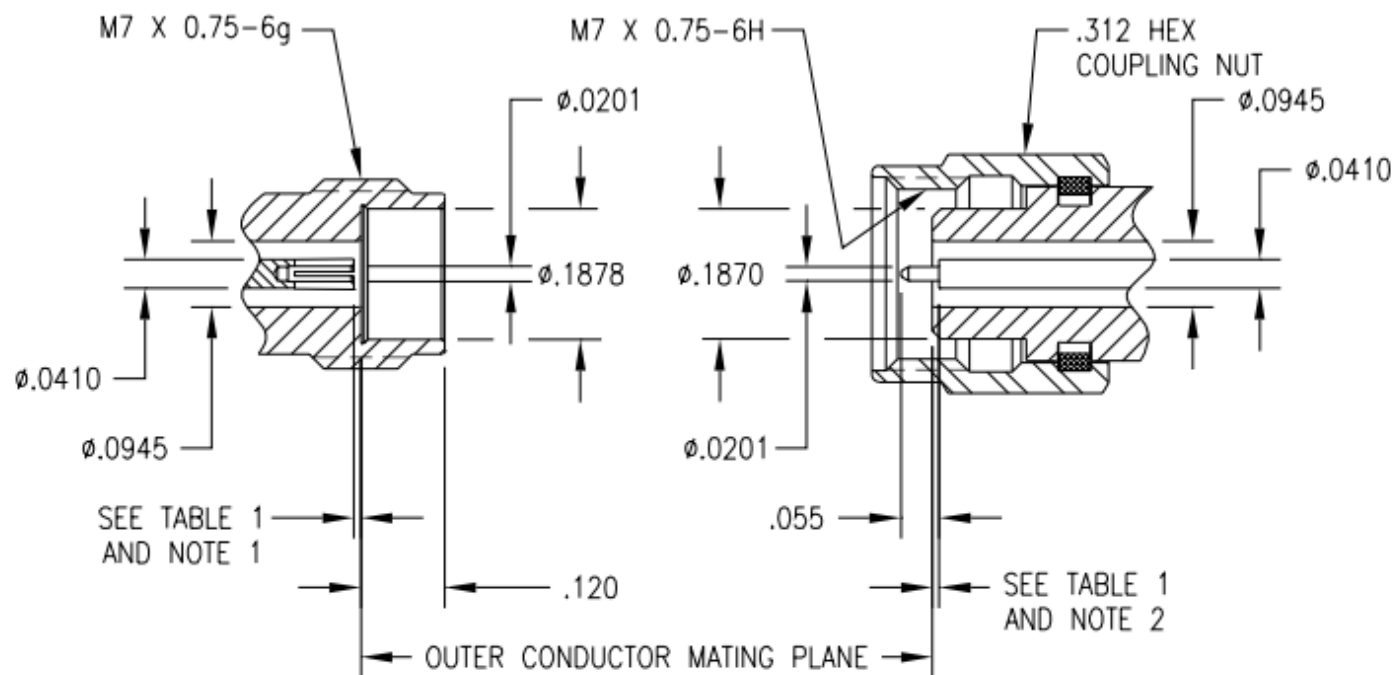


Figure 2. Critical Contact Pin Location
Dimensions of 2.4mm Precision Connectors

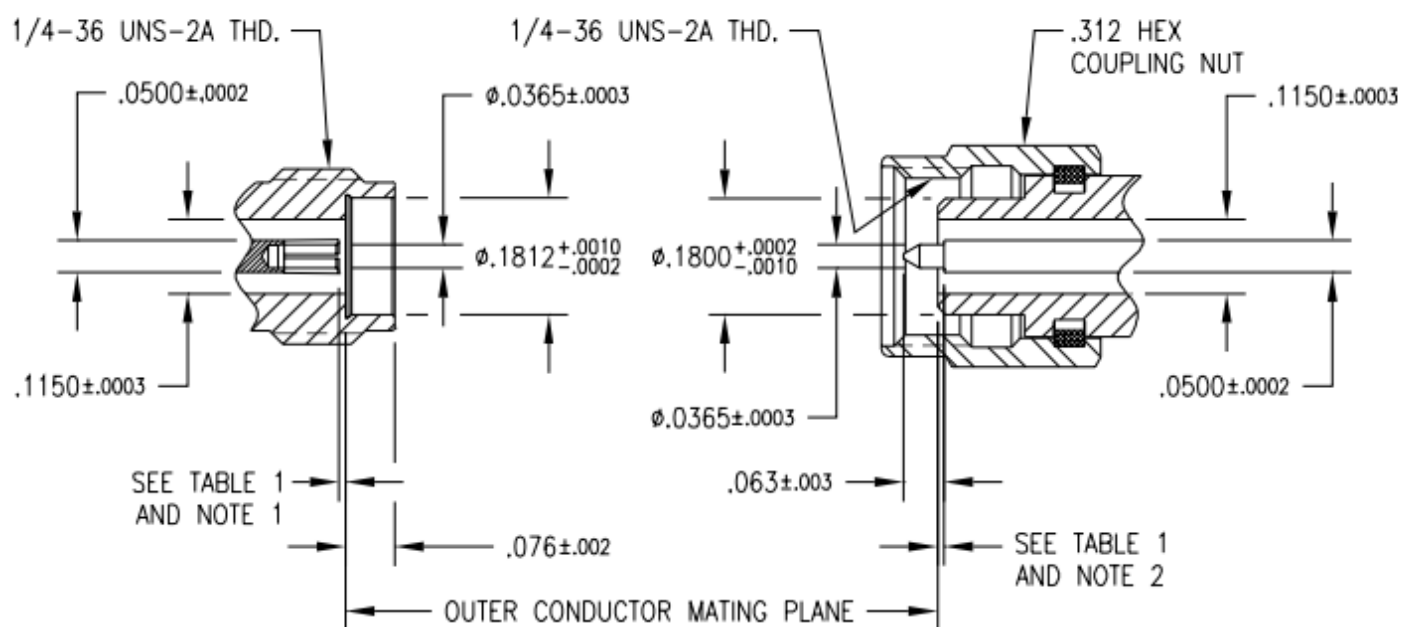


Figure 2. Critical Contact Pin Location
Dimensions of 2.92mm Precision Connectors

