A-INFO Microwave

Waveguide Components

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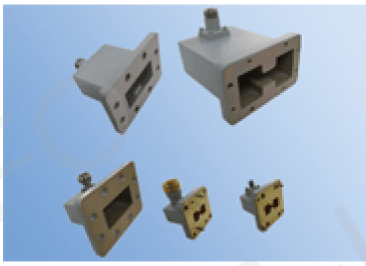
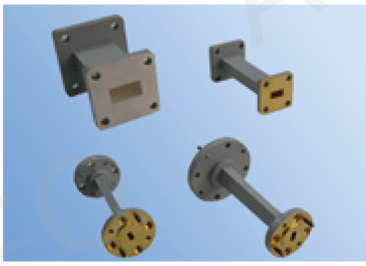
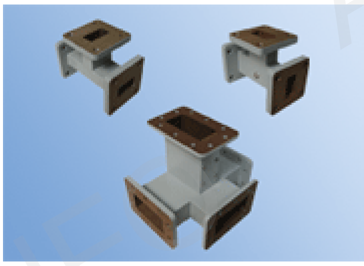
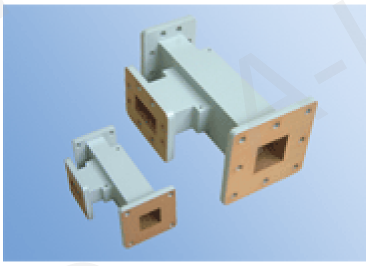
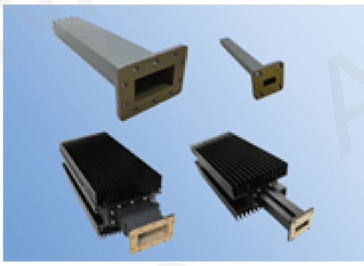
Adapter
Attenuator
Bend/Straight/Twist
Circulator/Isolaotr
Coupler
Detector
Filter
Load
OMT
Rotary Joint
Short Plates/Spacer
Flange/Gasket
Switch
Tee(ET/HT/MT)
Transition

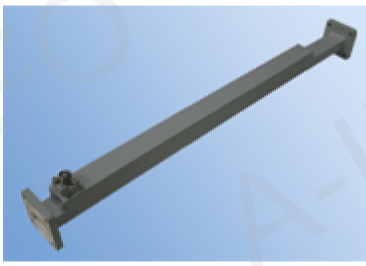


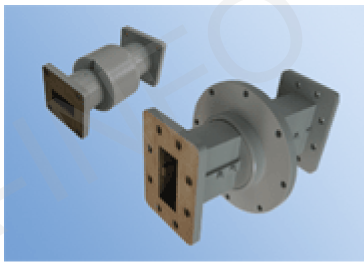












Review www.ainfoinc.com for the most updated product info.

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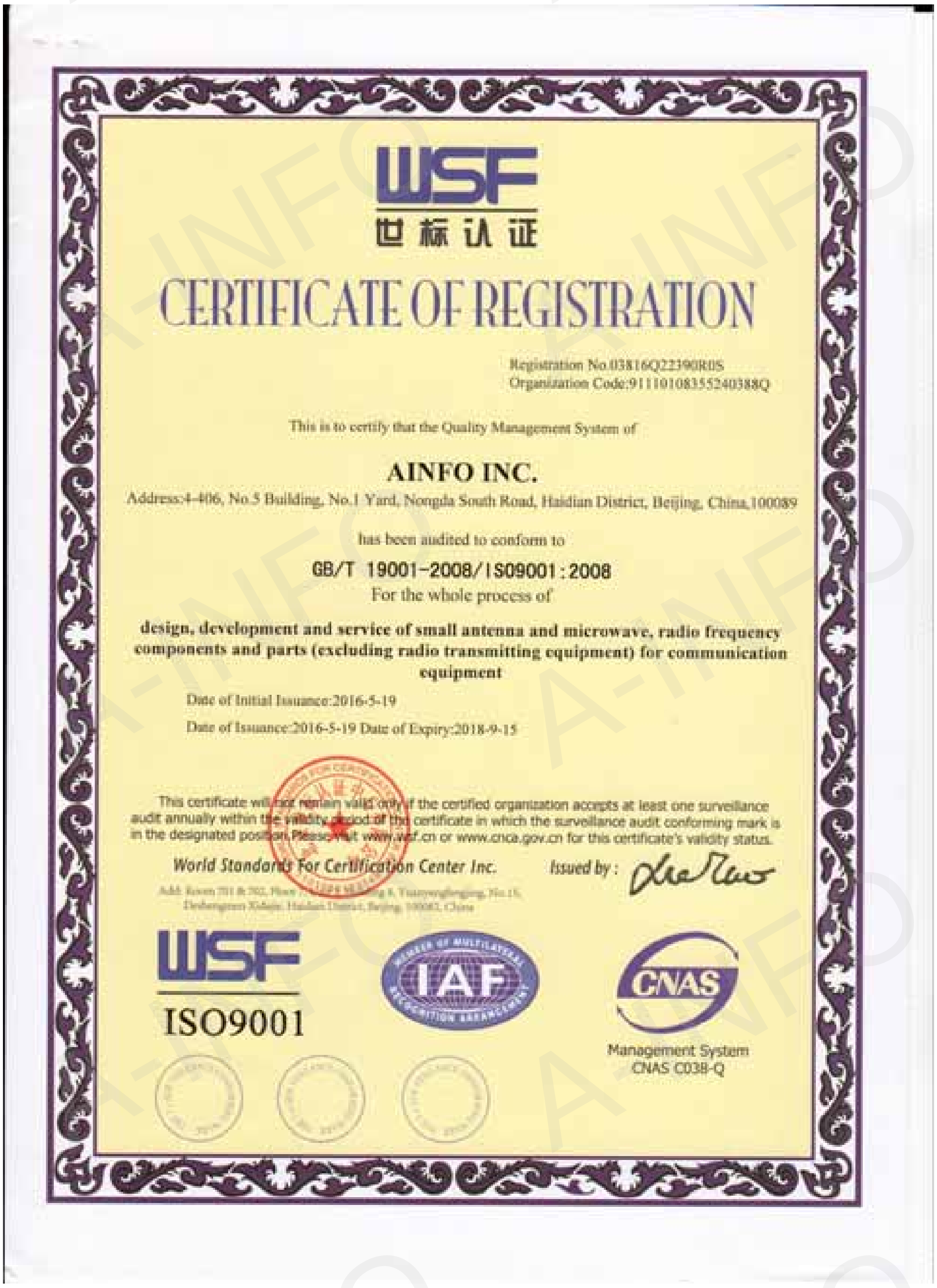
AINFO Inc. is an ISO 9001:2008 certified manufacturer.



WSF
世标认证

CERTIFICATE OF REGISTRATION

Registration No.03816Q22390R0S
Organization Code:91110108355240388Q

This is to certify that the Quality Management System of

AINFO INC.

Address:4-406, No.5 Building, No.1 Yard, Nongda South Road, Haidian District, Beijing, China,100089

has been audited to conform to

GB/T 19001-2008/ISO9001:2008

For the whole process of

design, development and service of small antenna and microwave, radio frequency components and parts (excluding radio transmitting equipment) for communication equipment

Date of Initial Issuance:2016-5-19

Date of Issuance:2016-5-19 Date of Expiry:2018-9-15

This certificate will not remain valid only if the certified organization accepts at least one surveillance audit annually within the validity period of the certificate in which the surveillance audit conforming mark is in the designated position. Please visit www.wsf.cn or www.cnca.gov.cn for this certificate's validity status.

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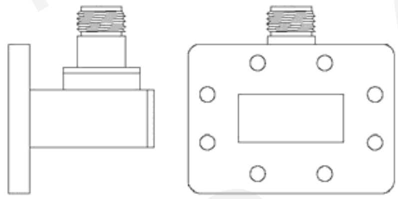
Content

WG to Coaxial Adapter - Right Angle



*Freq. = Frequency	*I.L. = Insertion Loss
*Mat. = Material	*N.W.=Net Weight

Ordering Information
P/N：

229	WCA	N
WR Size	Product Code	Connector

P/N	*Freq. (GHz)	VSWR Max.	Connector	Theoretical *I.L. (dB) Max.	EIA WR	Flange	*Mat.	*N.W.
2300WCAN	0.32-0.49	1.25	N-F	0.12	WR2300	FDP3	Al	15.80
2300WCAS	0.32-0.49	1.25	SMA-F	0.12	WR2300	FDP3	Al	15.75
2300WCA7/16	0.32-0.49	1.25	7/16-F	0.12	WR2300	FDP3	Al	15.85
2100WCAN	0.35-0.53	1.25	N-F	0.12	WR2100	FDP4	Al	12.35
2100WCAS	0.35-0.53	1.25	SMA-F	0.12	WR2100	FDP4	Al	12.30
2100WCA7/16	0.35-0.53	1.25	7/16-F	0.12	WR2100	FDP4	Al	12.40
1800WCAN	0.41-0.62	1.25	N-F	0.12	WR1800	FDP5	Al	10.55
1800WCAS	0.41-0.62	1.25	SMA-F	0.12	WR1800	FDP5	Al	10.50
1800WCA7/16	0.41-0.62	1.25	7/16-F	0.12	WR1800	FDP5	Al	10.60
1500WCAN	0.49-0.75	1.25	N-F	0.12	WR1500	FDP6	Al	6.95
1500WCAS	0.49-0.75	1.25	SMA-F	0.12	WR1500	FDP6	Al	6.90
1500WCA7/16	0.49-0.75	1.25	7/16-F	0.12	WR1500	FDP6	Al	7.00
1150WCAN	0.64-0.96	1.25	N-F	0.12	WR1150	FDP8	Al	4.35
1150WCAS	0.64-0.96	1.25	SMA-F	0.12	WR1150	FDP8	Al	4.30
1150WCA7/16	0.64-0.96	1.25	7/16-F	0.12	WR1150	FDP8	Al	4.40
975WCAN	0.75-1.12	1.25	N-F	0.09	WR975	FDP9	Al	3.45
975WCAS	0.75-1.12	1.25	SMA-F	0.12	WR975	FDP9	Al	3.40
975WCA7/16	0.75-1.12	1.25	7/16-F	0.12	WR975	FDP9	Al	3.50
770WCAN	0.96-1.45	1.25	N-F	0.12	WR770	FDP12	Al	2.40
770WCAS	0.96-1.45	1.25	SMA-F	0.12	WR770	FDP12	Al	2.35
770WCA7/16	0.96-1.45	1.25	7/16-F	0.12	WR770	FDP12	Al	2.45
650WCAN	1.12-1.70	1.25	N-F	0.10	WR650	FDP14	Al	1.25
650WCAS	1.12-1.70	1.25	SMA-F	0.12	WR650	FDP14	Al	1.23
650WCA7/16	1.12-1.70	1.25	7/16-F	0.12	WR650	FDP14	Al	1.30

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Right Angle WG to Coaxial Adapter

P/N	*Freq. (GHz)	VSWR Max.	Connector	Theoretical *I.L. (dB) Max.	EIA WR	Flange	*Mat.	*N.W.
510WCAN	1.45-2.20	1.25	N-F	0.12	WR510	FDP18	Al	0.90
510WCAS	1.45-2.20	1.25	SMA-F	0.12	WR510	FDP18	Al	0.85
510WCA7/16	1.45-2.20	1.25	7/16-F	0.12	WR510	FDP18	Al	0.95
430WCAN	1.70-2.60	1.25	N-F	0.12	WR430	FDP22	Al	0.65
430WCAS	1.70-2.60	1.25	SMA-F	0.13	WR430	FDP22	Al	0.60
430WCA7/16	1.70-2.60	1.25	7/16-F	0.13	WR430	FDP22	Al	0.70
340WCAN	2.20-3.30	1.25	N-F	0.12	WR340	FDP26	Al	0.50
340WCAS	2.20-3.30	1.25	SMA-F	0.14	WR340	FDP26	Al	0.45
340WCA7/16	2.20-3.30	1.25	7/16-F	0.14	WR340	FDP26	Al	0.55
284WCAN	2.60-3.95	1.25	N-F	0.13	WR284	FDP32	Al	0.35
284WCAS	2.60-3.95	1.25	SMA-F	0.15	WR284	FDP32	Al	0.30
284WCA7/16	2.60-3.95	1.25	7/16-F	0.15	WR284	FDP32	Al	0.40
229WCAN	3.30-4.90	1.25	N-F	0.14	WR229	FDP40	Al	0.19
229WCANM	3.30-4.90	1.25	N-M	0.14	WR229	FDP40	Al	0.19
229WCAS	3.30-4.90	1.25	SMA-F	0.16	WR229	FDP40	Al	0.18
229WCASM	3.30-4.90	1.25	SMA-M	0.16	WR229	FDP40	Al	0.18
229WCAT	3.30-4.90	1.25	TNC-F	0.16	WR229	FDP40	Al	0.19
229WCATM	3.30-4.90	1.25	TNC-M	0.16	WR229	FDP40	Al	0.19
229WCA7	3.30-4.90	1.25	7mm	0.16	WR229	FDP40	Al	0.22
229WCA3.5	3.30-4.90	1.25	3.5mm-F	0.16	WR229	FDP40	Al	0.18
229WCA3.5M	3.30-4.90	1.25	3.5mm-M	0.16	WR229	FDP40	Al	0.18
187WCAN	3.95-5.85	1.25	N-F	0.15	WR187	FDP48	Al	0.17
187WCANM	3.95-5.85	1.25	N-M	0.15	WR187	FDP48	Al	0.17
187WCAS	3.95-5.85	1.25	SMA-F	0.17	WR187	FDP48	Al	0.14
187WCASM	3.95-5.85	1.25	SMA-M	0.17	WR187	FDP48	Al	0.14
187WCAT	3.95-5.85	1.25	TNC-F	0.17	WR187	FDP48	Al	0.14
187WCATM	3.95-5.85	1.25	TNC-M	0.17	WR187	FDP48	Al	0.14
187WCA7	3.95-5.85	1.25	7mm	0.17	WR187	FDP48	Al	0.17
187WCA3.5	3.95-5.85	1.25	3.5mm-F	0.17	WR187	FDP48	Al	0.14
187WCA3.5M	3.95-5.85	1.25	3.5mm-M	0.17	WR187	FDP48	Al	0.14
159WCAN	4.90-7.05	1.25	N-F	0.16	WR159	FDP58	Al	0.13
159WCANM	4.90-7.05	1.25	N-M	0.16	WR159	FDP58	Al	0.13
159WCAS	4.90-7.05	1.25	SMA-F	0.18	WR159	FDP58	Al	0.12
159WCASM	4.90-7.05	1.25	SMA-M	0.18	WR159	FDP58	Al	0.12
159WCAT	4.90-7.05	1.25	TNC-F	0.18	WR159	FDP58	Al	0.12
159WCATM	4.90-7.05	1.25	TNC-M	0.18	WR159	FDP58	Al	0.12
159WCA7	4.90-7.05	1.25	7mm	0.18	WR159	FDP58	Al	0.15
159WCA3.5	4.90-7.05	1.25	3.5mm-F	0.18	WR159	FDP58	Al	0.12
159WCA3.5M	4.90-7.05	1.25	3.5mm-M	0.18	WR159	FDP58	Al	0.12

Right Angle WG to Coaxial Adapter

P/N	*Freq. (GHz)	VSWR Max.	Connector	Theoretical *I.L. (dB) Max.	EIA WR	Flange	*Mat.	*N.W.
137WCAN	5.85-8.20	1.25	N-F	0.17	WR137	FDP70	Al	0.10
137WCANM	5.85-8.20	1.25	N-M	0.17	WR137	FDP70	Al	0.10
137WCAS	5.85-8.20	1.25	SMA-F	0.20	WR137	FDP70	Al	0.08
137WCASM	5.85-8.20	1.25	SMA-M	0.20	WR137	FDP70	Al	0.08
137WCAT	5.85-8.20	1.25	TNC-F	0.20	WR137	FDP70	Al	0.09
137WCATM	5.85-8.20	1.25	TNC-M	0.20	WR137	FDP70	Al	0.09
137WCA7	5.85-8.20	1.25	7mm	0.20	WR137	FDP70	Al	0.12
137WCA3.5	5.85-8.20	1.25	3.5mm-F	0.20	WR137	FDP70	Al	0.08
137WCA3.5M	5.85-8.20	1.25	3.5mm-M	0.20	WR137	FDP70	Al	0.08
112WCAN	7.05-10.0	1.25	N-F	0.18	WR112	FBP84	Al	0.07
112WCANM	7.05-10.0	1.25	N-M	0.18	WR112	FBP84	Al	0.07
112WCAS	7.05-10.0	1.25	SMA-F	0.21	WR112	FBP84	Al	0.06
112WCASM	7.05-10.0	1.25	SMA-M	0.21	WR112	FBP84	Al	0.06
112WCAT	7.05-10.0	1.25	TNC-F	0.21	WR112	FBP84	Al	0.06
112WCATM	7.05-10.0	1.25	TNC-M	0.21	WR112	FBP84	Al	0.06
112WCA7	7.05-10.0	1.25	7mm	0.21	WR112	FBP84	Al	0.09
112WCA3.5	7.05-10.0	1.25	3.5mm-F	0.21	WR112	FBP84	Al	0.06
112WCA3.5M	7.05-10.0	1.25	3.5mm-M	0.21	WR112	FBP84	Al	0.06
90WCAN	8.20-12.4	1.25	N-F	0.21	WR90	FBP100	Al	0.06
90WCANM	8.20-12.4	1.25	N-M	0.21	WR90	FBP100	Al	0.06
90WCAS	8.20-12.4	1.25	SMA-F	0.23	WR90	FBP100	Al	0.04
90WCASM	8.20-12.4	1.25	SMA-M	0.23	WR90	FBP100	Al	0.04
90WCAT	8.20-12.4	1.25	TNC-F	0.23	WR90	FBP100	Al	0.04
90WCATM	8.20-12.4	1.25	TNC-M	0.23	WR90	FBP100	Al	0.04
90WCA7	8.20-12.4	1.25	7mm	0.23	WR90	FBP100	Al	0.08
90WCA3.5	8.20-12.4	1.25	3.5mm-F	0.23	WR90	FBP100	Al	0.04
90WCA3.5M	8.20-12.4	1.25	3.5mm-M	0.23	WR90	FBP100	Al	0.04
75WCAN	10.0-15.0	1.25	N-F	0.23	WR75	FBP120	Al	0.04
75WCANM	10.0-15.0	1.25	N-M	0.23	WR75	FBP120	Al	0.04
75WCAS	10.0-15.0	1.25	SMA-F	0.25	WR75	FBP120	Al	0.03
75WCASM	10.0-15.0	1.25	SMA-M	0.25	WR75	FBP120	Al	0.03
75WCAT	10.0-15.0	1.25	TNC-F	0.25	WR75	FBP120	Al	0.03
75WCATM	10.0-15.0	1.25	TNC-M	0.25	WR75	FBP120	Al	0.03
75WCA7	10.0-15.0	1.25	7mm	0.25	WR75	FBP120	Al	0.07
75WCA3.5	10.0-15.0	1.25	3.5mm-F	0.25	WR75	FBP120	Al	0.03
75WCA3.5M	10.0-15.0	1.25	3.5mm-M	0.25	WR75	FBP120	Al	0.03
62WCAS	12.4-18.0	1.25	SMA-F	0.27	WR62	FBP140	Al	0.04
62WCASM	12.4-18.0	1.25	SMA-M	0.27	WR62	FBP140	Al	0.04
62WCAN	12.4-18.0	1.25	N-F	0.25	WR62	FBP140	Al	0.03
62WCANM	12.4-18.0	1.25	N-M	0.25	WR62	FBP140	Al	0.03
62WCAT	12.4-18.0	1.25	TNC-F	0.25	WR62	FBP140	Al	0.03
62WCATM	12.4-18.0	1.25	TNC-M	0.25	WR62	FBP140	Al	0.03
62WCA7	12.4-18.0	1.25	7mm	0.27	WR62	FBP140	Al	0.06

