

Waveguide Flange Information

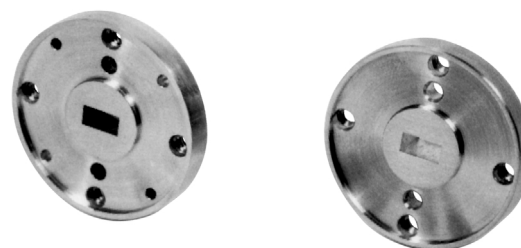
Maury Precision Flanges (MPF)

Description

Maury MPF flanges are designed to provide precise mating of flanges when repeated connections are required or in systems where optimum waveguide alignment is critical. Some MPF series flanges also allow mating to more than one type of flange interface, which amplifies their versatility and economy when mating different flange types within a band. Please refer to the "mates with" column in the chart below to see the possible combinations.

MPF flanges are provided on components used in Maury calibration kits or on low VSWR components such as waveguide to coax adapters with VSWR of 1.10 or better.

MPF flanges in WR22 and smaller waveguide (millimeter wave sizes) provide dramatic improvements in connection consistency, repeatability and serviceability versus standard UG flanges, while still maintaining mating compatibility with these older designs (see Maury data sheet 5E-030). As in larger waveguide sizes, these flanges have two precision index holes and slip-fit alignment pins. (Threaded pins may also be installed in the standard four-pin pattern when mating to standard UG flanges. Both types of pins are removable, making the flange face available for servicing.)



MPF flanges also have a raised outer ring which prevents the mating surfaces from cocking due to uneven torque applied to the flange bolts. To obtain complete technical descriptions, please request the data sheets shown in the Maury Data Sheet column.

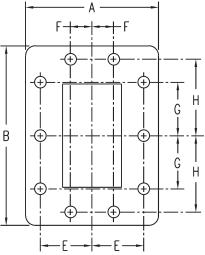
NOTE: All Maury MPF flanges have precision index holes. Corresponding slip-fit alignment pins are also available. Together, these ensure precise alignment and repeatable mating in waveguide connections. All Maury waveguide VNA calibration kit components come with MPF flanges. Alignment pins are available separately. See Maury data sheet 3A-996 for details.

Maury Precision Flange Reference Chart

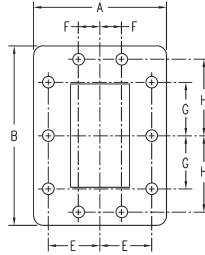
BAND	EIA WR NUMBER	MPF DESIGNATION	MATES WITH	MAURY DATA SHEET
L	650	MPF650	UG417A/U (without groove)	
R	430	MPF430	UG435/U (without groove)	5E-016
D	340	MPF340	CPR340F	
S	284	MPF284	UG53/U, UG54A/U, CPR284	5E-002
S	284	MPF284B	UG53/U, UG54A/U, CPR284, CMR284	5E-002A
S	284	MPF284C	UG53/U, UG54A/U	5E-002B
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	UG595/U, 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

Standard Waveguide Flange Specifications

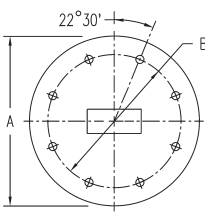
WR650	WG6	R14
UG417A/U (without groove)		
Dimensions	inches	mm
A	5.44	138.18
B	8.69	220.73
E	2.31	58.69
F	1.25	31.73
G	2.37	60.30
H	3.94	100.00
Hole Dia.	0.330 ¹	8.20



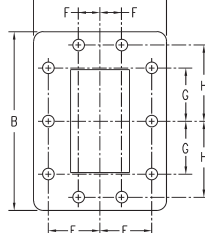
WR430	WG8	R22
UG435B/U (without groove)		
Dimensions	inches	mm
A	4.19	106.38
B	6.34	161.04
E	1.72	43.69
F	0.94	23.83
G	1.79	45.39
H	2.79	70.99
Hole Dia.	0.257 ¹	6.71



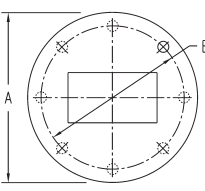
WR284	WG10	R32
UG53/U		
Dimensions	inches	mm
A	5.31	134.87
B	4.75	120.65
Hole Dia.	0.257 ¹	6.50



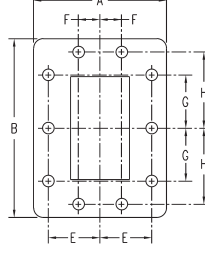
WR229	WG11A	R40
CPR229F UDR40		
Dimensions	inches	mm
A	2.76	70.20
B	3.89	98.73
E	1.05	26.67
F	0.50	12.70
G	1.07	27.18
H	1.62	41.15
Hole Dia.	0.257 ¹	6.50



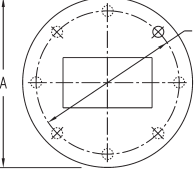
WR187	WG12	R48
UG149/U UAR48		
Dimensions	inches	mm
A	3.64	92.33
B	3.25	82.55
Hole Dia.	0.330 ¹	5.13