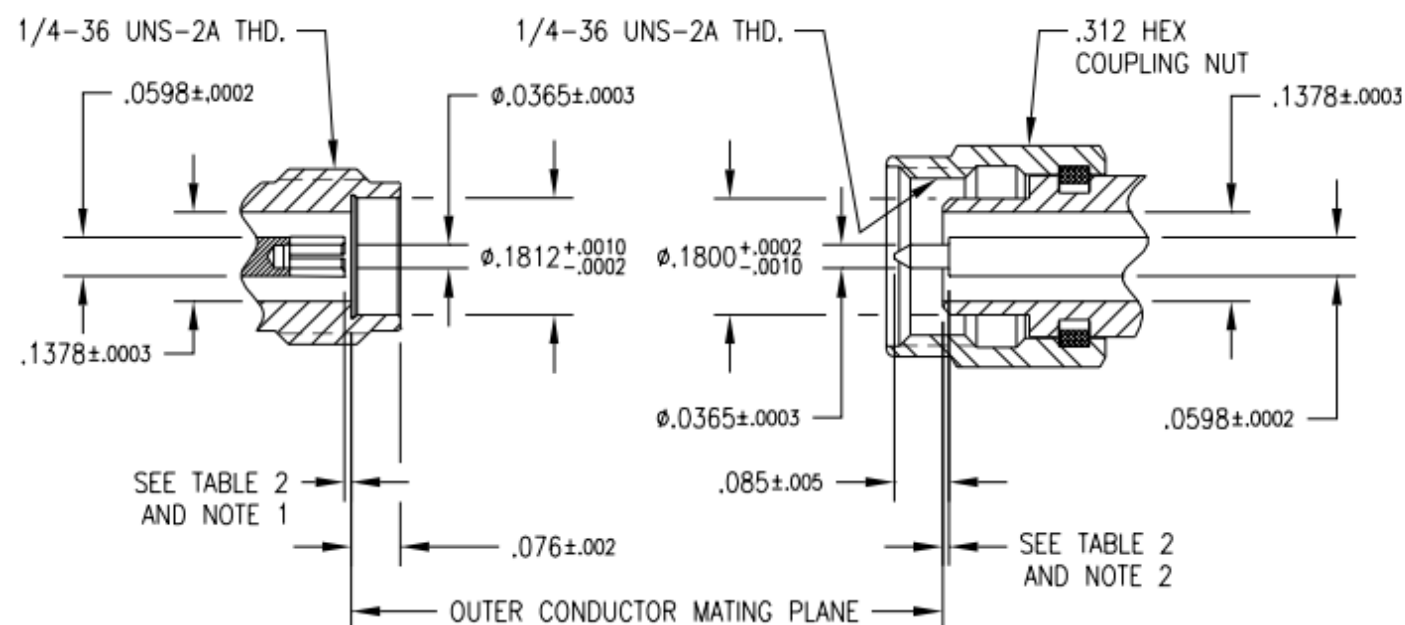


Figure 3. Critical Contact Pin Location
Dimensions of 3.5mm Precision Connectors

Figure 1

50N