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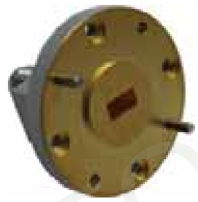
Right Angle WG to Coaxial Adapter

P/N	*Freq. (GHz)	VSWR Max.	Connector	Theoretical *I.L. (dB) Max.	EIA WR	Flange	*Mat.	*N.W.
62WCA3.5	12.4-18.0	1.25	3.5mm-F	0.27	WR62	FBP140	Al	0.03
62WCA3.5M	12.4-18.0	1.25	3.5mm-M	0.27	WR62	FBP140	Al	0.03
51WCAS_Cu	15.0-22.0	1.25	SMA-F	0.29	WR51	FBP180	Cu	0.05
51WCASM_Cu	15.0-22.0	1.25	SMA-M	0.29	WR51	FBP180	Cu	0.05
42WCAS_Cu	18.0-26.5	1.30	SMA-F	0.32	WR42	FBP220	Cu	0.03
42WCASM_Cu	18.0-26.5	1.30	SMA-M	0.32	WR42	FBP220	Cu	0.03
42WCAK_Cu	18.0-26.5	1.30	2.92mm-F	0.32	WR42	FBP220	Cu	0.03
42WCAKM_Cu	18.0-26.5	1.30	2.92mm-M	0.32	WR42	FBP220	Cu	0.03
42WCA3.5_Cu	18.0-26.5	1.30	3.5mm-F	0.32	WR42	FBP220	Cu	0.07
42WCA3.5M_Cu	18.0-26.5	1.30	3.5mm-M	0.32	WR42	FBP220	Cu	0.07
34WCAK_Cu	22.0-33.0	1.25	2.92mm-F	0.35	WR34	FBP260	Cu	0.03
34WCAKM_Cu	22.0-33.0	1.25	2.92mm-M	0.35	WR34	FBP260	Cu	0.03
28WCAK_Cu	26.5-40.0	1.30	2.92mm-F	0.39	WR28	FBP320	Cu	0.02
28WCAKM_Cu	26.5-40.0	1.30	2.92mm-M	0.39	WR28	FBP320	Cu	0.02
28WCA2.4_Cu	26.5-40.0	1.30	2.4mm-F	0.39	WR28	FBP320	Cu	0.02
28WCA2.4M_Cu	26.5-40.0	1.30	2.4mm-M	0.39	WR28	FBP320	Cu	0.02
22WCA2.4_Cu	33.0-50.0	1.50	2.4mm-F	0.41	WR22	FUGP400	Cu	0.035
19WCA2.4_Cu	40.0-50.0	1.50	2.4mm-F	0.80	WR19	FUGP500	Cu	0.035
19WCA1.85_Cu	40.0-60.0	1.50	1.85mm-F	0.80	WR19	FUGP500	Cu	0.035
15WCA1.85_Cu	50.0-65.0	1.50	1.85mm-F	1.20	WR15	FUGP620	Cu	0.02
15WCA1.85_Cu10	50.0-65.0	1.50	1.85mm-F	1.20	WR15	FUGP620	Cu	0.02

WG to Coaxial Adapter - Endlaunch



*Freq. = Frequency	*Mat. = Material
*N.W.=Net Weight	

Ordering Information
P/N：

229	WECA	N
WR Size	Product Code	Connector

P/N	*Freq. (GHz)	VSWR Max.	Connector	EIA WR	Flange	*Mat.	*N.W.
430WECAN	1.70-2.60	1.25	N-F	WR430	FDP22	Al	1.14
430WECAS	1.70-2.60	1.25	SMA-F	WR430	FDP22	Al	1.10
340WECAN	2.20-3.30	1.25	N-F	WR340	FDP26	Al	0.78
340WECAS	2.20-3.30	1.25	SMA-F	WR340	FDP26	Al	0.74
284WECAN	2.60-3.95	1.25	N-F	WR284	FDP32	Al	0.47
284WECAS	2.60-3.95	1.25	SMA-F	WR284	FDP32	Al	0.47
229WECAN	3.30-4.90	1.25	N-F	WR229	FDP40	Al	0.31
229WECAS	3.30-4.90	1.25	SMA-F	WR229	FDP40	Al	0.29
187WECAN	3.95-5.85	1.25	N-F	WR187	FDP48	Al	0.22
187WECAS	3.95-5.85	1.25	SMA-F	WR187	FDP48	Al	0.21
159WECAN	4.90-7.05	1.25	N-F	WR159	FDP58	Al	0.18
159WECAS	4.90-7.05	1.25	SMA-F	WR159	FDP58	Al	0.17
137WECAN	5.85-8.20	1.25	N-F	WR137	FDP70	Al	0.14
137WECAS	5.85-8.20	1.25	SMA-F	WR137	FDP70	Al	0.12
112WECAN	7.05-10.0	1.25	N-F	WR112	FBP84	Al	0.09
112WECAS	7.05-10.0	1.25	SMA-F	WR112	FBP84	Al	0.08
90WECAN	8.20-12.4	1.25	N-F	WR90	FBP100	Al	0.08
90WECAS	8.20-12.4	1.25	SMA-F	WR90	FBP100	Al	0.06
75WECAN	10.0-15.0	1.25	N-F	WR75	FBP120	Al	0.07
75WECAS	10.0-15.0	1.25	SMA-F	WR75	FBP120	Al	0.05

P/N	*Freq. (GHz)	VSWR Max.	Connector	EIA WR	Flange	*Mat.	*N.W.
62WECAN	12.4-18.0	1.25	N-F	WR62	FBP140	Al	0.05
62WECAS	12.4-18.0	1.25	SMA-F	WR62	FBP140	Al	0.04
51WECAS_Cu	15.0-22.0	1.25	SMA-F	WR51	FBP180	Cu	0.08
42WECAS_Cu	18.0-26.5	1.25	SMA-F	WR42	FBP220	Cu	0.05
42WECASM_Cu	18.0-26.5	1.25	SMA-M	WR42	FBP220	Cu	0.05
42WECAK_Cu	18.0-26.5	1.25	2.92mm -F	WR42	FBP220	Cu	0.05
34WECAK_Cu	22.0-33.0	1.30	2.92mm -F	WR34	FBP260	Cu	0.05
28WECAK_Cu	26.5-40.0	1.30	2.92mm-F	WR28	FBP320	Cu	0.03
28WECKM_Cu	26.5-40.0	1.30	2.92mm-M	WR28	FBP320	Cu	0.03
28WECA2.4_Cu	26.5-40.0	1.30	2.4mm-F	WR28	FBP320	Cu	0.03
22WECA2.4_Cu	33.0-50.0	2.00	2.4mm-F	WR22	FUGP400	Cu	0.04
19WECA2.4_Cu	40.0-50.0	2.00	2.4mm-F	WR19	FUGP500	Cu	0.03
19WECA1.85_Cu	40.0-60.0	2.00	1.85mm-F	WR19	FUGP500	Cu	0.03
15WECA1.85_Cu	50.0-65.0	2.00	1.85mm-F	WR15	FUGP620	Cu	0.02

WG to Coaxial Adapter - Double Ridge

*Freq. = Frequency	*Mat. = Material
*N.W.=Net Weight	

Ordering Information
P/N：

250	DRWCA	N
WR Size	Product Code	Connector

EIA WRD	P/N	*Freq. (GHz)	VSWR Max.	Connector	Flange	*Mat.	*N.W.
WRD84	84DRWCAN	0.84-2.0	1.30	N-F	FPWRD84D24	Al	1.40
WRD200	200DRWCAN	2.0-4.8	1.30	N-F	FPWRD200D24	Al	0.40
WRD200	200DRWCAS	2.0-4.8	1.30	SMA-F	FPWRD200D24	Al	0.40
WRD250	250DRWCAN	2.6-7.8	1.30	N-F	FPWRD250D30	Al	0.25
WRD250	250DRWCAS	2.6-7.8	1.30	SMA-F	FPWRD250D30	Al	0.20
WRD350	350DRWCAN	3.5-8.2	1.30	N-F	FPWRD350D24	Al	0.17
WRD350	350DRWCAS	3.5-8.2	1.30	SMA-F	FPWRD350D24	Al	0.16
WRD475	475DRWCAN	4.75-11.0	1.30	N-F	FPWRD475D24	Al	0.09
WRD475	475DRWCAS	4.75-11.0	1.30	SMA-F	FPWRD475D24	Al	0.08
WRD580	580DRWCAN_Cu	5.8-16.0	1.30	N-F	FPWRD580D28	Cu	0.16
WRD580	580DRWCAS_Cu	5.8-16.0	1.30	SMA-F	FPWRD580D28	Cu	0.15
WRD650	650DRWCAN_Cu	6.5-18.0	1.30	N-F	FPWRD650D28	Cu	0.13
WRD650	650DRWCAS_Cu	6.5-18.0	1.30	SMA-F	FPWRD650D28	Cu	0.12
WRD750	750DRWCAN_Cu	7.5-18.0	1.30	N-F	FPWRD750D24	Cu	0.11
WRD750	750DRWCAS_Cu	7.5-18.0	1.30	SMA-F	FPWRD750D24	Cu	0.11
WRD110	110DRWCAS_Cu	11.0-26.5	1.40	SMA-F	FPWRD110C24	Cu	0.07
WRD180	180DRWCAK_Cu	18.0-40.0	1.50	2.92mm-F	FPWRD180C24	Cu	0.03

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WG to Coaxial Adapter - Double Ridge Endlaunch

*Freq. = Frequency	*T. I.L. = Theoretical Insertion Loss
*N.W.=Net Weight	*Mat. = Material

Ordering Information
P/N：

250	DRWECA	N
WR Size	Product Code	Connector

EIA WRD	P/N	*Freq. (GHz)	VSWR Max.	Connector	*T.I.L. (dB) Max.	Flange	*Mat.	*N.W.
WRD84	84DRWECAN	0.84-2.0	1.30	N-F	-	FPWRD84D24	Al	-
WRD200	200DRWECAN	2.0-4.8	1.30	N-F	0.15	FPWRD200D24	Al	-
WRD200	200DRWECAS	2.0-4.8	1.30	SMA-F	0.15	FPWRD200D24	Al	-
WRD250	250DRWECAN	2.6-7.8	1.30	N-F	0.15	FPWRD250D30	Al	-
WRD250	250DRWECAS	2.6-7.8	1.30	SMA-F	0.15	FPWRD250D30	Al	-
WRD350	350DRWECAN	3.5-8.2	1.30	N-F	0.15	FPWRD350D24	Al	-
WRD350	350DRWECAS	3.5-8.2	1.30	SMA-F	0.15	FPWRD350D24	Al	-
WRD475	475DRWECAN	4.75-11.0	1.30	N-F	0.15	FPWRD475D24	Al	-
WRD475	475DRWECAS	4.75-11.0	1.30	SMA-F	0.15	FPWRD475D24	Al	-
WRD580	580DRWECAN_Cu	5.8-16.0	1.30	N-F	0.15	FPWRD580D28	Cu	-
WRD580	580DRWECAS_Cu	5.8-16.0	1.30	SMA-F	0.15	FPWRD580D28	Cu	-
WRD650	650DRWECAN_Cu	6.5-18.0	1.30	N-F	0.15	FPWRD650D28	Cu	0.20
WRD650	650DRWECANM_Cu	6.5-18.0	1.30	N-M	0.15	FPWRD650D28	Cu	0.25
WRD650	650DRWECAS_Cu	6.5-18.0	1.30	SMA-F	0.15	FPWRD650D28	Cu	0.20
WRD750	750DRWECAN_Cu	7.5-18.0	1.30	N-F	0.15	FPWRD750D24	Cu	-
WRD750	750DRWECAS_Cu	7.5-18.0	1.30	SMA-F	0.15	FPWRD750D24	Cu	-
WRD110	110DRWECAS_Cu	11.0-26.5	1.40	SMA-F	0.25	FPWRD110C24	Cu	-
WRD180	180DRWECAK_Cu	18.0-40.0	1.50	2.92mm-F	0.25	FPWRD180C24	Cu	-

WG to Coaxial Adapter - Double Ridge High Power

*Freq. = Frequency	*Ave. P.=Average Power
*N.W.=Net Weight	*Mat. = Material

Ordering Information
P/N：

250	DRWHCA	N
WR Size	Product Code	Connector

EIA WRD	P/N	Freq. (GHz)	VSWR Max.	Connector	Flange	*Ave. P. (W)	*Mat.
WRD84	84DRWHCAN	0.84-2.0	1.30	N-F	FPWRD84D24	1000	Al
WRD200	200DRWHCAN	2.0-4.8	1.30	N-F	FPWRD200D24	1000	Al
WRD250	250DRWHCAN	2.6-7.8	1.30	N-F	FPWRD250D30	1000	Al
WRD350	350DRWHCAN	3.5-8.2	1.30	N-F	FPWRD350D24	750	Al
WRD475	475DRWHCAN	4.75-11.0	1.30	N-F	FPWRD475D24	750	Al
WRD580	580DRWHCAN_Cu	5.8-16.0	1.30	N-F	FPWRD580D28	500	Cu
WRD650	650DRWHCAN_Cu	6.5-18.0	1.30	N-F	FPWRD650D28	500	Cu
WRD750	750DRWHCAN_Cu	7.5-18.0	1.35	N-F	FPWRD750D24	500	Cu

WG Attenuator - Fixed

*Freq. = Frequency	*Atten. = Attenuation
*Mat. = Material	

Ordering Information
P/N：

650	WFA	-XX
WR Size	Product Code	Attenuation

P/N	*Freq. (GHz)	EIA WR	*Atten. (dB)	VSWR	Flange	*Mat.
650WFA-XX	1.12-1.70	WR650	3/6/10/ 20/30	1.25	FDP14/FDM14	Al
510WFA-XX	1.45-2.20	WR510	3/6/10/ 20/30	1.25	FDP18/FDM18	Al
430WFA-XX	1.70-2.60	WR430	3/6/10/ 20/30	1.25	FDP22/FDM22	Al/Cu
340WFA-XX	2.20-3.30	WR340	3/6/10/ 20/30	1.25	FDP26/FDM26	Al/Cu
284WFA-XX	2.60-3.95	WR284	3/6/10/ 20/30	1.25	FDP32/FDM32	Al/Cu
229WFA-XX	3.30-4.90	WR229	3/6/10/ 20/30	1.25	FDP40/FDM40	Al/Cu
187WFA-XX	3.95-5.85	WR187	3/6/10/ 20/30	1.25	FDP48/FDM48	Al/Cu
159WFA-XX	4.90-7.05	WR159	3/6/10/ 20/30	1.25	FDP58/FDM58	Al/Cu
137WFA-XX	5.85-8.20	WR137	3/6/10/ 20/30	1.25	FDP70/FDM70	Al/Cu
112WFA-XX	7.05-10.0	WR112	3/6/10/ 20/30	1.25	FBP84/FBM84/ FBE84	Al/Cu
90WFA-XX	8.20-12.4	WR90	3/6/10/ 20/30	1.25	FBP100/FBM100/ FBE100	Al/Cu
75WFA-XX	10.0-15.0	WR75	3/6/10/ 20/30	1.25	FBP120/FBM120/ FBE120	Al/Cu
62WFA-XX	12.4-18.0	WR62	3/6/10/ 20/30	1.25	FBP140/FBM140/ FBE140	Al/Cu
51WFA-XX	15.0-22.0	WR51	3/6/10/ 20/30	1.25	FBP180/FBM180/ FBE180	Cu/Al
42WFA-XX	18.0-26.5	WR42	3/6/10/ 20/30	1.25	FBP220/FBM220/ FBE220	Cu/Al

P/N	*Freq. (GHz)	EIA WR	*Atten. (dB)	VSWR	Flange	*Mat.
34WFA-XX	22.0-33.0	WR34	3/6/10/ 20/30	1.25	FBP260/FBM260/ FBE260	Cu/Al
28WFA-XX	26.5-40.0	WR28	3/6/10/ 20/30	1.25	FBP320/FBM320/ FBE320	Cu/Al
22WFA-XX_Cu	33.0-50.0	WR22	3/6/10/ 20/30	1.30	FUGP400	Cu
19WFA-XX_Cu	40.0-60.0	WR19	3/6/10/ 0/30	1.30	FUGP500	Cu
15WFA-XX_Cu	50.0-75.0	WR15	3/6/10/ 20/30	1.30	FUGP620	Cu
12WFA-XX_Cu	60.0-90.0	WR12	3/6/10/ 20/30	1.30	FUGP740	Cu
10WFA-XX_Cu	75.0-110.0	WR10	3/6/10/ 20/30	1.30	FUGP900	Cu