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



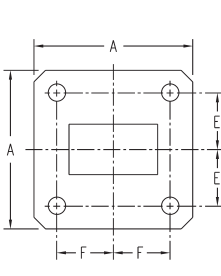
WR137	WG14	R70
UG344/U UAR70		
Dimensions	inches	mm
A	3.13	79.50
B	2.75	69.85
Hole Dia.	0.199 ¹	5.16



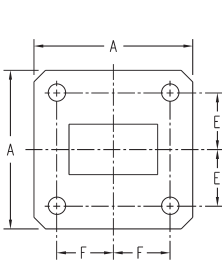
¹ English and metric hole sizes may differ slightly.

Standard Waveguide Flange Specifications

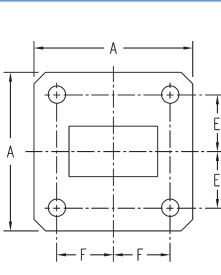
WR112	WG15	R84
UG51/U	UBR84	
Dimensions	inches	mm
A	1.875 ¹	47.90
E	0.737	18.72
F	0.676	17.17
Hole Dia.	0.169 ²	4.255



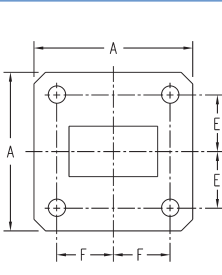
WR90	WG16	R100
UG39/U	UBR100	
Dimensions	inches	mm
A	1.625 ¹	41.40
E	0.640	16.26
F	0.610	15.49
Hole Dia.	0.169 ²	4.255



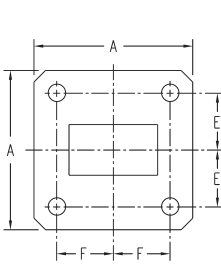
WR75	WG17	R120
COM'L	UBR120	
Dimensions	inches	mm
A	1.50 ¹	38.83
E	0.561	14.25
F	0.520	13.21
Hole Dia.	0.144 ²	4.085



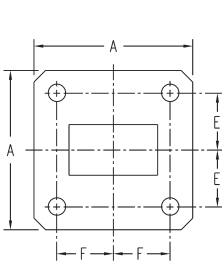
WR62	WG18	R140
UG419/U	UBR140	
Dimensions	inches	mm
A	1.31 ¹	33.30
E	0.478	12.14
F	0.497	12.63
Hole Dia.	0.144 ²	4.085



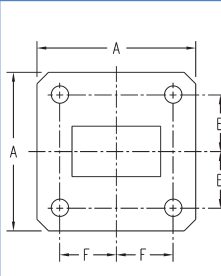
WR51	WG19	R180
COM'L		
Dimensions	inches	mm
A	1.31 ¹	33.27
E	0.497 ¹	12.62
F	0.478 ¹	12.14
Hole Dia.	0.144 ²	3.658



WR42	WG20	R220
UG595/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



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

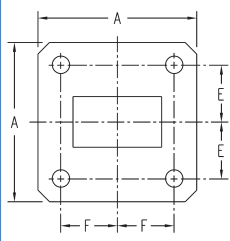


¹ CAUTION: U.S. MIL and commercial flange dimensions differ from IEC flanges.

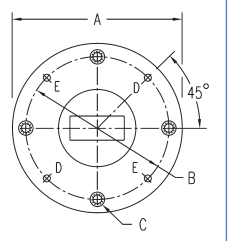
² English and metric hole sizes may differ slightly.

Standard Waveguide Flange Specifications

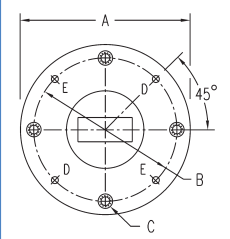
WR28	WG22	R320
UG599/U		
Dimensions	inches	mm
A	0.75	19.05
E	0.265	6.73
F	0.250	6.35
Hole Dia.	0.116	2.98



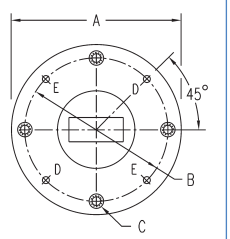
WR22	WG23	R400
UG383/U		
Dimensions	inches	mm
A	1.13	28.85
B	0.94	23.81
C Holes	4-40 UNC-2B	
D Holes	0.063	1.613
E Dowels	0.061	1.555



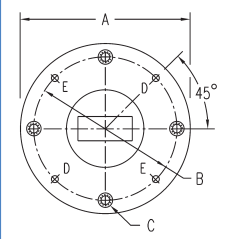
WR19	WG24	R500
UG383/U		
Dimensions	inches	mm
A	1.13	28.85
C Holes	4-40 UNC-2B	
D Holes	0.063	1.613
E Dowels	0.061	1.555
All Holes	0.938	23.81



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



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	0.563	14.29



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	0.563	14.29