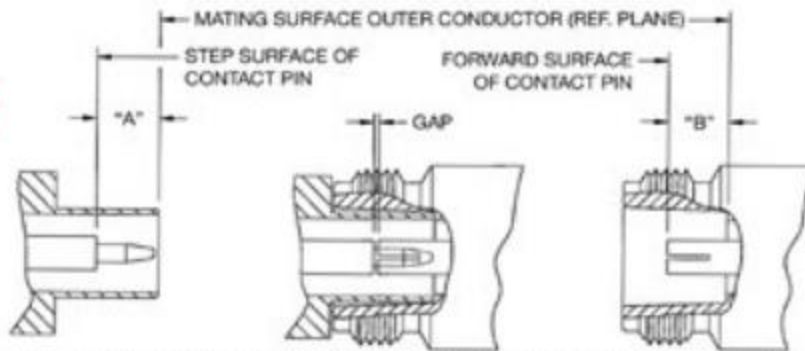
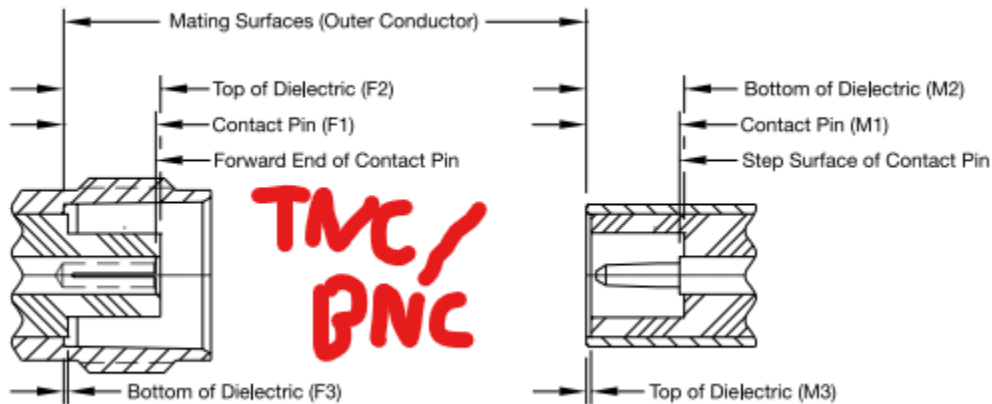
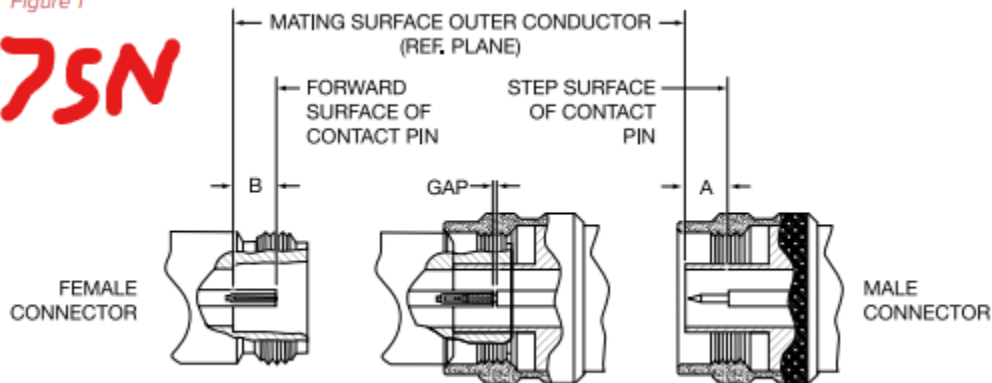
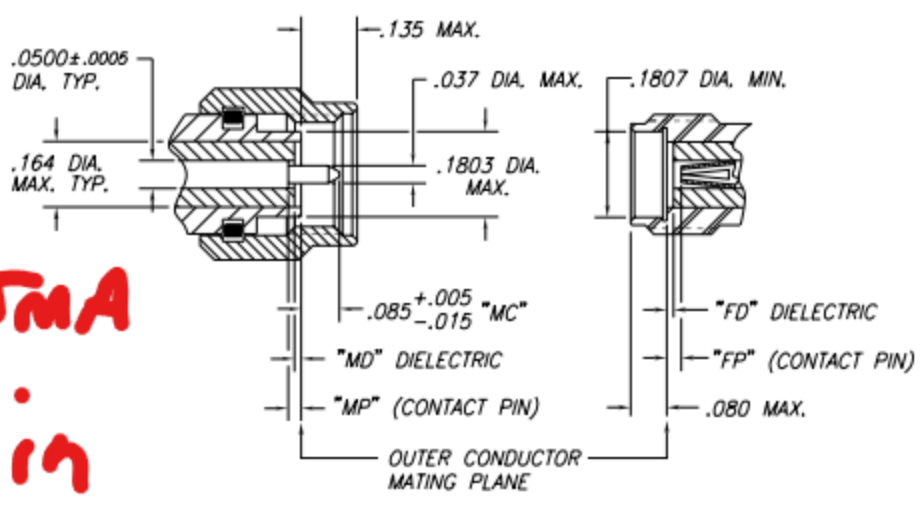