Straight WG - Rectangular

Ordering Information
P/N：

975	WAL	-XX
WR Size	Product Code	Length (mm)

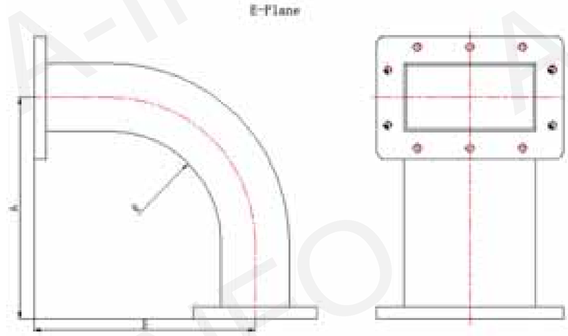
*Freq. = Frequency	*Mat. = Material

P/N	*Freq. (GHz)	VSWR	Standard Length(mm)	EIA WR	Flange	*Mat.
975WAL-XX	0.75-1.12	1.05	500	WR975	FDP9	Al
770WAL-XX	0.96-1.45	1.05	500	WR770	FDP12	Al
650WAL-XX	1.12-1.70	1.05	500	WR650	FDP14/FDM14	Al
510WAL- XX	1.45-2.20	1.05	500	WR510	FDP18/FDM18	Al
430WAL-XX	1.70-2.60	1.05	50/100/200/300/500	WR430	FDP22/FDM22	Al
340WAL-XX	2.20-3.30	1.05	50/75/100/200/300/500	WR340	FDP26/FDM26	Al
284WAL-XX	2.60-3.95	1.05	50/100/200/300/500/1000	WR284	FDP32/FDM32	Al
229WAL-XX	3.30-4.90	1.05	50/100/200/300/500	WR229	FDP40/FDM40	Al
187WAL-XX	3.95-5.85	1.05	100/200/300/500/1000/1200	WR187	FDP48/FDM48	Al
159WAL-XX	4.90-7.05	1.05	100/200/300/500	WR159	FDP58/FDM58	Al
137WAL-XX	5.85-8.20	1.05	100/200/300	WR137	FDP70/FDM70	Al
112WAL-XX	7.05-10.0	1.05	50/100/200/300	WR112	FBP84/FBM84/FBE84	Al
90WAL-XX	8.20-12.4	1.05	50/100/150/200/300/500/1000	WR90	FBP100/FBM100/FBE100	Al
75WAL-XX	10.0-15.0	1.05	50/100/200/300/500/1000	WR75	FBP120/FBM120/FBE120	Al
62WAL-XX	12.4-18.0	1.05	50/100/150/200/300	WR62	FBP140/FBM140/FBE140	Al
51WAL-XX_Cu	15.0-22.0	1.05	100	WR51	FBP180/FBM180/FBE180	Cu
42WAL-XX_Cu	18.0-26.5	1.05	50/100/200/300/500/1000	WR42	FBP220/FBM220/FBE220	Cu
34WAL-XX_Cu	22.0-33.0	1.05	100	WR34	FBP260/FBM260/FBE260	Cu
28WAL-XX_Cu	26.5-40.0	1.05	20/50/100/200/300/500/1000	WR28	FBP320/FBM320/FBE320	Cu
22WAL-XX_Cu	33.0-50.0	1.10	50	WR22	FUGP400	Cu
19WAL-XX_Cu	40.0-60.0	1.10	50/100	WR19	FUGP500	Cu
15WAL-XX_Cu	50.0-75.0	1.10	50	WR15	FUGP620	Cu

P/N	*Freq. (GHz)	VSWR	Standard Length (mm)	EIA WR	Flange	*Mat.
12WAI-XX_Cu	60.0-90.0	1.10	50	WR12	FUGP740	Cu
10WAL-XX_Cu	75.0-110.0	1.10	50	WR10	FUGP900	Cu
8WAL-XX_Cu_P0P0	90.0-140.0	1.10	30	WR8	APF8	Cu
6WAL-XX_Cu_P0P0	110.0-170.0	1.10	30	WR6	APF6	Cu
5WAL-XX_Cu_P0P0	140.0-220.0	1.20	30	WR5	APF5	Cu
4WAL-XX_Cu_P0P0	170.0-260.0	1.20	30	WR4	APF4	Cu
3WAL-XX_Cu_P0P0	220.0-325.0	1.20	30	WR3	APF3	Cu

Note: The length can be customized.

Bend - Radius (90º E-Plane)



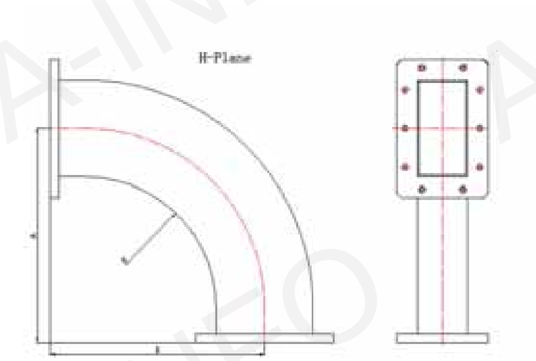
*Freq. = Frequency	*Mat. = Material
*N.W.=Net Weight	

Ordering Information
P/N：

430	WEB	-A	-B	-R
WR Size	Product Code	Size A (mm)	Size B (mm)	Size R (mm)

P/N	*Freq. (GHz)	VSWR	EIA WR	Flange	*Mat.	*N.W.
430WEB-190-190-95	1.70-2.60	1.15	WR430	FDP22/FDM22	Al/Cu	1.17
340WEB-100-100-40	2.20-3.30	1.15	WR340	FDP26/FDM26	Al/Cu	-
284WEB-100-100-40	2.60-3.95	1.15	WR284	FDP32/FDM32	Al/Cu	-
229WEB-80-80-40	3.30-4.90	1.15	WR229	FDP40/FDM40	Al/Cu	0.30
187WEB-80-80-40	3.95-5.85	1.15	WR187	FDP48/FDM48	Al/Cu	0.31
159WEB-80-80-40	4.90-7.05	1.15	WR159	FDP58/FDM58	Al/Cu	-
137WEB-60-60-30	5.85-8.20	1.15	WR137	FDP70/FDM70	Al/Cu	0.30
112WEB-50-50-25	7.05-10.0	1.15	WR112	FBP84/FBM84/FBE84	Al/Cu	0.08
90WEB-55-55-35	8.20-12.4	1.15	WR90	FBP100/FBM100/FBE100	Al	0.08
90WEB-50-50-20	8.20-12.4	1.15	WR90	FBP100/FBM100/FBE100	Al	0.06
75WEB-50-50-20_Cu	10.0-15.0	1.15	WR75	FBP120/FBM120/FBE120	Cu	0.15
62WEB-40-40-20_Cu	12.4-18.0	1.15	WR62	FBP140/FBM140/FBE140	Al/Cu	0.10
51WEB-30-30-15	15.0-22.0	1.15	WR51	FBP180/FBM180/FBE180	Al/Cu	-
42WEB-30-30-15	18.0-26.5	1.15	WR42	FBP220/FBM220/FBE220	Al	0.01
42WEB-30-30-15_Cu	18.0-26.5	1.15	WR42	FBP220/FBM220/FBE220	Cu	0.05
34WEB-30-30-15	22.0-33.0	1.15	WR34	FBP260/FBM260/FBE260	Al/Cu	-
28WEB-25-25-10_Cu	26.5-40.0	1.15	WR28	FBP320/FBM320/FBE320	Cu	0.05
22WEB-25-25-10_Cu	33.0-50.0	1.15	WR22	FUGP400	Cu	-
19WEB-25-25-10_Cu	40.0-60.0	1.15	WR19	FUGP500	Cu	-
15WEB-20-20-10_Cu	50.0-75.0	1.15	WR15	FUGP620	Cu	0.02
12WEB-20-20-10_Cu	60.0-90.0	1.15	WR12	FUGP740	Cu	0.02
10WEB-20-20-10_Cu	75.0-110.0	1.15	WR10	FUGP900	Cu	0.015

Bend - Radius (90º H-Plane)



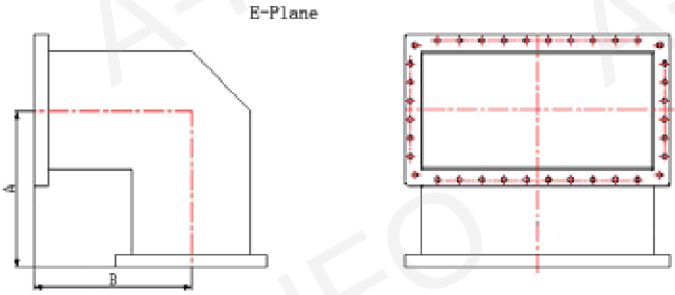
*Freq. = Frequency	*Mat. = Material
*N.W.=Net Weight	

Ordering Information
P/N：

430	WHB	-A	-B	-R
WR Size	Product Code	Size A (mm)	Size B (mm)	Size R (mm)

P/N	*Freq. (GHz)	VSWR	EIA WR	Flange	*Mat.	*N.W.
430WHB-250-250-152	1.70-2.60	1.15	WR430	FDP22/FDM22	Al/Cu	-
340WHB-180-180-100	2.20-3.30	1.15	WR340	FDP26/FDM26	Al/Cu	-
284WHB-160-160-100	2.60-3.95	1.15	WR284	FDP32/FDM32	Al/Cu	0.6/Al
229WHB-120-120-78	3.30-4.90	1.15	WR229	FDP40/FDM40	Al/Cu	-
187WHB-80-80-40	3.95-5.85	1.15	WR187	FDP48/FDM48	Al/Cu	-
159WHB-80-80-40	4.90-7.05	1.15	WR159	FDP58/FDM58	Al/Cu	-
137WHB-80-80-50	5.85-8.20	1.15	WR137	FDP70/FDM70	Al/Cu	-
112WHB-50-50-25	7.05-10.0	1.15	WR112	FBP84/FBM84/FBE84	Al/Cu	0.08/Al
90WHB-50-50-20	8.20-12.4	1.15	WR90	FBP100/FBM100/FBE100	Al/Cu	0.06/Al
75WHB-50-50-20_Cu	10.0-15.0	1.15	WR75	FBP120/FBM120/FBE120	Cu	0.15
62WHB-40-40-25_Cu	12.4-18.0	1.15	WR62	FBP140/FBM140/FBE140	Cu	0.10
51WHB-35-35-20	15.0-22.0	1.15	WR51	FBP180/FBM180/FBE180	Al/Cu	-
42WHB-35-35-20	18.0-26.5	1.15	WR42	FBP220/FBM220/FBE220	Al	0.01
42WHB-35-35-20_Cu	18.0-26.5	1.15	WR42	FBP220/FBM220/FBE220	Cu	0.05
34WHB-35-35-20	22.0-33.0	1.15	WR34	FBP260/FBM260/FBE260	Al/Cu	-
28WHB-30-30-15_Cu	26.5-40.0	1.15	WR28	FBP320/FBM320/FBE320	Cu	-
22WHB-20-20-10_Cu	33.0-50.0	1.15	WR22	FUGP400	Cu	-
19WHB-25-25-10_Cu	40.0-60.0	1.15	WR19	FUGP500	Cu	-
15WHB-25-25-10_Cu	50.0-75.0	1.15	WR15	FUGP620	Cu	0.021
12WHB-25-25-10_Cu	60.0-90.0	1.15	WR12	FUGP740	Cu	0.02
10WHB-25-25-10_Cu	75.0-110.0	1.15	WR10	FUGP900	Cu	0.015

Bend - Miter (90º E-Plane)



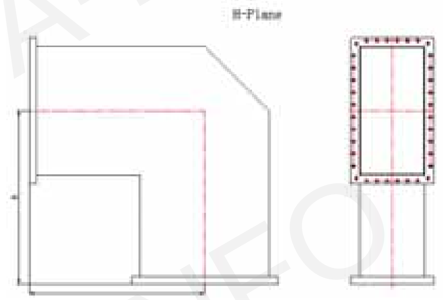
*Freq. = Frequency	*Mat. = Material

Ordering Information
P/N：

650	WTEB	-A	-B
WR Size	Product Code	Size A (mm)	Size B (mm)

P/N	*Freq. (GHz)	VSWR	EIA WR	Flange	*Mat.
975WTEB-150-150	0.75-1.12	1.20	WR975	FDP9	Al
770WTEB-100-100	0.96-1.45	1.20	WR770	FDP12	Al
650WTEB-100-100	1.12-1.70	1.20	WR650	FDP14/FDM14	Al
510WTEB-80-80	1.45-2.20	1.20	WR510	FDP18/FDM18	Al/Cu
430WTEB-80-80	1.70-2.60	1.20	WR430	FDP22/FDM22	Al/Cu
340WTEB-60-60	2.20-3.30	1.20	WR340	FDP26/FDM26	Al/Cu
284WTEB-50-50	2.60-3.95	1.20	WR284	FDP32/FDM32	Al/Cu
229WTEB-45-45	3.30-4.90	1.20	WR229	FDP40/FDM40	Al/Cu
187WTEB-40-40	3.95-5.85	1.15	WR187	FDP48/FDM48	Al/Cu
159WTEB-40-40	4.90-7.05	1.20	WR159	FDP58/FDM58	Al/Cu
137WTEB-51-51	5.85-8.20	1.15	WR137	FDP70/FDM70	Al/Cu
112WTEB-35-35	7.05-10.0	1.15	WR112	FBP84/FBM84/FBE84	Al/Cu
90WTEB-30-30	8.20-12.4	1.15	WR90	FBP100/FBM100/FBE100	Al/Cu
75WTEB-25-25	10.0-15.0	1.20	WR75	FBP120/FBM120/FBE120	Al/Cu
62WTEB-25-25	12.4-18.0	1.20	WR62	FBP140/FBM140/FBE140	Al/Cu
51WTEB-20-20_Cu	15.0-22.0	1.20	WR51	FBP180/FBM180/FBE180	Cu
42WTEB-20-20_Cu	18.0-26.5	1.15	WR42	FBP220/FBM220/FBE220	Cu
34WTEB-20-20_Cu	22.0-33.0	1.20	WR34	FBP260/FBM260/FBE260	Cu
28WTEB-15-15_Cu	26.5-40.0	1.20	WR28	FBP320/FBM320/FBE320	Cu

Bend - Miter (90º H-Plane)



*Freq. = Frequency	*Mat. = Material

Ordering Information
P/N：

650	WTHB	-A	-B
WR Size	Product Code	Size A (mm)	Size B (mm)

P/N	*Freq. (GHz)	VSWR	EIA WR	Flange	*Mat.
975WTHB-250-250	0.75-1.12	1.30	WR975	FDP9	Al
770WTHB-200-200	0.96-1.45	1.30	WR770	FDP12	Al
650WTHB-180-180	1.12-1.70	1.30	WR650	FDP14/FDM14	Al
510WTHB-150-150	1.45-2.20	1.30	WR510	FDP18/FDM18	Al/Cu
430WTHB-80-80	1.70-2.60	1.30	WR430	FDP22/FDM22	Al/Cu
340WTHB-60-60	2.20-3.30	1.30	WR340	FDP26/FDM26	Al/Cu
284WTHB-80-80	2.60-3.95	1.30	WR284	FDP32/FDM32	Al/Cu
229WTHB-65-65	3.30-4.90	1.30	WR229	FDP40/FDM40	Al/Cu
187WTHB-55-55	3.95-5.85	1.30	WR187	FDP48/FDM48	Al/Cu
159WTHB-55-55	4.90-7.05	1.30	WR159	FDP58/FDM58	Al/Cu
137WTHB-51-51	5.85-8.20	1.30	WR137	FDP70/FDM70	Al/Cu
112WTHB-35-35	7.05-10.0	1.30	WR112	FBP84/FBM84/FBE84	Al/Cu
90WTHB-30-30	8.20-12.4	1.30	WR90	FBP100/FBM100/FBE100	Al/Cu
75WTHB-25-25	10.0-15.0	1.30	WR75	FBP120/FBM120/FBE120	Al/Cu
62WTHB-25-25	12.4-18.0	1.30	WR62	FBP140/FBM140/FBE140	Al/Cu
51WTHB-20-20_Cu	15.0-22.0	1.30	WR51	FBP180/FBM180/FBE180	Cu
42WTHB-20-20_Cu	18.0-26.5	1.30	WR42	FBP220/FBM220/FBE220	Cu
34WTHB-20-20_Cu	22.0-33.0	1.30	WR34	FBP260/FBM260/FBE260	Cu
28WTHB-15-15_Cu	26.5-40.0	1.30	WR28	FBP320/FBM320/FBE320	Cu

Twist WG - Rectangular

*Freq. = Frequency	*Mat. = Material
*N.W.=Net Weight	

Ordering Information
P/N：

430	WTA	-800
WR Size	Product Code	Length (mm)

P/N	*Freq. (GHz)	VSWR	EIA WR	Length (mm)	Flange	*Mat.	*N.W.
430WTA-800	1.70-2.60	1.10	WR430	800	FDP22/FDM22	Al/Cu	-
340WTA-500	2.20-3.30	1.10	WR340	500	FDP26/FDM26	Al/Cu	-
284WTA-300	2.60-3.95	1.10	WR284	300	FDP32/FDM32	Al/Cu	-
229WTA-250	3.30-4.90	1.10	WR229	250	FDP40/FDM40	Al/Cu	-
187WTA-200	3.95-5.85	1.10	WR187	200	FDP48/FDM48	Al/Cu	0.30
159WTA-200	4.90-7.05	1.10	WR159	200	FDP58/FDM58	Al/Cu	0.30
137WTA-150	5.85-8.20	1.10	WR137	150	FDP70/FDM70	Al/Cu	0.16
112WTA-120	7.05-10.0	1.10	WR112	120	FBP84/FBM84/FBE84	Al/Cu	-
90WTA-100	8.20-12.4	1.10	WR90	100	FBP100/FBM100/FBE100	Al/Cu	0.06
75WTA-90	10.0-15.0	1.15	WR75	90	FBP120/FBM120/FBE120	Al	0.06
75WTA-100_Cu	10.0-15.0	1.15	WR75	100	FBP120/FBM120/FBE120	Cu	0.16
62WTA-75_Cu	12.4-18.0	1.10	WR62	75	FBP140/FBM140/FBE140	Cu	0.10
51WTA-70_Cu	15.0-22.0	1.10	WR51	70	FBP180/FBM180/FBE180	Cu	-
42WTA-60_Cu	18.0-26.5	1.10	WR42	60	FBP220/FBM220/FBE220	Cu	-
34WTA-55_Cu	22.0-33.0	1.10	WR34	55	FBP260/FBM260/FBE260	Cu	-
28WTA-55_Cu	26.5-40.0	1.10	WR28	55	FBP320/FBM320/FBE320	Cu	0.06
22WTA-50_Cu	33.0-50.0	1.10	WR22	50	FUGP400	Cu	-
19WTA-50_Cu	40.0-60.0	1.10	WR19	50	FUGP500	Cu	-
15WTA-50_Cu	50.0-75.0	1.10	WR15	50	FUGP620	Cu	0.02
12WTA-50_Cu	60.0-90.0	1.10	WR12	50	FUGP740	Cu	0.02
10WTA-50_Cu	75.0-110.0	1.10	WR10	50	FUGP900	Cu	-

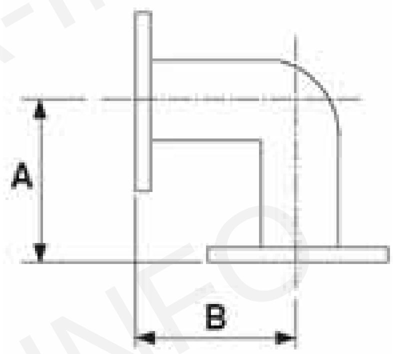
Straight WG - Double Ridge

Ordering Information
P/N：

250	DRWAL	-XXX
WR Size	Product Code	Length(mm)

EIA WRD	P/N	Frequency (GHz)	VSWR	Length (XXX) (mm)	Flange	Material
WRD250	250DRWAL-XXX	2.6-7.8	1.15	Customized	FPWRD250D30	Al
WRD350	350DRWAL-XXX	3.5-8.2	1.15	Customized	FPWRD350D24	Al
WRD475	475DRWAL-XXX	4.75-11.0	1.15	Customized	FPWRD475D24	Al
WRD580	580DRWAL-XXX_Cu	5.8-16.0	1.15	Customized	FPWRD580D28	Cu
WRD650	650DRWAL-XXX_Cu	6.5-18.0	1.15	Customized	FPWRD650D28	Cu
WRD750	750DRWAL-XXX_Cu	7.5-18.0	1.15	Customized	FPWRD750D24	Cu
WRD180	180DRWAL-XXX_Cu	18.0-40.0	1.15	Customized	FPWRD180C24	Cu

Bend - Double Ridge (E-Plane)

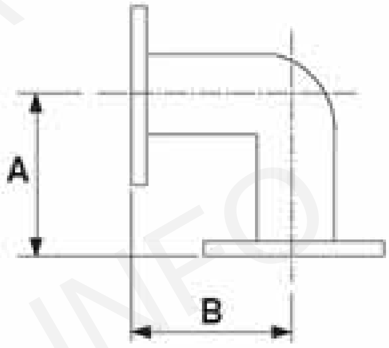


Ordering Information
P/N：

650	DRWEB	-A	-B
WR Size	Product Code	Size A(mm)	Size B(mm)

EIA WRD	P/N	Frequency (GHz)	VSWR	Flange	Material	Size A,B (mm)
WRD650	650DRWEB-A-B_Cu	6.5-18.0	1.20	FPWRD650D28	Cu	Customized
WRD750	750DRWEB-A-B_Cu	7.5-18.0	1.20	FPWRD750D24	Cu	Customized

Bend - Double Ridge (H-Plane)

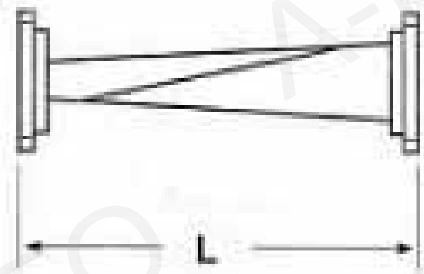


Ordering Information
P/N：

650	DRWHB	-A	-B
WR Size	Product Code	Size A(mm)	Size B(mm)

EIA WRD	P/N	Frequency (GHz)	VSWR	Flange	Material	Size A,B (mm)
WRD650	650DRWHB-A-B_Cu	6.5-18.0	1.20	FPWRD650D28	Cu	Customized
WRD750	750DRWHB-A-B_Cu	7.5-18.0	1.20	FPWRD750D24	Cu	Customized

Twist WG - Double Ridge

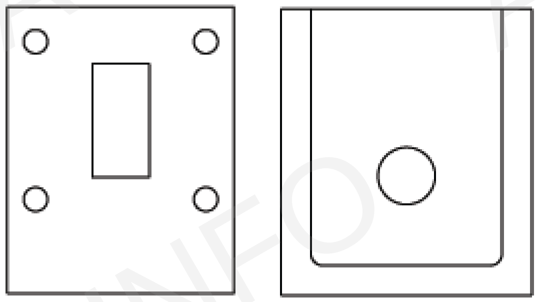


Ordering Information
P/N：

250	DRWTA	-XXX
WR Size	Product Code	Length (mm)

EIA WRD	P/N	Frequency (GHz)	VSWR	Length (XXX) (mm)	Flange	Material
WRD250	250DRWTA-XXX	2.6-7.8	1.25	Customized	FPWRD250D30	Al
WRD350	350DRWTA-XXX	3.5-8.2	1.25	Customized	FPWRD350D24	Al
WRD475	475DRWTA-XXX	4.75-11.0	1.25	Customized	FPWRD475D24	Al
WRD580	580DRWTA-XXX_Cu	5.8-16.0	1.25	Customized	FPWRD580D28	Cu
WRD650	650DRWTA-XXX_Cu	6.5-18.0	1.25	Customized	FPWRD650D28	Cu
WRD750	750DRWTA-XXX_Cu	7.5-18.0	1.25	Customized	FPWRD750D24	Cu
WRD180	180DRWTA-XXX_Cu	18.0-40.0	1.25	Customized	FPWRD180C24	Cu

WG Circulator



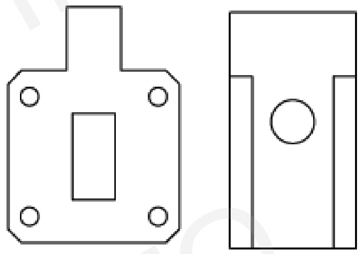
*Freq. = Frequency	*BW = Bandwidth
*I.L. = Insertion Loss	*Iso. = Isolation

Ordering Information
P/N：

284	WCIC
WR Size	Product Code

P/N	*Freq. (GHz)	*BW (MHz)	EIA WR	*I.L. (dB)	*Iso. (dB)	VSWR	Average Power (W)	Flange
340WCIC-2326-20-250	2.30-2.60	Full	WR340	0.3	20	1.20	250	FDP26
284WCIC-2731-20-1200	2.70-3.10	Full	WR284	0.4	20	1.30	1200	FDP32
187WCIC-4450-20-600	4.40-5.00	Full	WR187	0.3	20	1.25	600	FDP48
159WCIC-5458-20-200	5.40-5.80	Full	WR159	0.4	20	1.25	200	FDP58
159WCIC-5665-20-20	5.60-6.50	Full	WR159	0.35	20	1.20	200	FDP58
112WCIC-9096-20-300	9.07-9.67	Full	WR112	0.5	20	1.25	300	FBP84
112WCIC-8085-20-100	8.0-8.5	Full	WR112	0.3	20	1.25	100	FBP84
90WCIC-8999-20-10	8.9-9.9	Full	WR90	0.3	20	1.20	10	FBP100
90WCIC-9095-20-200	9.0-9.5	Full	WR90	0.3	20	1.25	200	FBP100
90WCIC-9499-23-200	9.4-9.9	Full	WR90	0.35	23	1.15	200	FBP100
75WCIC-105117-20-10	10.5-11.7	Full	WR75	0.35	20	1.25	10	FBP120
62WCIC-123167-20-100	12.36-16.7	Full	WR62	0.5	20	1.25	100	FBP140
42WCIC-180265-20-50	18.0-26.5	2000	WR42	0.4	20	1.25	50	FBP220
34WCIC-240270-20-50	24.0-27.0	Full	WR34	0.4	20	1.25	50	FBP260

WG Isolator



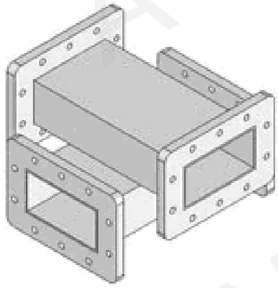
*Freq. = Frequency	*BW = Bandwidth
*I.L. = Insertion Loss	*Iso. = Isolation

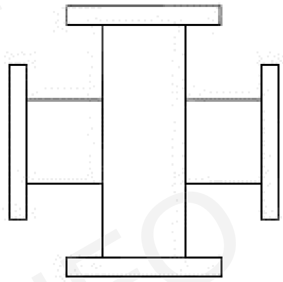
Ordering Information
P/N：

284	WISO
WR Size	Product Code

P/N	*Freq. (GHz)	EIA WR	*BW (MHz)	*I.L. (dB)	*Iso. (dB)	VSWR	Average Power (W)	Flange
284WISO-3134-20-200	3.13-3.47	WR284	Full	0.5	20	1.25	200	FDP32/ FDM32
112WISO-7485-20-10	7.4-8.5	WR112	Full	0.5	18	1.3	10	FBP84
112WISO-7579-20-50	7.5-7.9	WR112	Full	0.3	20	1.25	50	FBP84
90WISO-80105-17-10	8.0-10.5	WR90	Full	0.6	15	1.3	10	FBP100
90WISO-8595-18-10	8.5-9.5	WR90	Full	0.6	18	1.3	10	FBP100
90WISO-100103-22-200	10.0-10.3	WR90	Full	0.4	22	1.2	200	FBP100/ FBM100/ FBE100
75WISO-125135-22-10	12.5-13.5	WR75	500	0.4	22	1.2	10	FBP120/ FBM120/ FBE120
62WISO-130160-20-100	13.0-16.0	WR62	1000	0.4	20	1.2	100	FBP140/ FBM140/ FBE140
62WISO-130160-22-30	13.0-16.0	WR62	600	0.3	22	1.2	30	FBP140/ FBM140/ FBE140
51WISO-160170-25-100	16.0-17.0	WR51	500	0.5	25	1.18	100	FBP180/ FBM180/ FBE180
42WISO-180265-20-10	18.0-26.5	WR42	1000	0.4	20	1.25	10	FBP220/ FBM220/ FBE220
42WISO-190240-18-1	19.0-24.0	WR42	Full	0.6	18	1.3	1	FBP220
42WISO-196216-20-15	19.6-21.6	WR42	2000	0.4	20	1.25	15	FBP220
42WISO-210230-20-10	21.0-23.0	WR42	2000	0.5	20	1.25	10	FBP220/ FBM220/ FBE220
34WISO-250270-20-10	25.0-27.0	WR34	Full	0.4	20	1.25	10	FBP260/ FBM260/ FBE260
28WISO-270330-18-1	27.0-33.0	WR28	Full	0.6	18	1.4	1	FBP320

WG Coupler - Cross (W+C-XX Type)





*Freq. = Frequency	*Coup. = Coupling
*Coup. Acc. = Coupling Accuracy	*Freq. SS. = Frequency Sensitivity
*M.L. = Mainline	*S.L. = Secondline
*Dir. = Directivity	*Mat. = Material

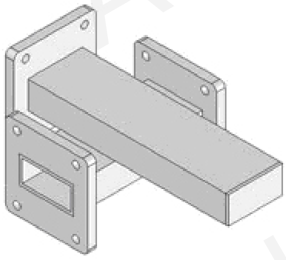
Order Information
P/N :

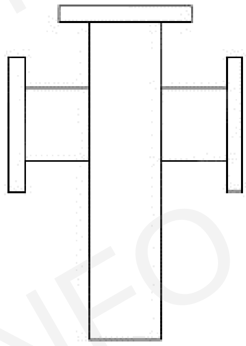
975	W+C	-XX
WR Size	Product Code	Coupling

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. Max.	VSWR *S.L. Max.	Flange	*Mat.
WR975	0.75-1.12	975W+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FDP9	Al
WR770	0.96-1.45	770W+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FDP12	Al
WR650	1.12-1.70	650W+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FDP14/ FDM14	Al
WR510	1.45-2.20	510W+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FDP18/ FDM18	Al/ Cu
WR430	1.70-2.60	430W+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FDP22/ FDM22	Al/ Cu
WR340	2.20-3.30	340W+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FDP26/ FDM26	Al/ Cu
WR284	2.60-3.95	284W+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FDP32/ FDM32	Al/ Cu
WR229	3.30-4.90	229W+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FDP40/ FDM40	Al/ Cu
WR187	3.95-5.85	187W+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FDP48/ FDM48	Al/ Cu
WR159	4.90-7.05	159W+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FDP58/ FDM58	Al/ Cu
WR137	5.85-8.20	137W+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FDP70/ FDM70	Al/ Cu
WR112	7.05-10.0	112W+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FBP84/ FBM84/ FBE84	Al/ Cu

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. Max.	VSWR *S.L. Max.	Flange	*Mat.
WR90	8.20-12.4	90W+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FBP100/ FBM100/ FBE100	Cu/ Al
WR75	10.0-15.0	75W+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FBP120/ FBM120/ FBE120	Cu/ Al
WR62	12.4-18.0	62W+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FBP140/ FBM140/ FBE140	Cu/ Al
WR51	15.0-22.0	51W+C-XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FBP180/ FBM180/ FBE180	Cu
WR42	18.0-26.5	42W+C-XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FBP220/ FBM220/ FBE220	Cu
WR34	22.0-33.0	34W+C-XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FBP260/ FBM260/ FBE260	Cu
WR28	26.5-40.0	28W+C-XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.05	FBP320/ FBM320/ FBE320	Cu

WG Coupler - Cross (WL+C-XX Type)





*Freq. = Frequency	*Coup. = Coupling
*Coup. Acc. = Coupling Accuracy	*Freq. SS. = Frequency Sensitivity
*M.L. = Mainline	*S.L. = Secondline
*Dir. = Directivity	*Mat. = Material

Order Information
P/N :

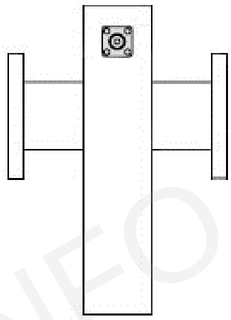
975	WL+C	-XX
WR Size	Product Code	Coupling

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. Max.	VSWR *S.L. Max.	Flange	*Mat.
WR975	0.75-1.12	975WL+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.10	FDP9	Al
WR770	0.96-1.45	770WL+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.10	FDP12	Al
WR650	1.12-1.70	650WL+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.10	FDP14/FDM14	Al
WR510	1.45-2.20	510WL+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.10	FDP18/FDM18	Al/Cu
WR430	1.70-2.60	430WL+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.10	FDP22/FDM22	Al/Cu
WR340	2.20-3.30	340WL+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.10	FDP26/FDM26	Al/Cu
WR284	2.60-3.95	284WL+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.10	FDP32/FDM32	Al/Cu
WR229	3.30-4.90	229WL+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.10	FDP40/FDM40	Al/Cu
WR187	3.95-5.85	187WL+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.10	FDP48/FDM48	Al/Cu
WR159	4.90-7.05	159WL+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.10	FDP58/FDM58	Al/Cu
WR137	5.85-8.20	137WL+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.10	FDP70/FDM70	Al/Cu
WR112	7.05-10.0	112WL+C-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.10	FBP84/FBM84/FBE84	Al/Cu

WG Cross Coupler

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. Max.	VSWR *S.L. Max.	Flange	*Mat.
WR90	8.20-12.4	90WL+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FBP100/ FBM100/ FBE100	Cu/ Al
WR75	10.0-15.0	75WL+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FBP120/ FBM120/ FBE120	Cu/ Al
WR62	12.4-18.0	62WL+C-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FBP140/ FBM140/ FBE140	Cu/ Al
WR51	15.0-22.0	51WL+C-XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FBP180/ FBM180/ FBE180	Cu
WR42	18.0-26.5	42WL+C-XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FBP220/ FBM220/ FBE220	Cu
WR34	22.0-33.0	34WL+C-XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FBP260/ FBM260/ FBE260	Cu
WR28	26.5-40.0	28WL+C-XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.10	FBP320/ FBM320/ FBE320	Cu

WG Coupler - Cross (WL+Cx-XX Type)



Order Information
P/N：

975	WL+Cx				-XX
WR Size	Product Code, x means connector type:				Coupling
	N=N type-F	NM=N type-M	S=SMA-F	SM=SMA-M	
	3.5=3.5mm-F	3.5M=3.5mm-M	K=2.92mm-F	KM=2.92mm-M	
	2.4=2.4mm-F	2.4M=2.4mm-M	-	-	
	Notes: F = Female, M = Male.				