Figure 1

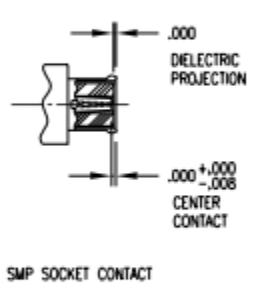
75N



SMA
in

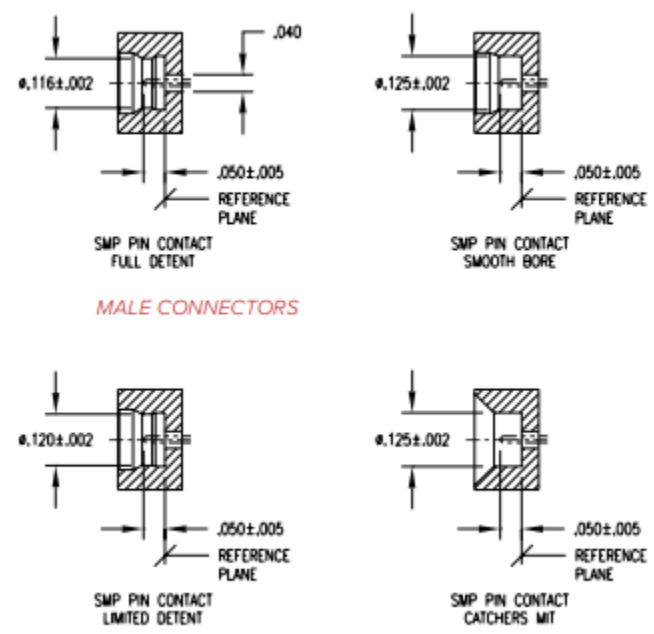


SMP



FEMALE CONNECTOR

in



MALE CONNECTORS

50 MHz	500 MHz	1 GHz	4 GHz	6 GHz	7.5 GHz	10 GHz	11 GHz	14 GHz	18 GHz	22 GHz	26 GHz	27 GHz	28 GHz	40 GHz	65 GHz
MHV	TRB	GHV	BNC	MCX	7/16	1.0/2.3	C	4.1 / 9.5	SMA	BMA	SMA 26.5	SMA 27	BMMA	SMK	SMPM
		LC / LT	HN	MMCX		SMC	N	4.3 / 10						SMP	1.85
			SMB	MC CARD		TPS	SC								SMPS
				MHF/U/FL			TNC								
				QMA											
DC															65 GHz



















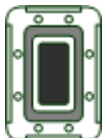
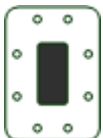
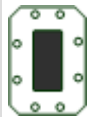
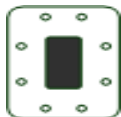
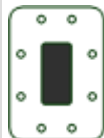
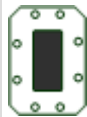
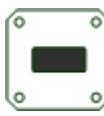
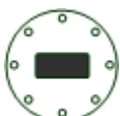
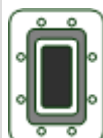
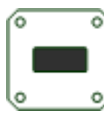
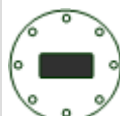
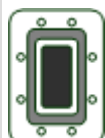
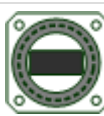
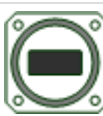
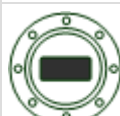
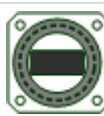
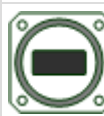
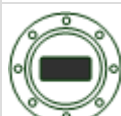


A few basic facts about waveguide: Here are [Waveguide Equations & Fields](#)

- The "WR" designation stands for "waveguide, rectangular"
- The wide inside dimension in inches is the "xxx" part of WRxxx; ie, WR650 is 6.50 inches, WR90 is 0.90 inches.
- The TE₁₀ mode of propagation is the lowest mode that is supported.
- The waveguide width determines the lower cutoff frequency and is equal (ideally) to ½ wavelength of the lower cutoff frequency.
- The TE₂₀, occurs when the width equals one wavelength of the lower cutoff frequency, and so on for higher modes.
- The TE₀₁ mode occurs when the height equals ½ wavelength of the cutoff frequency, and so on to higher modes.
- Click [here](#) for waveguide formulas.