*Freq. = Frequency	*Coup. = Coupling
*Coup. Acc. = Coupling Accuracy	*Freq. SS. = Frequency Sensitivity
*M.L. = Mainline	*S.L. = Secondline
*Dir. = Directivity	*Con. = connector
*Mat. = Material	

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. Max.	VSWR *S.L. Max.	Flange	*Con.	*Mat.
WR975	0.75-1.12	975WL+CN-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP9	N-F	Al
WR975	0.75-1.12	975WL+CS-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP9	S-F	Al
WR770	0.96-1.45	770WL+CN-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP12	N-F	Al
WR770	0.96-1.45	770WL+CS-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP12	S-F	Al
WR650	1.12-1.70	650WL+CN-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP14/FDM14	N-F	Al
WR650	1.12-1.70	650WL+CS-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP14/FDM14	S-F	Al
WR510	1.45-2.20	510WL+CN-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP18/FDM18	N-F	Al/Cu
WR510	1.45-2.20	510WL+CS-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP18/FDM18	S-F	Al/Cu
WR430	1.70-2.60	430WL+CN-XX	30/40/50/60	±0.7	±1.0	18	1.05	1.25	FDP22/FDM22	N-F	Al/Cu

(ES) Equipements Scientifiques SA - Département RF & Hyperfréquence - 127 rue de Buzenval BP 26 - 92380 Garches
Tél. 01 47 95 99 60 - Fax. 01 47 01 16 22 - e-mail: hyper@es-france.com - Site Web: www.es-france.com

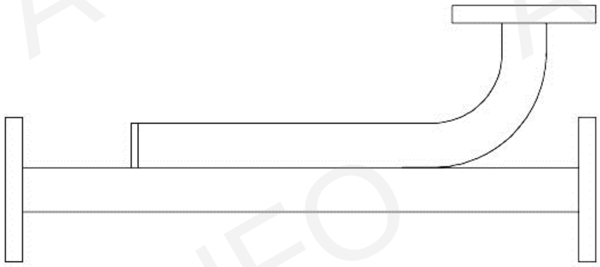
A-INFO

WG Cross Coupler

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. Max.	VSWR *S.L. Max.	Flange	*Con.	*Mat.
WR430	1.70-2.60	430WL+CS-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.25	FDP22/ FDM22	S-F	Al/ Cu
WR340	2.20-3.30	340WL+CN-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.25	FDP26/ FDM26	N-F	Al/ Cu
WR340	2.20-3.30	340WL+CS-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.25	FDP26/ FDM26	S-F	Al/ Cu
WR284	2.60-3.95	284WL+CN-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.25	FDP32/ FDM32	N-F	Al/ Cu
WR284	2.60-3.95	284WL+CS-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.25	FDP32/ FDM32	S-F	Al/ Cu
WR229	3.30-4.90	229WL+CN-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.25	FDP40/ FDM40	N-F	Al/ Cu
WR229	3.30-4.90	229WL+CS-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.25	FDP40/ FDM40	S-F	Al/ Cu
WR187	3.95-5.85	187WL+CN-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.25	FDP48/ FDM48	N-F	Al/ Cu
WR187	3.95-5.85	187WL+CS-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.25	FDP48/ FDM48	S-F	Al/ Cu
WR159	4.90-7.05	159WL+CN-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.25	FDP58/ FDM58	N-F	Al/ Cu
WR159	4.90-7.05	159WL+CS-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.25	FDP58/ FDM58	S-F	Al/ Cu
WR137	5.85-8.20	137WL+CN-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.25	FDP70/ FDM70	N-F	Al/ Cu
WR137	5.85-8.20	137WL+CS-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.25	FDP70/ FDM70	S-F	Al/ Cu
WR112	7.05-10.0	112WL+CN-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.25	FBP84/ FBM84/ FBE84	N-F	Al/ Cu
WR112	7.05-10.0	112WL+CS-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.25	FBP84/ FBM84/ FBE84	S-F	Al/ Cu
WR90	8.20-12.4	90WL+CN-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.25	FBP100/ FBM100/ FBE100	N-F	Cu/ Al
WR90	8.20-12.4	90WL+CS-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.25	FBP100/ FBM100/ FBE100	S-F	Cu/ Al
WR75	10.0-15.0	75WL+CN-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.25	FBP120/ FBM120/ FBE120	N-F	Cu/ Al
WR75	10.0-15.0	75WL+CS-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.25	FBP120/ FBM120/ FBE120	S-F	Cu/ Al

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. Max.	VSWR *S.L. Max.	Flange	*Con.	*Mat.
WR62	12.4-18.0	62WL+CN-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.25	FBP140/ FBM140/ FBE140	N-F	Cu/ Al
WR62	12.4-18.0	62WL+CS-XX	30/40/ 50/60	±0.7	±1.0	18	1.05	1.25	FBP140/ FBM140/ FBE140	S-F	Cu/ Al
WR51	15.0-22.0	51WL+CS -XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.25	FBP180/ FBM180/ FBE180	N-F	Cu
WR42	18.0-26.5	42WL+CS -XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.35	FBP220/ FBM220/ FBE220	S-F	Cu
WR42	18.0-26.5	42WL+C3.5 -XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.35	FBP220/ FBM220/ FBE220	3.5-F	Cu
WR42	18.0-26.5	42WL+CK -XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.35	FBP220/ FBM220/ FBE220	2.92-F	Cu
WR34	22.0-33.0	34WL+CK -XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.35	FBP260/ FBM260/ FBE260	2.92-F	Cu
WR28	26.5-40.0	28WL+CK -XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.40	FBP320/ FBM320/ FBE320	2.92-F	Cu
WR28	26.5-40.0	28WL+C2.4 -XX_Cu	30/40/ 50/60	±0.7	±1.0	18	1.05	1.40	FBP320/ FBM320/ FBE320	2.4-F	Cu

WG Coupler - High Directional (WC-XX Type)



*Freq. = Frequency	*Coup. = Coupling
*Coup. Acc. = Coupling Accuracy	*Freq. SS. = Frequency Sensitivity
*M.L. = Mainline	*S.L. = Secondline
*Dir. = Direcitivity	*Mat. = Material

Model Information

Example P/N：

284	WC	-XX
WR Size	Product Code	Coupling

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. *S.L. Max.	Flange	*Mat.
WR284	2.60-3.95	284WC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FDP32/ FDM32	Al/ Cu
WR229	3.30-4.90	229WC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FDP40/ FDM40	Al/ Cu
WR187	3.95-5.85	187WC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FDP48/ FDM48	Al/ Cu
WR159	4.90-7.05	159WC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FDP58/ FDM58	Al/ Cu
WR137	5.85-8.20	137WC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FDP70/ FDM70	Al/ Cu
WR112	7.05-10.0	112WC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FBP84/ FBM84/ FBE84	Al/ Cu
WR90	8.20-12.4	90WC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.10	FBP100/ FBM100/ FBE100	Al/ Cu
WR75	10.0-15.0	75WC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.15	FBP120/ FBM120/ FBE120	Al/ Cu

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. *S.L. Max.	Flange	*Mat.
WR62	12.4-18.0	62WC-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.15	FBP140/ FBM140/ FBE140	Al/ Cu
WR51	15.0-22.0	51WC-XX_Cu	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.15	FBP180/ FBM180/ FBE180	Cu
WR42	18.0-26.5	42WC-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.15	FBP220/ FBM220/ FBE220	Cu
WR34	22.0-33.0	34WC-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.15	FBP260/ FBM260/ FBE260	Cu
WR28	26.5-40.0	28WC-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.15	FBP320/ FBM320/ FBE320	Cu
WR22	33.0-50.0	22WC-XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP400	Cu
WR19	40.0-60.0	19WC-XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP500	Cu
WR15	50.0-75.0	15WC-XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP620	Cu
WR12	60.0-90.0	12WC-XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP740	Cu
WR10	75.0-110.0	10WC-XX_Cu	3/6/10/ 20/30/ 40/50	±1.3	±0.9	30	1.15 1.20	FUGP900	Cu

WG Coupler - High Directional (WCx-XX Type)

Order Information
P/N：

<table>
<tr><td>430</td><td colspan="4">WCx</td><td>-XX</td></tr>
<tr><td rowspan="5">WR Size</td><td colspan="4">Product Code, x means connector type:</td><td rowspan="5">Coupling</td></tr>
<tr><td>N=N type-F</td><td>NM=N type-M</td><td>S=SMA-F</td><td>SM=SMA-M</td></tr>
<tr><td>3.5=3.5mm-F</td><td>3.5M=3.5mm-M</td><td>K=2.92mm-F</td><td>KM=2.92mm-M</td></tr>
<tr><td>2.4=2.4mm-F</td><td>2.4M=2.4mm-M</td><td>1.85=1.85mm-F</td><td>1.85M=1.85mm-M</td></tr>
<tr><td colspan="4">Notes: F = Female, M = Male.</td></tr>
</table>

*Freq. = Frequency	*Coup. = Coupling
*Coup. Acc. = Coupling Accuracy	*Freq. SS. = Frequency Sensitivity
*M.L. = Mainline	*S.L. = Secondline
*Dir. = Direcitivity	*Con. = Connector
*Mat. = Material	

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR430	1.70-2.60	430WCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP22/ FDM22	N-F	Al/ Cu
WR430	1.70-2.60	430WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP22/ FDM22	S-F	Al/ Cu
WR340	2.20-3.30	340WCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP26/ FDM26	N-F	Al/ Cu
WR340	2.20-3.30	340WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP26/ FDM26	S-F	Al/ Cu
WR284	2.60-3.95	284WCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP32/ FDM32	N-F	Al/ Cu

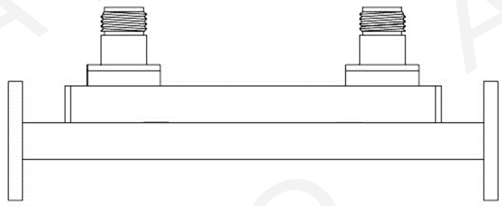
WG High Directional Coupler

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR284	2.60-3.95	284WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP32/ FDM32	S-F	Al/ Cu
WR229	3.30-4.90	229WCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP40/ FDM40	N-F	Al/ Cu
WR229	3.30-4.90	229WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP40/ FDM40	S-F	Al/ Cu
WR187	3.95-5.85	187WCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP48/ FDM48	N-F	Al/ Cu
WR187	3.95-5.85	187WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP48/ FDM48	S-F	Al/ Cu
WR159	4.90-7.05	159WCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP58/ FDM58	N-F	Al/ Cu
WR159	4.90-7.05	159WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP58/ FDM58	S-F	Al/ Cu
WR137	5.85-8.20	137WCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP70/ FDM70	N-F	Al/ Cu
WR137	5.85-8.20	137WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP70/ FDM70	S-F	Al/ Cu
WR112	7.05-10.0	112WCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP84/ FBM84/ FBE84	N-F	Al/ Cu
WR112	7.05-10.0	112WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP84/ FBM84/ FBE84	S-F	Al/ Cu
WR90	8.20-12.4	90WCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP100/ FBM100/ FBE100	N-F	Al/ Cu
WR90	8.20-12.4	90WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP100/ FBM100/ FBE100	S-F	Al/ Cu
WR75	10.0-15.0	75WCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP120/ FBM120/ FBE120	N-F	Al/ Cu
WR75	10.0-15.0	75WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP120/ FBM120/ FBE120	S-F	Al/ Cu

WG High Directional Coupler

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR62	12.4-18.0	62WCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP140/ FBM140/ FBE140	N-F	Al/ Cu
WR62	12.4-18.0	62WCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP140/ FBM140/ FBE140	S-F	Al/ Cu
WR51	15.0-22.0	51WCS-XX_Cu	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP180/ FBM180/ FBE180	S-F	Cu
WR42	18.0-26.5	42WCS-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP220/ FBM220/ FBE220	S-F	Cu
WR42	18.0-26.5	42WC3.5-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP220/ FBM220/ FBE220	3.5-F	Cu
WR42	18.0-26.5	42WCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP220/ FBM220/ FBE220	2.92-F	Cu
WR34	22.0-33.0	34WCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP260/ FBM260/ FBE260	2.92-F	Cu
WR28	26.5-40.0	28WCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.40	FBP320/ FBM320/ FBE320	2.92-F	Cu
WR28	26.5-40.0	28WC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.40	FBP320/ FBM320/ FBE320	2.4-F	Cu
WR22	33.0-50.0	22WC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.50	FUGP400	2.4-F	Cu
WR19	40.0-60.0	19WC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.40	FUGP500	2.4-F	Cu
WR19	40.0-60.0	19WC1.85-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.40	FUGP500	1.85-F	Cu
WR15	50.0-65.0	15WC1.85-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.40	FUGP620	1.85-F	Cu

WG Coupler - High Directional (WUCx-XX Type)



Order Information
P/N：

<table>
<tr><td>430</td><td colspan="4">WUCx</td><td>-XX</td></tr>
<tr><td rowspan="5">WR Size</td><td colspan="4">Product Code, x means connector type:</td><td rowspan="5">Coupling</td></tr>
<tr><td>N=N type-F</td><td>NM=N type-M</td><td>S=SMA-F</td><td>SM=SMA-M</td></tr>
<tr><td>3.5=3.5mm-F</td><td>3.5M=3.5mm-M</td><td>K=2.92mm-F</td><td>KM=2.92mm-M</td></tr>
<tr><td>2.4=2.4mm-F</td><td>2.4M=2.4mm-M</td><td>1.85=1.85mm-F</td><td>1.85M=1.85mm-M</td></tr>
<tr><td colspan="4">Notes: F = Female, M = Male.</td></tr>
</table>

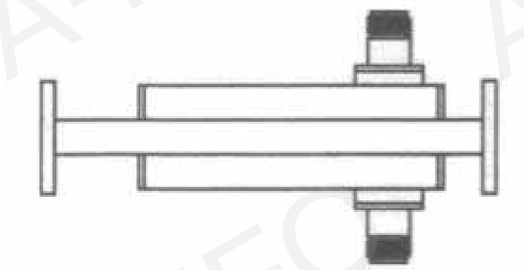
*Freq. = Frequency	*Coup. = Coupling
*Coup. Acc. = Coupling Accuracy	*Freq. SS. = Frequency Sensitivity
*M.L. = Mainline	*S.L. = Secondline
Directivity: Depending on the Return Loss of coaxial load connected to reverse coupling port.	*Mat. = Material
*Con. = Connector	

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR430	1.70-2.60	430WUCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP22/ FDM22	N-F	Al/ Cu
WR430	1.70-2.60	430WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP22/ FDM22	S-F	Al/ Cu
WR340	2.20-3.30	340WUCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP26/ FDM26	N-F	Al/ Cu
WR340	2.20-3.30	340WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP26/ FDM26	S-F	Al/ Cu
WR284	2.60-3.95	284WUCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP32/ FDM32	N-F	Al/ Cu

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR284	2.60-3.95	284WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP32/ FDM32	S-F	Al/ Cu
WR229	3.30-4.90	229WUCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP40/ FDM40	N-F	Al/ Cu
WR229	3.30-4.90	229WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP40/ FDM40	S-F	Al/ Cu
WR187	3.95-5.85	187WUCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP48/ FDM48	N-F	Al/ Cu
WR187	3.95-5.85	187WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP48/ FDM48	S-F	Al/ Cu
WR159	4.90-7.05	159WUCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP58/ FDM58	N-F	Al/ Cu
WR159	4.90-7.05	159WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP58/ FDM58	S-F	Al/ Cu
WR137	5.85-8.20	137WUCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP70/ FDM70	N-F	Al/ Cu
WR137	5.85-8.20	137WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FDP70/ FDM70	S-F	Al/ Cu
WR112	7.05-10.0	112WUCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FBP84/ FBM84/ FBE84	N-F	Al/ Cu
WR112	7.05-10.0	112WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FBP84/ FBM84/ FBE84	S-F	Al/ Cu
WR90	8.20-12.4	90WUCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FBP100/ FBM100/ FBE100	N-F	Al/ Cu
WR90	8.20-12.4	90WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FBP100/ FBM100/ FBE100	S-F	Al/ Cu
WR75	10.0-15.0	75WUCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FBP120/ FBM120/ FBE120	N-F	Al/ Cu
WR75	10.0-15.0	75WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.05 1.25	FBP120/ FBM120/ FBE120	S-F	Al/ Cu

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR62	12.4-18.0	62WUCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.10 1.25	FBP140/ FBM140/ FBE140	N-F	Al/ Cu
WR62	12.4-18.0	62WUCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.10 1.25	FBP140/ FBM140/ FBE140	S-F	Al/ Cu
WR51	15.0-22.0	51WUCS-XX_Cu	3/6/10/ 20/30/ 40/50	±0.9	±0.7	1.10 1.25	FBP180/ FBM180/ FBE180	S-F	Cu
WR42	18.0-26.5	42WUCS-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.10 1.35	FBP220/ FBM220/ FBE220	S-F	Cu
WR42	18.0-26.5	42WUC3.5-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.10 1.35	FBP220/ FBM220/ FBE220	3.5-F	Cu
WR42	18.0-26.5	42WUCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.10 1.35	FBP220/ FBM220/ FBE220	2.92-F	Cu
WR34	22.0-33.0	34WUCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.10 1.35	FBP260/ FBM260/ FBE260	2.92-F	Cu
WR28	26.5-40.0	28WUCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.10 1.40	FBP320/ FBM320/ FBE320	2.92-F	Cu
WR28	26.5-40.0	28WUC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.10 1.40	FBP320/ FBM320/ FBE320	2.4-F	Cu
WR22	33.0-50.0	22WUC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.15 1.50	FUGP400	2.4-F	Cu
WR19	40.0-60.0	19WUC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.15 1.40	FUGP500	2.4-F	Cu
WR19	40.0-60.0	19WUC1.85-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.15 1.40	FUGP500	1.85-F	Cu
WR15	50.0-65.0	15WUC1.85-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	1.15 1.40	FUGP620	1.85-F	Cu

WG Coupler - High Directional (WDCx-XX Type)



Order Information

P/N：

284	WDCx				-XX
WR Size	Product Code, x means connector type:				Coupling
	N=N type-F	NM=N type-M	S=SMA-F	SM=SMA-M	
	3.5=3.5mm-F	3.5M=3.5mm-M	K=2.92mm-F	KM=2.92mm-M	
	2.4=2.4mm-F	2.4M=2.4mm-M	1.85=1.85mm-F	1.85M=1.85mm-M	
	Notes: F = Female, M = Male.				