H-Bend	E-Bend
 <p>An H-Bend is bent in the Hard direction (along the long side). This is the direction of the H-field in the TE₁₀ mode.</p>	 <p>An E-Bend is bent in the Easy direction (along the short side). This is the direction of the E-field in the TE₁₀ mode.</p>

Waveguide Flanges

North American Waveguide Flange Shapes			IEC Waveguide Flange Shapes		
 <p>Contact Grooved</p>	 <p>CPR</p>	 <p>CMR</p>	 <p>CAR</p>	 <p>UDR</p>	 <p>UER</p>
 <p>Square Cover</p>	 <p>Round Cover</p>	 <p>CPR Grooved</p>	 <p>UBR</p>	 <p>UAR</p>	 <p>PDR</p>
 <p>Choke</p>	 <p>Square Cover Grooved</p>	 <p>Round Cover Grooved</p>	 <p>CBR</p>	 <p>PBR</p>	 <p>PAR</p>

Flange Style Designations

- **UG:** UG is the military standard MIL-DTL-3922 for a range of flange types.
- **CMR:** CMR flanges are the miniature version of the Connector Pressurized Rectangular(CPR) style flanges.
- **CPRG:** Connector Pressurized Rectangular (CPR) refers to a range of commercial rectangular flanges. CPRG is Grooved CPR flange.
- **CPRF:** Connector Pressurized Rectangular (CPR) refers to a range of commercial rectangular flanges. CPRF is flat CPR flange.
- **Cover or Plate:** Square, flat UG style flanges.
- **Choke:** UG style flanges with an o-ring groove and a choke cavity.

Designation (a)=aluminum, (b)=brass, (c)=copper, (s)=silver				f _L - f _U * (GHz)	f _{co} ** (GHz)	Inside Width (in)	Inside Height (in)
WR	U.S. Mil. ___ /U	British Mil.	IEC				
WR975	RG204 (a)			0.75-1.12	0.605	9.750	4.875
WR770	RG205 (a)			0.96-1.45	0.766	7.700	3.850
WR650	RG69 (b) RG103 (a)	WG6		1.12-1.70	0.908	6.500	3.250
WR510				1.45-2.20	1.157	5.100	2.550
WR430	RG104 (b) RG105 (a)	WG8		1.70-2.60	1.372	4.300	2.150
WR340	RG112 (b) RG113 (a)	WG9A		2.20-3.30	1.736	3.400	1.700
WR284	RG48 (b) RG75 (a)	WG10		2.60-3.95	2.078	2.840	1.340
WR229	RG340 (c) RG341 (a)	WG11A	R40	3.30-4.90	2.577	2.290	1.145
WR187	RG49 (b) RG95 (a)	WG12	R48	3.95-5.85-	3.152	1.872	0.872
WR159	RG343 (c) RG344 (a)	WG13	R58	4.90-7.05	3.712	1.590	0.795
WR137	RG50 (b) RG106 (a)	WG14	R70	5.850-8.200	4.301	1.372	0.622
WR112	RG51 (b) RG68 (a)	WG15	R84	7.050-10.000	5.260	1.122	0.497
WR90	RG52 (b) RG67 (a)	WG16	R100	8.20-12.40	6.56	0.900	0.400
WR75	RG346 (c) RG347 (a)	WG17		10.0-15.0	7.87	0.750	0.375
WR62	RG91 (b) RG349 (a)	WG18		12.40-18.00	9.49	0.622	0.311
WR51	RG352 (c) RG351 (a)	WG19		15.00-22.00	11.6	0.510	0.255
WR42	RG53 (b) RG121 (a)	WG20		18.00-26.5	14.1	0.420	0.170
WR34	RG354 (c)			20.0-33.0	17.4	0.340	0.170
WR28	RG96 (s) RG271 (c)	WG22		26.50-40.00	21.1	0.280	0.140
WR22	RG97 (s)	WG23		33.00-50.00	26.4	0.224	0.112
WR19		WG24		40.00-60.00	31.4	0.188	0.0940
WR15	RG98 (s)	WG25		50.00-75.00	39.9	0.148	0.0740
WR12	RG99 (s)	WG26		60.00-90.00	48.4	0.122	0.0610
WR10		WG27		75.00-110.0	59.0	0.100	0.0500

WR8	RG138 (s)	WG28		90.00-140.0	73.8	0.0800	0.0400
WR7	RG136 (s)			110.0-170.0	90.8	0.0650	0.0325
WR4	RG137			170.0-260.0	137	0.0430	0.0215
WR3	RG139 (s)			220.0-325.0	174	0.0340	0.0170

Double-Ridge Waveguide

Double-ridge waveguide provides a wider operational bandwidth at the cost of higher insertion loss and lower power handling. The "D" in WRD stands for double-ridge. D24 at the end means a bandwidth ration of 1.24:1, etc.