*Freq. = Frequency	*Coup. = Coupling
*Coup. Acc. = Coupling Accuracy	*Freq. SS. = Frequency Sensitivity
*M.L. = Mainline	*S.L. = Secondline
*Dir. = Direcitivity	*Mat. = Material
*Con. = Connector	

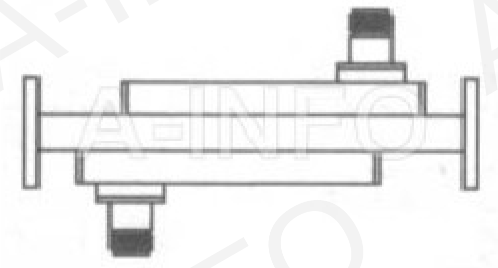
EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR284	2.60-3.95	284WDCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP32/ FDM32	N-F	Al/ Cu
WR284	2.60-3.95	284WDCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP32/ FDM32	S-F	Al/ Cu
WR229	3.30-4.90	229WDCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP40/ FDM40	N-F	Al/ Cu
WR229	3.30-4.90	229WDCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP40/ FDM40	S-F	Al/ Cu
WR187	3.95-5.85	187WDCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP48/ FDM48	N-F	Al/ Cu

WG High Directional Coupler

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR187	3.95-5.85	187WDCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP48/ FDM48	S-F	Al/ Cu
WR159	4.90-7.05	159WDCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP58/ FDM58	N-F	Al/ Cu
WR159	4.90-7.05	159WDCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP58/ FDM58	S-F	Al/ Cu
WR137	5.85-8.20	137WDCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP70/ FDM70	N-F	Al/ Cu
WR137	5.85-8.20	137WDCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP70/ FDM70	S-F	Al/ Cu
WR112	7.05-10.0	112WDCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP84/ FBM84/ FBE84	N-F	Al/ Cu
WR112	7.05-10.0	112WDCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP84/ FBM84/ FBE84	S-F	Al/ Cu
WR90	8.20-12.4	90WDCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP100/ FBM100/ FBE100	N-F	Al/ Cu
WR90	8.20-12.4	90WDCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP100/ FBM100/ FBE100	S-F	Al/ Cu
WR75	10.0-15.0	75WDCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP120/ FBM120/ FBE120	N-F	Al/ Cu
WR75	10.0-15.0	75WDCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP120/ FBM120/ FBE120	S-F	Al/ Cu
WR62	12.4-18.0	62WDCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP140/ FBM140/ FBE140	N-F	Al/ Cu
WR62	12.4-18.0	62WDCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP140/ FBM140/ FBE140	S-F	Al/ Cu
WR51	15.0-22.0	51WDCS-XX_Cu	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP180/ FBM180/ FBE180	S-F	Cu
WR42	18.0-26.5	42WDCS-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.30	FBP220/ FBM220/ FBE220	S-F	Cu

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR42	18.0-26.5	42WDC3.5-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.30	FBP220/ FBM220/ FBE220	3.5-F	Cu
WR42	18.0-26.5	42WDCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.30	FBP220/ FBM220/ FBE220	2.92-F	Cu
WR34	22.0-33.0	34WDCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.25	FBP260/ FBM260/ FBE260	2.92-F	Cu
WR28	26.5-40.0	28WDCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.30	FBP320/ FBM320/ FBE320	2.92-F	Cu
WR28	26.5-40.0	28WDC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.30	FBP320/ FBM320/ FBE320	2.4-F	Cu
WR22	33.0-50.0	22WDC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.50	FUGP400	2.4-F	Cu
WR19	40.0-60.0	19WDC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.50	FUGP500	2.4-F	Cu
WR19	40.0-60.0	19WDC1.85-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.50	FUGP500	1.85-F	Cu
WR15	50.0-65.0	15WDC1.85-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.50	FUGP620	1.85-F	Cu

WG Coupler - High Directional (WDXCx-XX Type)



Order Information

P/N：

430	WDXCx				-XX
WR Size	Product Code, x means connector type:				Coupling
	N=N type-F	NM=N type-M	S=SMA-F	SM=SMA-M	
	3.5=3.5mm-F	3.5M=3.5mm-M	K=2.92mm-F	KM=2.92mm-M	
	2.4=2.4mm-F	2.4M=2.4mm-M	1.85=1.85mm-F	1.85M=1.85mm-M	
	Notes: F = Female, M = Male.				

*Freq. = Frequency	*Coup. = Coupling
*Coup. Acc. = Coupling Accuracy	*Freq. SS. = Frequency Sensitivity
*M.L. = Mainline	*S.L. = Secondline
*Dir. = Direcitivity	*Mat. = Material

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR430	1.70-2.60	430WDXCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP22/ FDM22	N-F	Al/ Cu
WR430	1.70-2.60	430WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP22/ FDM22	S-F	Al/ Cu
WR340	2.20-3.30	340WDXCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP26/ FDM26	N-F	Al/ Cu
WR340	2.20-3.30	340WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP26/ FDM26	S-F	Al/ Cu
WR284	2.60-3.95	284WDXCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP32/ FDM32	N-F	Al/ Cu

A-INFO

WG High Directional Coupler

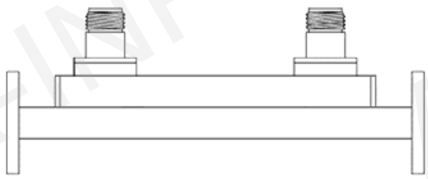
EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR284	2.60-3.95	284WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP32/ FDM32	S-F	Al/ Cu
WR229	3.30-4.90	229WDXCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP40/ FDM40	N-F	Al/ Cu
WR229	3.30-4.90	229WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP40/ FDM40	S-F	Al/ Cu
WR187	3.95-5.85	187WDXCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP48/ FDM48	N-F	Al/ Cu
WR187	3.95-5.85	187WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP48/ FDM48	S-F	Al/ Cu
WR159	4.90-7.05	159WDXCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP58/ FDM58	N-F	Al/ Cu
WR159	4.90-7.05	159WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP58/ FDM58	S-F	Al/ Cu
WR137	5.85-8.20	137WDXCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP70/ FDM70	N-F	Al/ Cu
WR137	5.85-8.20	137WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FDP70/ FDM70	S-F	Al/ Cu
WR112	7.05-10.0	112WDXCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP84/ FBM84/ FBE84	N-F	Al/ Cu
WR112	7.05-10.0	112WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP84/ FBM84/ FBE84	S-F	Al/ Cu
WR90	8.20-12.4	90WDXCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP100/ FBM100/ FBE100	N-F	Al/ Cu
WR90	8.20-12.4	90WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP100/ FBM100/ FBE100	S-F	Al/ Cu
WR75	10.0-15.0	75WDXCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP120/ FBM120/ FBE120	N-F	Al/ Cu

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR75	10.0-15.0	75WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.05 1.25	FBP120/ FBM120/ FBE120	S-F	Al/ Cu
WR62	12.4-18.0	62WDXCN-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP140/ FBM140/ FBE140	N-F	Al/ Cu
WR62	12.4-18.0	62WDXCS-XX	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP140/ FBM140/ FBE140	S-F	Al/ Cu
WR51	15.0-22.0	51WDXCS-XX_Cu	3/6/10/ 20/30/ 40/50	±0.9	±0.7	30	1.10 1.25	FBP180/ FBM180/ FBE180	S-F	Cu
WR42	18.0-26.5	42WDXCS-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP220/ FBM220/ FBE220	S-F	Cu
WR42	18.0-26.5	42WDXC3.5-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP220/ FBM220/ FBE220	3.5-F	Cu
WR42	18.0-26.5	42WDXCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP220/ FBM220/ FBE220	2.92-F	Cu
WR34	22.0-33.0	34WDXCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.35	FBP260/ FBM260/ FBE260	2.92-F	Cu
WR28	26.5-40.0	28WDXCK-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.40	FBP320/ FBM320/ FBE320	2.92-F	Cu
WR28	26.5-40.0	28WDXC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.10 1.40	FBP320/ FBM320/ FBE320	2.4-F	Cu
WR22	33.0-50.0	22WDXC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.50	FUGP400	2.4-F	Cu
WR19	40.0-60.0	19WDXC2.4-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.40	FUGP500	2.4-F	Cu
WR19	40.0-60.0	19WDXC1.85-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.40	FUGP500	1.85-F	Cu
WR15	50.0-65.0	15WDXC1.85-XX_Cu	3/6/10/ 20/30/ 40/50	±1.0	±0.9	30	1.15 1.40	FUGP620	1.85-F	Cu

We can also provide the following types coupler, pls. see the outline drawing.

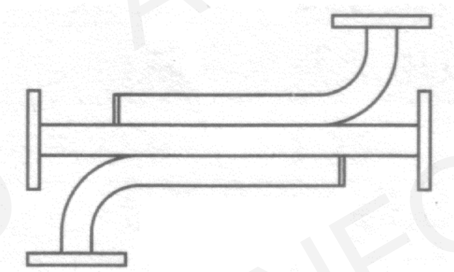
Four ports Dual Coupler

WUC Series

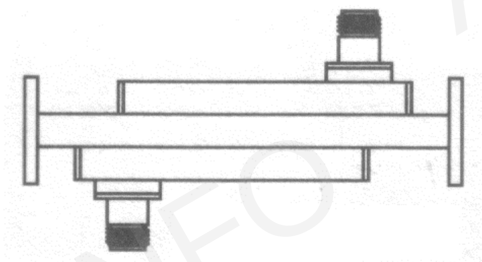


WUCN Series

Dual Directional Coupler

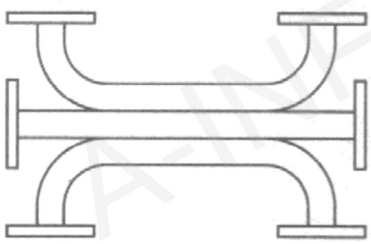


WDXC Series

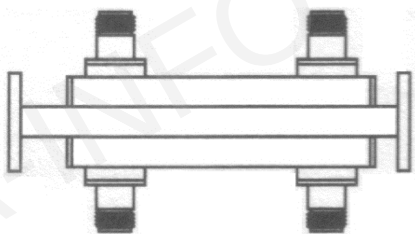


WDXCN Series

Six Ports Dual Coupler

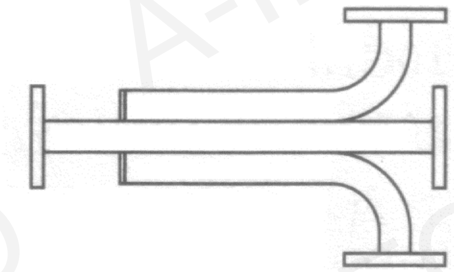


WDUC Series

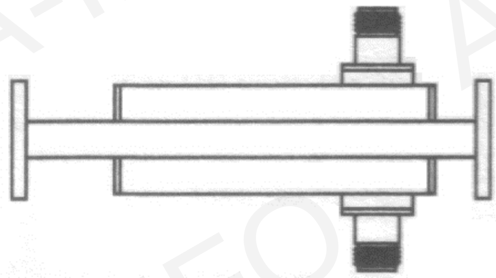


WDUCN Series

Same Directional Coupled Power Divider



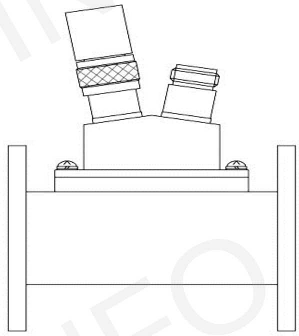
WDC Series



WDCN Series

Note:
For detailed information of above couplers, pls.feel free to contact us.

WG Coupler - Loop (WHCx-XX Type)



Order Information
P/N：

430	WHCx				-XX
WR Size	Product Code, x means connector type:				Coupling
	N=N type-F	NM=N type-M	S=SMA-F	SM=SMA-M	
	3.5=3.5mm-F	3.5M=3.5mm-M	K=2.92mm-F	KM=2.92mm-M	
	2.4=2.4mm-F	2.4M=2.4mm-M	-	-	
	Notes: F = Female, M = Male.				

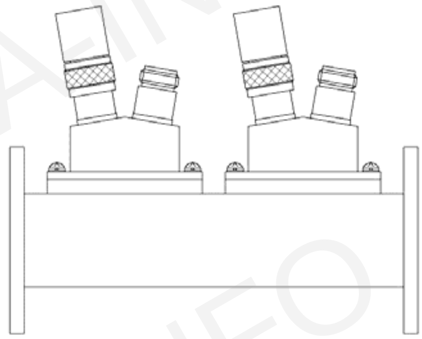
*Freq. = Frequency	*Coup. = Coupling
*BW. = Bandwidth	*M.L. = Mainline
*S.L. = Secondline	*Mat. = Material
*Dir. = Directivity	*Con. = Connector

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Dir. (dB) (Typ.)	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR430	1.70-2.60	430WHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP22/ FDM22	N-F	Al/ Cu
WR430	1.70-2.60	430WHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP22/ FDM22	S-F	Al/ Cu
WR340	2.20-3.30	340WHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP26/ FDM26	N-F	Al/ Cu
WR340	2.20-3.30	340WHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP26/ FDM26	S-F	Al/ Cu
WR284	2.60-3.95	284WHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP32/ FDM32	N-F	Al/ Cu
WR284	2.60-3.95	284WHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP32/ FDM32	S-F	Al/ Cu
WR229	3.30-4.90	229WHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP40/ FDM40	N-F	Al/ Cu
WR229	3.30-4.90	229WHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP40/ FDM40	S-F	Al/ Cu
WR187	3.95-5.85	187WHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP48/ FDM48	N-F	Al/ Cu

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Dir. (dB) (Typ.)	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR187	3.95-5.85	187WHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP48/ FDM48	S-F	Al/ Cu
WR159	4.90-7.05	159WHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP58/ FDM58	N-F	Al/ Cu
WR159	4.90-7.05	159WHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP58/ FDM58	S-F	Al/ Cu
WR137	5.85-8.20	137WHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP70/ FDM70	N-F	Al/ Cu
WR137	5.85-8.20	137WHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP70/ FDM70	S-F	Al/ Cu
WR112	7.05-10.0	112WHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP84/ FBM84/ FBE84	N-F	Al/ Cu
WR112	7.05-10.0	112WHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP84/ FBM84/ FBE84	S-F	Al/ Cu
WR90	8.20-12.4	90WHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP100/ FBM100/ FBE100	N-F	Cu/ Al
WR90	8.20-12.4	90WHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP100/ FBM100/ FBE100	S-F	Cu/ Al
WR75	10.0-15.0	75WHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP120/ FBM120/ FBE120	N-F	Cu/ Al
WR75	10.0-15.0	75WHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP120/ FBM120/ FBE120	S-F	Cu/ Al
WR62	12.4-18.0	62WHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP140/ FBM140/ FBE140	N-F	Cu/ Al
WR62	12.4-18.0	62WHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP140/ FBM140/ FBE140	S-F	Cu/ Al
WR51	15.0-22.0	51WHCS-XX_Cu	30/40/ 50/60	15	1.10 1.35	FBP180/ FBM180/ FBE180	S-F	Cu
WR42	18.0-26.5	42WHCS-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP220/ FBM220/ FBE220	S-F	Cu
WR42	18.0-26.5	42WHC3.5-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP220/ FBM220/ FBE220	3.5-F	Cu
WR42	18.0-26.5	42WHCK-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP220/ FBM220/ FBE220	2.92-F	Cu

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Dir. (dB) (Typ.)	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR34	22.0-33.0	34WHCK-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP260/ FBM260/ FBE260	2.92-F	Cu
WR28	26.5-40.0	28WHCK-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP320/ FBM320/ FBE320	2.92-F	Cu
WR28	26.5-40.0	28WHC2.4-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP320/ FBM320/ FBE320	2.4-F	Cu

WG Coupler - Loop (WHHCx-XX Type)



Order Information
P/N：

<table>
<tr><td><u>430</u></td><td colspan="4"><u>WHHCx</u></td><td><u>-XX</u></td></tr>
<tr><td rowspan="5">WR Size</td><td colspan="4">Product Code, x means connector type:</td><td rowspan="5">Coupling</td></tr>
<tr><td>N=N type-F</td><td>NM=N type-M</td><td>S=SMA-F</td><td>SM=SMA-M</td></tr>
<tr><td>3.5=3.5mm-F</td><td>3.5M=3.5mm-M</td><td>K=2.92mm-F</td><td>KM=2.92mm-M</td></tr>
<tr><td>2.4=2.4mm-F</td><td>2.4M=2.4mm-M</td><td>-</td><td>-</td></tr>
<tr><td colspan="4">Notes: F = Female, M = Male.</td></tr>
</table>

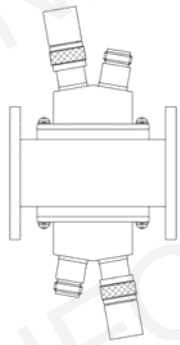
*Freq. = Frequency	*Coup. = Coupling
*BW. = Bandwidth	*M.L. = Mainline
*S.L. = Secondline	*Mat. = Material
*Dir. = Direcitivity	*Con. = Connector

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Dir. (dB) (Typ.)	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR430	1.70-2.60	430WHHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP22/ FDM22	N-F	Al/ Cu
WR430	1.70-2.60	430WHHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP22/ FDM22	S-F	Al/ Cu
WR340	2.20-3.30	340WHHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP26/ FDM26	N-F	Al/ Cu
WR340	2.20-3.30	340WHHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP26/ FDM26	S-F	Al/ Cu
WR284	2.60-3.95	284WHHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP32/ FDM32	N-F	Al/ Cu
WR284	2.60-3.95	284WHHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP32/ FDM32	S-F	Al/ Cu
WR229	3.30-4.90	229WHHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP40/ FDM40	N-F	Al/ Cu
WR229	3.30-4.90	229WHHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP40/ FDM40	S-F	Al/ Cu
WR187	3.95-5.85	187WHHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP48/ FDM48	N-F	Al/ Cu

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Dir. (dB) (Typ.)	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR187	3.95-5.85	187WHHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP48/ FDM48	S-F	Al/ Cu
WR159	4.90-7.05	159WHHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP58/ FDM58	N-F	Al/ Cu
WR159	4.90-7.05	159WHHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP58/ FDM58	S-F	Al/ Cu
WR137	5.85-8.20	137WHHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP70/ FDM70	N-F	Al/ Cu
WR137	5.85-8.20	137WHHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP70/ FDM70	S-F	Al/ Cu
WR112	7.05-10.0	112WHHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP84/ FBM84/ FBE84	N-F	Al/ Cu
WR112	7.05-10.0	112WHHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP84/ FBM84/ FBE84	S-F	Al/ Cu
WR90	8.20-12.4	90WHHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP100/ FBM100/ FBE100	N-F	Cu/ Al
WR90	8.20-12.4	90WHHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP100/ FBM100/ FBE100	S-F	Cu/ Al
WR75	10.0-15.0	75WHHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP120/ FBM120/ FBE120	N-F	Cu/ Al
WR75	10.0-15.0	75WHHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP120/ FBM120/ FBE120	S-F	Cu/ Al
WR62	12.4-18.0	62WHHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP140/ FBM140/ FBE140	N-F	Cu/ Al
WR62	12.4-18.0	62WHHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP140/ FBM140/ FBE140	S-F	Cu/ Al
WR51	15.0-22.0	51WHHCS-XX_Cu	30/40/ 50/60	15	1.10 1.35	FBP180/ FBM180/ FBE180	S-F	Cu
WR42	18.0-26.5	42WHHCS-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP220/ FBM220/ FBE220	S-F	Cu
WR42	18.0-26.5	42WHHC3.5-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP220/ FBM220/ FBE220	3.5-F	Cu
WR42	18.0-26.5	42WHHCK-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP220/ FBM220/ FBE220	2.92-F	Cu

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Dir. (dB) (Typ.)	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR34	22.0-33.0	34WHHCK-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP260/ FBM260/ FBE260	2.92-F	Cu
WR28	26.5-40.0	28WHHCK-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP320/ FBM320/ FBE320	2.92-F	Cu
WR28	26.5-40.0	28WHHC2.4-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP320/ FBM320/ FBE320	2.4-F	Cu

WG Coupler - Loop (WDHCx-XX Type)



Order Information

P/N：

430	WDHCx				-XX
WR Size	Product Code, x means connector type:				Coupling
	N=N type-F	NM=N type-M	S=SMA-F	SM=SMA-M	
	3.5=3.5mm-F	3.5M=3.5mm-M	K=2.92mm-F	KM=2.92mm-M	
	2.4=2.4mm-F	2.4M=2.4mm-M	-	-	
	Notes: F = Female, M = Male.				