Designation (a) = aluminum, (b) = brass, (c) = copper		f _L - f _u (GHz)	f _{co} (GHz)	Maximum Inside Width (in)	Maximum Inside Height (in)
WRD	U.S. Mil. MIL-W-23351-				
WRD250	-	2.60-7.80	2.093	1.655	0.715
WRD350 D24	4-029 (a) 4-303 (b) 4-031 (c)	3.50-8.20	2.915	1.480	0.688
WRD475 D24	4-033 (a) 4-034 (b) 4-035 (c)	4.75-11.0	3.961	1.090	0.506
WRD500 D36	2-025 (a) 2-026 (b) 2-027 (c)	5.00-18.00	4.222	0.752	0.323
WRD650	-	6.50-18.00	5.348	0.721	0.321
WRD750 D24	4-037 (a) 4-038 (b) 4-039 (c)	7.50-18.00	6.239	0.691	0.321
WRD110 D24	4-041 (a) 4-042 (b) 4-043 (c)	11.00-26.50	9.363	0.471	0.219
WRD180 D24	4-045 (a) 4-046 (b) 4-047 (c)	18.00-40.00	14.995	0.288	0.134

Virginia Diodes, Inc. Waveguide Band Designations

12/2021

VDI Designation	Internal Dimensions (μm)		Cut-off frequency (GHz) *	Suggested min. frequency (GHz)	Suggested max. frequency (GHz)	Calculated Loss (dB/cm) for Au *		Alternate Designations	
	Width	Height				At min. frequency	At max. frequency		
WR-28	7112	3556	21.1	26.5	40	0.008	0.006	Ka	-
WR-22	5690	2845	26.35	33	50	0.012	0.008	Q	-
WR-19	4775	2388	31.39	40	60	0.015	0.010	U	-
WR-15	3759	1880	39.88	50	75	0.022	0.015	V	-
WR-12	3099	1549	48.37	60	90	0.030	0.020	E	-
WR-10	2540	1270	59.01	75	110	0.039	0.027	W	-
WR-8.0	2032	1016	73.77	90	140	0.059	0.038	F	WR-8
WR-6.5	1651	825.5	90.79	110	170	0.081	0.052	D	WR-6
WR-5.1	1295	647.5	115.8	140	220	0.12	0.074	G	WR-5
WR-4.3	1092	546	137.3	170	260	0.14	0.1	-	WR-4
WR-3.4	864	432	173.5	220	330	0.2	0.14	-	WR-3
WM-710 (WR-2.8)	710	355	211.1	260	400	0.28	0.18	-	-
WM-570 (WR-2.2)	570	285	263.0	330	500	0.37	0.25	-	-
WM-470 (WR-1.9)	470	235	318.9	400	600	0.5	0.34	-	-
WM-380 (WR-1.5)	380	190	394.5	500	750	0.67	0.47	-	-
WM-310 (WR-1.2)	310	155	483.5	600	900	0.95	0.64	-	-
WM-250 (WR-1.0)	250	125	599.6	750	1100	1.3	0.88	-	-
WM-200 (WR-0.8)	200	100	749.5	900	1400	2	1.2	-	-
WM-164 (WR-0.65)	164	82	914.0	1100	1700	2.6	1.7	-	-
WM-130 (WR-0.51)	130	65	1153	1400	2200	3.7	2.3	-	-
WM-106 (WR-0.43)	106	53	1414	1700	2600	5.1	3.2	-	-
WM-86 (WR-0.34)	86	43	1743	2200	3300	6.3	4.3	-	-