*Freq. = Frequency	*Coup. = Coupling
*BW. = Bandwidth	*M.L. = Mainline
*S.L. = Secondline	*Mat. = Material
*Dir. = Direcitivity	*Con. = Connector

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Dir. (dB) (Typ.)	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR430	1.70-2.60	430WDHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP22/ FDM22	N-F	Al/ Cu
WR430	1.70-2.60	430WDHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP22/ FDM22	S-F	Al/ Cu
WR340	2.20-3.30	340WDHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP26/ FDM26	N-F	Al/ Cu
WR340	2.20-3.30	340WDHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP26/ FDM26	S-F	Al/ Cu
WR284	2.60-3.95	284WDHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP32/ FDM32	N-F	Al/ Cu
WR284	2.60-3.95	284WDHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP32/ FDM32	S-F	Al/ Cu
WR229	3.30-4.90	229WDHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP40/ FDM40	N-F	Al/ Cu
WR229	3.30-4.90	229WDHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP40/ FDM40	S-F	Al/ Cu
WR187	3.95-5.85	187WDHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP48/ FDM48	N-F	Al/ Cu

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Dir. (dB) (Typ.)	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR187	3.95-5.85	187WDHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP48/ FDM48	S-F	Al/ Cu
WR159	4.90-7.05	159WDHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP58/ FDM58	N-F	Al/ Cu
WR159	4.90-7.05	159WDHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP58/ FDM58	S-F	Al/ Cu
WR137	5.85-8.20	137WDHCN-XX	30/40/ 50/60	15	1.10 1.35	FDP70/ FDM70	N-F	Al/ Cu
WR137	5.85-8.20	137WDHCS-XX	30/40/ 50/60	15	1.10 1.35	FDP70/ FDM70	S-F	Al/ Cu
WR112	7.05-10.0	112WDHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP84/ FBM84/ FBE84	N-F	Al/ Cu
WR112	7.05-10.0	112WDHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP84/ FBM84/ FBE84	S-F	Al/ Cu
WR90	8.20-12.4	90WDHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP100/ FBM100/ FBE100	N-F	Cu/ Al
WR90	8.20-12.4	90WDHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP100/ FBM100/ FBE100	S-F	Cu/ Al
WR75	10.0-15.0	75WDHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP120/ FBM120/ FBE120	N-F	Cu/ Al
WR75	10.0-15.0	75WDHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP120/ FBM120/ FBE120	S-F	Cu/ Al
WR62	12.4-18.0	62WDHCN-XX	30/40/ 50/60	15	1.10 1.35	FBP140/ FBM140/ FBE140	N-F	Cu/ Al
WR62	12.4-18.0	62WDHCS-XX	30/40/ 50/60	15	1.10 1.35	FBP140/ FBM140/ FBE140	S-F	Cu/ Al
WR51	15.0-22.0	51WDHCS-XX_Cu	30/40/ 50/60	15	1.10 1.35	FBP180/ FBM180/ FBE180	S-F	Cu
WR42	18.0-26.5	42WDHCS-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP220/ FBM220/ FBE220	S-F	Cu
WR42	18.0-26.5	42WDHC3.5-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP220/ FBM220/ FBE220	3.5-F	Cu
WR42	18.0-26.5	42WDHCK-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP220/ FBM220/ FBE220	2.92-F	Cu

A-INFO

WG Loop Coupler

EIA WR	*Freq. (GHz)	P/N	*Coup. (dB)	*Dir. (dB) (Typ.)	VSWR *M.L. *S.L. Max.	Flange	*Con.	*Mat.
WR34	22.0-33.0	34WDHCK-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP260/ FBM260/ FBE260	2.92-F	Cu
WR28	26.5-40.0	28WDHCK-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP320/ FBM320/ FBE320	2.92-F	Cu
WR28	26.5-40.0	28WDHC2.4-XX_Cu	30/40/ 50/60	15	1.15 1.70	FBP320/ FBM320/ FBE320	2.4-F	Cu

DR WG Coupler - High Directional (DRWCx-XX Type)

Order Information
P/N：

200	DRWCx				-XX
WR Size	Product Code, x means connector type:				Coupling
	N=N type-F	NM=N type-M	S=SMA-F	SM=SMA-M	
	3.5=3.5mm-F	3.5M=3.5mm-M	K=2.92mm-F	KM=2.92mm-M	
	2.4=2.4mm-F	2.4M=2.4mm-M	-	-	
	Notes: F = Female, M = Male.				

*Freq. = Frequency	*Coup. = Coupling
*Coup. Acc. = Coupling Accuracy	*Freq. SS. = Frequency Sensitivity
*M.L. = Mainline	*S.L. = Secondline
*Dir. = Direcitivity	*Mat. = Material
*Con. = Connector	

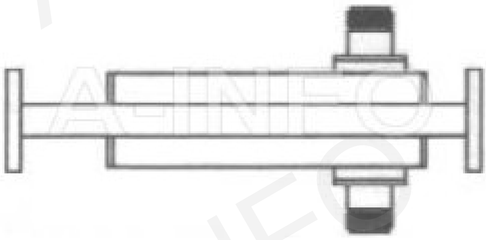
EIA WRD	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. *S.L. Max.	*Con.	*Mat.
WRD200	2.0-4.8	200DRWCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD200	2.0-4.8	200DRWCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD250	2.6-7.8	250DRWCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD250	2.6-7.8	250DRWCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD350	3.5-8.2	350DRWCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD350	3.5-8.2	350DRWCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu

A-INFO

Double Ridge WG Coupler

EIA WRD	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. *S.L. Max.	*Con.	*Mat.
WRD475	4.75-11.0	475DRWCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD475	4.75-11.0	475DRWCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD580	5.8-16.0	580DRWCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD580	5.8-16.0	580DRWCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD650	6.5-18.0	650DRWCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD650	6.5-18.0	650DRWCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD750	7.5-18.0	750DRWCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD750	7.5-18.0	750DRWCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD110	11.0-26.5	110DRWCS-XX_Cu	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Cu
WRD180	18.0-40.0	180DRWCK-XX_Cu	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	2.92-F	Cu

DR WG Coupler - High Directional (DRWDCx-XX Type)



Order Information
P/N：

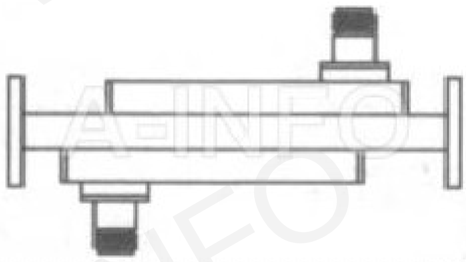
200	DRWDCx				-XX
WR Size	Product Code, x means connector type:				Coupling
	N=N type-F	NM=N type-M	S=SMA-F	SM=SMA-M	
	3.5=3.5mm-F	3.5M=3.5mm-M	K=2.92mm-F	KM=2.92mm-M	
	2.4=2.4mm-F	2.4M=2.4mm-M	-	-	
	Notes: F = Female, M = Male.				

*Freq. = Frequency	*Coup. = Coupling
*Coup. Acc. = Coupling Accuracy	*Freq. SS. = Frequency Sensitivity
*M.L. = Mainline	*S.L. = Secondline
*Dir. = Direcitivity	*Mat. = Material
*Con. = Connector	

EIA WRD	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. *S.L. Max.	*Con.	*Mat.
WRD200	2.0-4.8	200DRWDCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD200	2.0-4.8	200DRWDCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD250	2.6-7.8	250DRWDCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD250	2.6-7.8	250DRWDCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD350	3.5-8.2	350DRWDCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD350	3.5-8.2	350DRWDCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu

EIA WRD	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. *S.L. Max.	*Con.	*Mat.
WRD475	4.75-11.0	475DRWDCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD475	4.75-11.0	475DRWDCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD580	5.8-16.0	580DRWDCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD580	5.8-16.0	580DRWDCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD650	6.5-18.0	650DRWDCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD650	6.5-18.0	650DRWDCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD750	7.5-18.0	750DRWDCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD750	7.5-18.0	750DRWDCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD110	11.0-26.5	110DRWDCS-XX_Cu	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Cu
WRD180	18.0-40.0	180DRWDCK-XX_Cu	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	2.92-F	Cu

DR WG Coupler - High Directional (DRWDXCx-XX Type)



Order Information

P/N：

200	DRWDXCx				-XX
WR Size	Product Code, x means connector type:				Coupling
	N=N type-F	NM=N type-M	S=SMA-F	SM=SMA-M	
	3.5=3.5mm-F	3.5M=3.5mm-M	K=2.92mm-F	KM=2.92mm-M	
	2.4=2.4mm-F	2.4M=2.4mm-M	-	-	
	Notes: F = Female, M = Male.				

*Freq. = Frequency	*Coup. = Coupling
*Coup. Acc. = Coupling Accuracy	*Freq. SS. = Frequency Sensitivity
*M.L. = Mainline	*S.L. = Secondline
*Dir. = Direcitivity	*Mat. = Material
*Con. = Connector	

EIA WRD	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. *S.L. Max.	*Con.	*Mat.
WRD200	2.0-4.8	200DRWDXCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD200	2.0-4.8	200DRWDXCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD250	2.6-7.8	250DRWDXCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD250	2.6-7.8	250DRWDXCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD350	3.5-8.2	350DRWDXCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu

Double Ridge WG Coupler

EIA WRD	*Freq. (GHz)	P/N	*Coup. (dB)	*Coup. Acc. (dB)	*Freq. SS. (dB)	*Dir. (dB) Min.	VSWR *M.L. *S.L. Max.	*Con.	*Mat.
WRD350	3.5-8.2	350DRWDXCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD475	4.75-11.0	475DRWDXCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD475	4.75-11.0	475DRWDXCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD580	5.8-16.0	580DRWDXCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD580	5.8-16.0	580DRWDXCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD650	6.5-18.0	650DRWDXCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD650	6.5-18.0	650DRWDXCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD750	7.5-18.0	750DRWDXCN-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	N-F	Al/ Cu
WRD750	7.5-18.0	750DRWDXCS-XX	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Al/ Cu
WRD110	11.0-26.5	110DRWDXCS-XX_Cu	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	S-F	Cu
WRD180	18.0-40.0	180DRWDXCK-XX_Cu	10/ 20/30/ 40/50	±1.5	±1.5	25	1.25 1.50	2.92-F	Cu

WG Detector

Ordering Information

P/N：

284	JBQ
WR Size	Product Code

P/N	Frequency (GHz)	Sensitivity (mV/mW)	EIA WR	Anti-Burning Power (mW)	Detector Type	Response Speed	Connector
284JBQ	2.60-3.95	300	WR284	25-100	Positive/ Negative	2us	SMA/ BNC
229JBQ	3.30-4.90	300	WR229	25-100	Positive/ Negative	2us	SMA/ BNC
187JBQ	3.95-5.85	300	WR187	25-100	Positive/ Negative	2us	SMA/ BNC
159JBQ	4.90-7.05	300	WR159	25-100	Positive/ Negative	2us	SMA/ BNC
137JBQ	5.85-8.20	300	WR137	25-100	Positive/ Negative	2us	SMA/ BNC
112JBQ	7.05-10.0	300	WR112	25-100	Positive/ Negative	2us	SMA/ BNC
90JBQ	8.2-12.4	200	WR90	25-100	Positive/ Negative	2us	SMA/ BNC
75JBQ	10.0-15.0	200	WR75	25-100	Positive/ Negative	2us	SMA/ BNC
62JBQ	12.4-18.0	200	WR62	25-100	Positive/ Negative	2us	SMA/ BNC
51JBQ	15.0-22.0	200	WR51	25-100	Positive/ Negative	2us	SMA/ BNC
42JBQ	18.0-26.5	200-400	WR42	25-100	Positive/ Negative	2us	SMA
34JBQ	22.0-33.0	400-600	WR34	25-100	Positive/ Negative	2us	SMA
28JBQ	26.5-40.0	400-600	WR28	25-100	Positive/ Negative	2us	SMA
22JBQ	33.0-50.0	200	WR22	25-100	Positive/ Negative	2us	SMA
19JBQ	40.0-60.0	200	WR19	25-100	Positive/ Negative	2us	SMA
15JBQ	50.0-75.0	50-70	WR15	25-100	Positive/ Negative	2us	SMA
12JBQ	60.0-90.0	50-70	WR12	25-100	Positive/ Negative	2us	SMA
10JBQ	75.0-110.0	50-70	WR10	25-100	Positive/ Negative	2us	SMA

WG Filter – Band Pass

Ordering Information

P/N：

75	-LB	-BP	-10565-10765
WR Size	Product Code	Band Pass	Bandwidth(MHz)

*F0 = Center Frequency	*I.L. = Insertion Loss
*Mat. = Material	

P/N	*F0 (MHz)	*I.L. (dB)	EIA WR	Rejection (dB@MHz) Min.	VSWR	Flange	*Mat.
229LB-BP-3820-3860	3840	1.5	WR229	35 @ 3.79GHz 35 @ 3.89GHz	1.5	FDP40	Al
90LB-BP-9000-9500	9250	0.6	WR90	45 @ F<8.5GHz 45 @ F>10GHz	1.3	FBP100	Al
90LB-BP-9150-9650	9400	0.6	WR90	40 @ F<8.65GHz 40 @ F>10.15GHz	1.3	FBP100	Al
75LB-BP-10565-10765	10665	1.2	WR75	80 @11700-12400 80 @9600	1.5	FBP120	Al
42LB-BP-25500-27000	26250	0.5	WR42	30 @23.5GHz & 29GHz 60 @21.5GHz & 31GHz	1.2	FBP220	Al
28LB-BP-28600-29800	29200	0.99	WR28	70 @26950 70 @31450	1.5	FBP320	Al
28LB-BP-29500-30000	29750	1.2	WR28	50@28550	1.2	FBP320	Al
28LB-BP-34000-36000	35000	0.5	WR28	60 @ 32.4445GHz 60 @ 38.5-40GHz	2.0	FBP320	Cu

WG Load - Precision & Low Power

*Freq. = Frequency	*Avg. = Average
*Mat. = Material	

Ordering Information
P/N：

975	WLPL
975	WPL
WR Size	Product Code

1. Gerneal Version

EIA WR	*Freq. (GHz)	P/N	VSWR Max.	*Avg. Power (W)	Peak Power (KW)	Length (mm/inch)	Flange Type	*Mat.
WR975	0.75-1.12	975WLPL	1.10	25	25	900.5 / 35.4	FDP9	Al
WR770	0.96-1.45	770WLPL	1.10	25	25	-	FDP12	Al
WR650	1.12-1.70	650WLPL	1.08	25	25	495 / 19.5	FDP14	Al
WR510	1.45-2.20	510WLPL	1.06	25	25	435 / 17.1	FDP18	Al
WR430	1.70-2.60	430WLPL	1.05	15	15	376 / 14.8	FDP22/ APF430	Al
WR340	2.20-3.30	340WLPL	1.05	12	12	320 / 12.6	FDP26/ APF340	Al
WR284	2.60-3.95	284WLPL	1.05	10	10	264 / 10.4	FDP32/ FAP32/ FEP32/ APF284B/ APF284/ APF284C	Al
WR229	3.30-4.90	229WLPL	1.05	10	10	188 / 7.4	FDP40/ FAP40/ FEP40/ APF229/ APF229B	Al
WR187	3.95-5.85	187WLPL	1.04	8	8	163 / 6.4	FDP48/ FAP48/ FEP48/ APF187/ APF187C	Al
WR159	4.90-7.05	159WLPL	1.04	7	7	147 / 5.8	FDP58/ FAP58/ FEP58/ APF159/ APF159B	Al
WR137	5.85-8.20	137WLPL	1.04	6	6	132 / 5.2	FDP70/ FAP70/ FEP70/ APF137/ APF137C	Al