* Cutoff frequency and waveguide loss calculated according to IEEE P1785.1

1-1

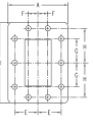
L



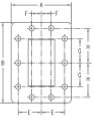
Maury Precision Flange Reference Chart

BAND	EIA WR NUMBER	MPF DESIGNATION	MATES WITH	MAURY DATA SHEET
L	650	MPF650	UG417A/U (without groove)	
R	430	MPF430	UG435/U (without groove)	5E-016
D	340	MPF340	CPR340F	
S	284	MPF284	UG53/U, UG54A/U, CPR284	5E-002
S	284	MPF284B	UG53/U, UG54A/U, CPR284, CMR284	5E-002A
S	284	MPF284C	UG53/U, UG54A/U	5E-002B
E	229	MPF229	CPR229, CMR229	5E-003
E	229	MPF229B	CPR229	5E-003A
G	187	MPF187	UG149A/U, UG148B/U, CPR187	5E-004
G	187	MPF187C	UG149A/U, UG148B/U	5E-004A
F	159	MPF159	CPR159, CMR159	5E-011
F	159	MPF159B	CPR159	5E-011A
C	137	MPF137	UG344/U, UG343A/U, CPR137	5E-005
C	137	MPF137C	UG344/U, UG343A/U	5E-005A
H	112	MPF112	UG51/U, UG138/U, CPR112F & G	5E-001
H	112	MPF112B	UG51/U, UG52/U	5E-001A
H	112	MPF112C	UG51/U, UG52/U, CMR112	5E-001C
HS	102	MPF102	UG1493	5E-014
X	90	MPF90	UG39/U, UG40A/U, CPR90	5E-006
X	90	MPF90A	UG39/U, UG40A/U, CMR90	5E-006
X	90	MPF90B	UG39/U, UG40A/U	5E-006A
M	75	MPF75A & B	M3922/70-004 & -005	5E-007
P	62	MPF62	UG419/U, UG541A/U	5E-008
N	51	MPF51A & B	M3922/70-010, -011, -012, -022, -023, -024	5E-012
N	51	MPF51C	Agilent Type, UBR180	5E-013
K	42	MPF42	UG595/U, UG596/U	5E-009
Q	34	MPF34	UG595U, UG596/U, UG1530/U	5E-019
U	28	MPF28	UG599/U, UG600/U	5E-010
J	22	MPF22	UG383/U	5E-030
T	19	MPF19	UG383/U	5E-030
V	15	MPF15	UG385	5E-031
Y	12	MPF12	UG385	5E-031
Z	10	MPF10	UG385	5E-031

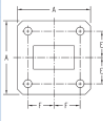
WR650	WG6	R14
UG417A/U (without groove)		
Dimensions	inches	mm
A	5.44	138.18
B	8.69	220.73
E	2.31	58.69
F	1.25	31.73
G	2.37	60.30
H	3.94	100.00
Hole Dia.	0.330 ¹	8.20



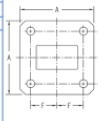
WR430	WG8	R22
UG435B/U (without groove)		
Dimensions	inches	mm
A	4.19	106.38
B	6.34	161.04
E	1.72	43.69
F	0.94	23.83
G	1.79	45.39
H	2.79	70.99
Hole Dia.	0.257 ¹	6.71



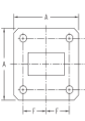
WR112	WG15	R84
UG51/U UBR84		
Dimensions	inches	mm
A	1.875 ¹	47.90
E	0.737	18.72
F	0.676	17.17
Hole Dia.	0.169 ²	4.255




WR90	WG16	R100
UG39/U UBR100		
Dimensions	inches	mm
A	1.625 ¹	41.40
E	0.640	16.26
F	0.610	15.49
Hole Dia.	0.169 ²	4.255



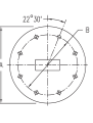
WR28	WG22	R320
UG599/U		
Dimensions	inches	mm
A	0.75	19.05
E	0.265	6.73
F	0.250	6.35
Hole Dia.	0.116	2.98



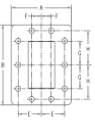
WR22	WG23	R400
UG383/U		
Dimensions	inches	mm
A	1.13	28.85
B	0.94	23.81
C Holes	4-40 UNC-2B	
D Holes	0.063	1.613
E Dowels	0.061	1.555



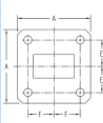
WR284	WG10	R32
UG53/U		
Dimensions	inches	mm
A	5.31	134.87
B	4.75	120.65
Hole Dia.	0.257 ¹	6.50



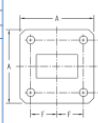
WR229	WG11A	R40
CPR229F UDR40		
Dimensions	inches	mm
A	2.76	70.20
B	3.69	93.73
E	1.05	26.67
F	0.50	12.70
G	1.07	27.18
H	1.62	41.15
Hole Dia.	0.257 ¹	6.50




WR75	WG17	R120
COML UBR120		
Dimensions	inches	mm
A	1.50 ¹	38.83
E	0.561	14.25
F	0.520	13.21
Hole Dia.	0.144 ²	3.658



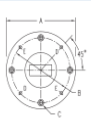
WR62	WG18	R140
UG419/U UBR140		
Dimensions	inches	mm
A	1.31 ¹	33.30
E	0.478	12.14
F	0.497	12.63
Hole Dia.	0.144 ²	3.658



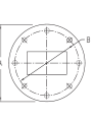
WR19	WG24	R500
UG387/U		
Dimensions	inches	mm
A	1.13	28.85
C Holes	4-40 UNC-2B	
D Holes	0.063	1.613
E Dowels	0.061	1.555
All Holes	0.938	23.81



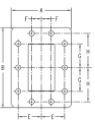
WR15	WG25	R620
UG385/U		
Dimensions	inches	mm
A	0.750	19.05
B	0.563	14.29
C Holes	4-40 UNC-2B	
D Holes	0.063	1.613
E Dowels	0.061	1.555



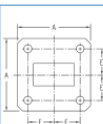
WR187	WG12	R48
UG149/U UAR48		
Dimensions	inches	mm
A	3.64	92.33
B	3.25	82.55
Hole Dia.	0.330 ¹	8.13



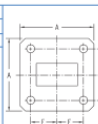
WR159	WG13	R58
CPR159 UDR58		
Dimensions	inches	mm
A	2.44	61.98
B	3.18	80.77
E	0.88	22.35
F	0.38	9.53
G	0.50	12.70
H	1.27	32.26
Hole Dia.	0.257 ¹	6.50




WR51	WG19	R180
COML		
Dimensions	inches	mm
A	1.31 ¹	33.27
E	0.497 ¹	12.62
F	0.478 ¹	12.14
Hole Dia.	0.144 ²	3.658



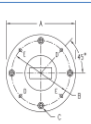
WR42	WG20	R220
UG495/U UBR220		
Dimensions	inches	mm
A	0.875 ¹	22.41
E	0.335	8.51
F	0.320	8.13
Hole Dia.	0.116 ²	3.07



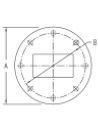
WR12	WG26	R740
UG387/U		
Dimensions	inches	mm
A	0.750	19.05
B	0.563	14.29
C Holes	4-40 UNC-2B	
D Holes	0.063	1.613
E Dowels	0.061	1.555
All Holes	0.963	24.49



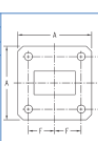
WR10	WG27	R900
UG387/U		
Dimensions	inches	mm
A	0.750	19.05
B	0.563	14.29
C Holes	4-40 UNC-2B	
D Holes	0.063	1.613
E Dowels	0.061	1.555
All Holes	0.963	24.49



WR137	WG14	R70
UG344/U UAR70		
Dimensions	inches	mm
A	3.13	79.50
B	2.75	69.85
Hole Dia.	0.199 ¹	5.16



WR34	WG21	R260
UG1530		
Dimensions	inches	mm
A	0.875 ¹	22.41
E	0.335 ¹	8.51
F	0.320 ¹	8.13
Hole Dia.	0.116 ²	3.07



Source:

- N1045B Electrical Remote Sampling Head Quick Start Poster
(<https://www.keysight.com/us/en/assets/9018-04749/quick-start-guides/9018-04749.pdf>)
- Coaxial Connectors Adapters and Connectors Technical Overview
(<https://www.keysight.com/us/en/assets/7018-04561/technical-overviews/5992-0118.pdf>)
- Electrical Connector Care
(<https://rfmw.em.keysight.com/DigitalPhotonics/flexdca/UG/Content/Topics/Connector-Care/connector-elec-care.htm>)
- Maury MW Connector Gages and Connector Gage Kits DATA SHEET 2Y-051
(<https://www.maurymw.com/wp-content/uploads/2023/11/2Y-051.pdf>)
- Connect with Confidence: Color-Coded Interconnects; Special Report from the March 2013 Cables & Connectors Supplement to The Microwave Journal. Steve Dudkiewicz (Maury MW)
(<https://www.maurymw.com/wp-content/uploads/2023/11/5A-055.pdf>)
- AGILENT PRECISION RF CONNECTOR FAQ
(https://people.eecs.berkeley.edu/~aflynn/Cory111Lab/AGILENT_PRECISION_RF_CONNECTOR_FAQ.doc)
- Delta Electronics Mfg. Corp. PRODUCTS BY FREQUENCY chart (<https://www.deltarf.com/frequency>)
- Maury MW ColorConnect™ Precision Adapters & Test Essentials™ Lab Adapters DATA SHEET / 2B-074
(<https://www.maurymw.com/wp-content/uploads/2023/11/2B-074.pdf>)
- VDI Application Note: VDI Waveguide Band Designations (VDI-1002)
(https://www.vadiodes.com/images/AppNotes/VDI_Waveguide_Designations.pdf)
- VDI Application Note: VDI Waveguide Interface (https://www.vadiodes.com/images/AppNotes/20-05-14_VDI_PRECISION_WAVEGUIDE_INTERFACE_R4V3_CUSTOMER_ONE_PAGE.pdf)
- Waveguide Flange Information Maury Precision Flanges (MPF)(<https://www.maurymw.com/wp-content/uploads/2023/11/wgflngs.pdf>)
- Waveguide & Flange Selection Guide (<https://www.rfcafe.com/references/electrical/waveguide-chart.htm>)