EIA WR	*Freq. (GHz)	P/N	VSWR Max.	*Avg. Power (W)	Peak Power (KW)	Length (mm/inch)	Flange Type	*Mat.
WR112	7.05-10.0	112WLPL	1.03	4	4	127 / 5	FBP84/ FDP84/ FEP84/ APF112B/ APF112	Al
WR90	8.20-12.4	90WLPL	1.03	4	4	127 / 5	FBP100/ FDP100/ FEP100/ APF90B/ APF90/ APF90A	Al
WR75	10.0-15.0	75WLPL	1.04	2	2	127 / 5	FBP120/ FDP120/ APF75B/ APF75A	Al
WR62	12.4-18.0	62WLPL	1.04	1.5	1.5	102 / 4	FBP140/ FDP140/ APF62	Al
WR51	15.0-22.0	51WLPL_Cu	1.05	1	1	79 / 3.1	FBP180/ FDP180/ APF51C/ APF51B/ APF51A	Cu
WR42	18.0-26.5	42WLPL_Cu	1.05	0.5	0.5	71 / 2.8	FBP220/ APF42	Cu
WR34	22.0-33.0	34WLPL_Cu	1.05	0.5	0.5	63.5 / 2.5	FBP260/ APF34	Cu
WR28	26.5-40.0	28WLPL_Cu	1.05	0.5	0.5	56 / 2.2	FBP320/ APF28	Cu
WR22	33.0-50.0	22WLPL_Cu	1.08	0.5	0.5	41 / 1.6	FUGP400/ APF22/ APF22A	Cu
WR19	40.0-60.0	19WLPL_Cu	1.06	0.3	0.3	41 / 1.6	FUGP500/ APF19/ APF19A	Cu
WR15	50.0-75.0	15WLPL_Cu	1.10	0.3	0.1	38 / 1.5	FUGP620/ APF15/ APF15A	Cu
WR12	60.0-90.0	12WLPL_Cu	1.06	0.2	0.0	38 / 1.5	FUGP740/ APF12/ APF12A	Cu
WR10	75.0-110.0	10WLPL_Cu	1.08	0.2	0.0	38 / 1.5	FUGP900/ APF10/ APF10A	Cu

2. Precision Version

EIA WR	*Freq. (GHz)	P/N	VSWR Max.	*Avg. Power (W)	Peak Power (KW)	Length (mm/inch)	Flange Type	*Mat.
WR975	0.75-1.12	975WPL	1.05	25	25	900.5 / 35.4	FDP9	Al
WR770	0.96-1.45	770WPL	1.05	25	25	-	FDP12	Al
WR650	1.12-1.70	650WPL	1.04	25	25	495 / 19.5	FDP14	Al
WR510	1.45-2.20	510WPL	1.03	25	25	435 / 17.1	FDP18	Al
WR430	1.70-2.60	430WPL	1.025	15	15	376 / 14.8	FDP22/ APF430	Al
WR340	2.20-3.30	340WPL	1.025	12	12	320 / 12.6	FDP26/ APF340	Al
WR284	2.60-3.95	284WPL	1.025	10	10	264 / 10.4	FDP32/ FAP32/ FEP32/ APF284B/ APF284/ APF284C	Al
WR229	3.30-4.90	229WPL	1.02	10	10	188 / 7.4	FDP40/ FAP40/ FEP40/ APF229/ APF229B	Al
WR187	3.95-5.85	187WPL	1.02	8	8	163 / 6.4	FDP48/ FAP48/ FEP48/ APF187/ APF187C	Al
WR159	4.90-7.05	159WPL	1.02	7	7	147 / 5.8	FDP58/ FAP58/ FEP58/ APF159/ APF159B	Al
WR137	5.85-8.20	137WPL	1.02	6	6	132 / 5.2	FDP70/ FAP70/ FEP70/ APF137/ APF137C	Al
WR112	7.05-10.0	112WPL	1.015	4	4	127 / 5	FBP84/ FDP84/ FEP84/ APF112B/ APF112	Al
WR90	8.20-12.4	90WPL	1.015	4	4	127 / 5	FBP100/ FDP100/ FEP100/ APF90B/ APF90/ APF90A	Al

EIA WR	*Freq. (GHz)	P/N	VSWR Max.	*Avg. Power (W)	Peak Power (KW)	Length (mm/inch)	Flange Type	*Mat.
WR75	10.0-15.0	75WPL	1.02	2	2	127 / 5	FBP120/ FDP120/ APF75B/ APF75A	Al
WR62	12.4-18.0	62WPL	1.02	1.5	1.5	102 / 4	FBP140/ FDP140/ APF62	Al
WR51	15.0-22.0	51WPL_Cu	1.025	1	1	79 / 3.1	FBP180/ FDP180/ APF51C/ APF51B/ APF51A	Cu
WR42	18.0-26.5	42WPL_Cu	1.025	0.5	0.5	71 / 2.8	FBP220/ APF42	Cu
WR34	22.0-33.0	34WPL_Cu	1.025	0.5	0.5	63.5 / 2.5	FBP260/ APF34	Cu
WR28	26.5-40.0	28WPL_Cu	1.025	0.5	0.5	56 / 2.2	FBP320/ APF28	Cu
WR22	33.0-50.0	22WPL_Cu	1.04	0.5	0.5	41 / 1.6	FUGP400/ APF22/ APF22A	Cu
WR19	40.0-60.0	19WPL_Cu	1.03	0.3	0.3	41 / 1.6	FUGP500/ APF19/ APF19A	Cu
WR15	50.0-75.0	15WPL_Cu	1.025	0.3	0.1	38 / 1.5	FUGP620/ APF15/ APF15A	Cu
WR12	60.0-90.0	12WPL_Cu	1.03	0.2	0.0	38 / 1.5	FUGP740/ APF12/ APF12A	Cu
WR10	75.0-110.0	10WPL_Cu	1.03	0.2	0.0	38 / 1.5	FUGP900/ APF10/ APF10A	Cu

WG Load – Low-Medium Power

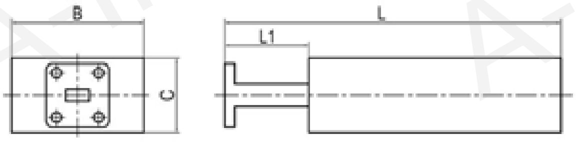
*Freq. = Frequency	*Avg. = Average
*Mat. = Material	

Ordering Information
P/N：

650	WMPL	80
WR Size	Product Code	Average Power

EIA WR	*Freq. (GHz)	P/N	VSWR Max.	*Avg. Power (W)	Peak Power (KW)	Length (mm/inch)	Flange Type	*Mat.
WR650	1.12-1.70	650WMPL80	1.2	80	400	495 / 19.5	FDP14/FDM14	Al
WR510	1.45-2.20	510WMPL70	1.2	70	400	435 / 17.1	FDP18/FDM18	Al
WR430	1.70-2.60	430WMPL60	1.15	60	400	376 / 14.8	FDP22/FDM22	Al
WR340	2.20-3.30	340WMPL60	1.15	60	400	320 / 12.6	FDP26/FDM26	Al
WR284	2.60-3.95	284WMPL45	1.1	45	400	264 / 10.4	FDP32/FDM32	Al
WR229	3.30-4.90	229WMPL40	1.1	40	400	300 / 11.8	FDP40/FDM40	Al
WR187	3.95-5.85	187WMPL40	1.1	40	350	163 / 6.4	FDP48/FDM48	Al
WR159	4.90-7.05	159WMPL30	1.1	30	300	147 / 5.8	FDP58/FDM58	Al
WR137	5.85-8.20	137WMPL25	1.1	25	200	132 / 5.2	FDP70/FDM70	Al
WR112	7.05-10.0	112WMPL25	1.1	25	200	127 / 5	FBP84/FBM84	Al
WR90	8.20-12.4	90WMPL25	1.1	25	110	121 / 4.76	FBP100/FBM100	Al
WR90	8.20-12.4	90WMPL50	1.1	50	110	121 / 4.76	FBP100/FBM100	Al
WR75	10.0-15.0	75WMPL25	1.1	25	100	120 / 4.72	FBP120/FBM120	Al
WR62	12.4-18.0	62WMPL15	1.1	15	100	129 / 5	FBP140/FBM140	Al
WR51	15.0-22.0	51WMPL15_Cu	1.1	15	60	79 / 3.1	FBP180/FBM180	Cu
WR42	18.0-26.5	42WMPL15_Cu	1.1	15	60	71 / 2.8	FBP220/FBM220	Cu
WR34	22.0-33.0	34WMPL10_Cu	1.1	10	40	63.5 / 2.5	FBP260/FBM260	Cu
WR28	26.5-40.0	28WMPL10_Cu	1.1	10	25	74 / 2.9	FBP320/FBM320	Cu
WR22	33.0-50.0	22WMPL10_Cu	1.1	10	10	41 / 1.6	FUGP400	Cu

WG Load - Medium Power



*Freq. = Frequency	*Avg. = Average
*Mat. = Material	

Ordering Information
P/N：

650	WMPL	1500
WR Size	Product Code	Average Power

EIA WR	*Freq. (GHz)	P/N	VSWR Max.	*Avg. Power (W)	Peak Power (KW)	L (mm)	L1 (mm)	B (mm)	C (mm)	Flange Type	*Mat.
WR650	1.12-1.70	650WMPL1500	1.2	1500	800	660.4	150	-	-	FDP14/ FDM14	Al
WR510	1.45-2.20	510WMPL1300	1.2	1300	800	609.6	150	-	-	FDP18/ FDM18	Al
WR430	1.70-2.60	430WMPL1200	1.2	1200	800	558.8	150	-	-	FDP22/ FDM22/ APF430	Al
WR340	2.20-3.30	340WMPL1200	1.2	1200	800	508	150	180	95.3	FDP26/ FDM26/ APF340	Al
WR284	2.60-3.95	284WMPL1200	1.15	1200	800	457.2	150	160	66	FDP32/ FDM32/ FEP32/ FAP32/ FAM32/ FAE32/ APF284B/ APF284/ APF284C	Al

A-INFO

WG Medium Power Load

EIA WR	*Freq. (GHz)	P/N	VSWR Max.	*Avg. Power (W)	Peak Power (KW)	L (mm)	L1 (mm)	B (mm)	C (mm)	Flange Type	*Mat.
WR229	3.30-4.90	229WMPL1000	1.15	1000	800	304.8	101.6	-	-	FDP40/ FDM40/ FEP40/ FAP40/ FAM40/ FAE40/ APF229/ APF229B	Al
WR187	3.95-5.85	187WMPL750	1.15	750	750	279.4	101.6	100	63.5	FDP48/ FDM48/ FEP48/ FAP48/ FAM48/ FAE48/ APF187/ APF187C	Al
WR159	4.90-7.05	159WMPL625	1.15	625	625	279.4	101.6	90	61.9	FDP58/ FEP58/ FAP58/ APF159/ APF159B	Al
WR137	5.85-8.20	137WMPL500	1.15	500	400	279.4	101.6	80	49.2	FDP70/ FDM70/ FEP70/ FAP70/ FAM70/ FAE70/ APF137/ APF137C	Al
WR112	7.05-10.0	112WMPL425	1.15	425	400	279.4	100	70	47.8	FBP84/ FBM84/ FBE84/ FDP84/ FDM84/ FEP84/ APF112B/ APF112	Al

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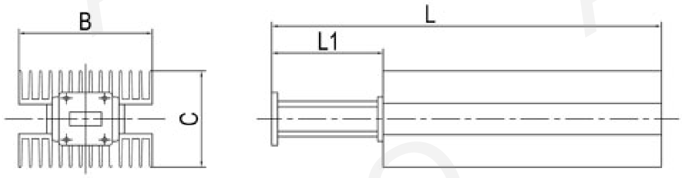
WG Medium Power Load

EIA WR	*Freq. (GHz)	P/N	VSWR Max.	*Avg. Power (W)	Peak Power (KW)	L (mm)	L1 (mm)	B (mm)	C (mm)	Flange Type	*Mat.
WR90	8.20-12.4	90WMPL225	1.15	225	225	139.7	30.48	60.0	40.0	FBP100/ FBM100/ FBE100/ FDP100/ FDM100/ FEP100/ APF90B/ APF90/ APF90A	Al
WR75	10.0-15.0	75WMPL200	1.15	200	200	127	30.48	60	38	FBP120/ FBM120/ FBE120/ FDP120/ FDM120/ APF75B/ APF75A	Al
WR62	12.4-18.0	62WMPL100	1.15	100	200	114.3	30.48	50	36	FBP140/ FBM140/ FBE140/ FDP140/ FDM140/ APF62	Al
WR51	15.0-22.0	51WMPL100	1.15	100	120	114.3	30.48	-	-	FBP180/ FBM180/ FBE180/ FDP180/ FDM180/ APF51C/ APF51B/ APF51A	Al
WR42	18.0-26.5	42WMPL100	1.2	100	120	114.3	30.48	40	24.3	FBP220/ FBM220/ FBE220/ APF42	Al
WR34	22.0-33.0	34WMPL75	1.2	75	80	101.6	25.4	40	24.3	FBP260/ FBM260/ FBE260/ APF34	Al
WR28	26.5-40.0	28WMPL75	1.2	75	50	101.6	25.4	40.0	22.6	FBP320/ FBM320/ FBE320/ APF28	Al

WG Load - High Power



*Freq. = Frequency	*Avg. = Average
*Mat. = Material	

Ordering Information
P/N :

650	WHPL	2500
WR Size	Product Code	Average Power

EIA WR	*Freq. (GHz)	P/N	VSWR Max.	*Avg. Power (W)	Peak Power (KW)	L (mm)	L1 (mm)	B (mm)	C (mm)	Flange Type	*Mat.
WR650	1.12-1.70	650WHPL2500	1.2	2500	800	660.4	150	-	-	FDP14/ FDM14	Al
WR650	1.12-1.70	650WHPL5500	1.15	5500	5500	850.9	150	-	-	FDP14/ FDM14	Al
WR650	1.12-1.70	650WHPL8000	1.15	8000	5500	850.9	150	-	-	FDP14/ FDM14	Al
WR510	1.45-2.20	510WHPL2500	1.2	2500	800	609.6	150	-	-	FDP18/ FDM18	Al
WR510	1.45-2.20	510WHPL5000	1.15	5000	4500	749.3	150	-	-	FDP18/ FDM18	Al
WR510	1.45-2.20	510WHPL7000	1.15	7000	4500	749.3	150	-	-	FDP18/ FDM18	Al
WR430	1.70-2.60	430WHPL2500	1.2	2500	800	558.8	150	-	-	FDP22/ FDM22/ APF430	Al
WR430	1.70-2.60	430WHPL4500	1.15	4500	4000	700	150	-	-	FDP22/ FDM22/ APF430	Al
WR430	1.70-2.60	430WHPL6500	1.15	6500	4000	700	150	260	214.6	FDP22/ FDM22/ APF430	Al
WR340	2.20-3.30	340WHPL2500	1.2	2500	800	508	150	190	183.2	FDP26/ APF340	Al
WR340	2.20-3.30	340WHPL4000	1.15	4000	3500	660.4	150	-	-	FDP26/ FDM26/ APF340	Al
WR340	2.20-3.30	340WHPL5500	1.15	5500	3500	660.4	150	-	-	FDP26/ FDM26/ APF340	Al

WG High Power Load

EIA WR	*Freq. (GHz)	P/N	VSWR Max.	*Avg. Power (W)	Peak Power (KW)	L (mm)	L1 (mm)	B (mm)	C (mm)	Flange Type	*Mat.
WR284	2.60-3.95	284WHPL2400	1.15	2400	800	457.2	150	160	154	FDP32/ FDM32/ FEP32/ FAP32/ FAM32/ FAE32/ APF284B/ APF284/ APF284C	Al
WR284	2.60-3.95	284WHPL3500	1.1	3500	3200	610	150	160	154		Al
WR284	2.60-3.95	284WHPL5000	1.1	5000	3200	610	150	260	194		Al
WR229	3.30-4.90	229WHPL2000	1.15	2000	800	304.8	101.6	-	-	FDP40/ FDM40/ FEP40/ FAP40/ FAM40/ FAE40/ APF229/ APF229B	Al
WR229	3.30-4.90	229WHPL3000	1.1	3000	2000	457.2	101.6	-	-		Al
WR229	3.30-4.90	229WHPL4000	1.1	4000	2000	457.2	101.6	-	-		Al
WR187	3.95-5.85	187WHPL1500	1.15	1500	750	279.4	101.6	121	121.2	FDP48/ FDM48/ FEP48/ FAP48/ FAM48/ FAE48/ APF187/ APF187C	Al
WR187	3.95-5.85	187WHPL2000	1.1	2000	2000	457.2	101.6	121	121.2		Al
WR187	3.95-5.85	187WHPL3000	1.1	3000	2000	457.2	101.6	160	150.1		Al
WR159	4.90-7.05	159WHPL1300	1.15	1300	625	279.4	101.6	121	119.4	FDP58/ FEP58/ FAP58/ APF159/ APF159B	Al
WR159	4.90-7.05	159WHPL2000	1.1	2000	1000	457.2	101.6	121	119.2		Al
WR159	4.90-7.05	159WHPL3000	1.1	3000	1000	457.2	101.6	160	148.2		Al
WR137	5.85-8.20	137WHPL1000	1.15	1000	400	279.4	101.6	121	108.8	FDP70/ FAP70/ FEP70/ APF137/ APF137C	Al
WR137	5.85-8.20	137WHPL1500	1.1	1500	400	457.2	101.6	121	108.8		Al
WR137	5.85-8.20	137WHPL3000	1.1	3000	710	457.2	101.6	160	149.8		Al

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WG High Power Load

EIA WR	*Freq. (GHz)	P/N	VSWR Max.	*Avg. Power (W)	Peak Power (KW)	L (mm)	L1 (mm)	B (mm)	C (mm)	Flange Type	*Mat.
WR112	7.05-10.0	112WHPL850	1.15	850	400	279.4	100	-	-	FBP84/ FBM84/ FBE84/ FDP84/ FDM84/ FEP84/ APF112B/ APF112	Al
WR112	7.05-10.0	112WHPL1500	1.1	1500	400	350	100	-	-		Al
WR112	7.05-10.0	112WHPL2000	1.1	2000	460	350	100	120	84.6		Al
WR112	7.05-10.0	112WHPL3000	1.15	3000	550	546.1	190.5	-	-		Al
WR90	8.20-12.4	90WHPL500	1.15	500	225	139.7	30.48	90	88	FBP100/ FBM100/ FBE100/ FDP100/ FDM100/ FEP100/ APF90B/ APF90/ APF90A	Al
WR90	8.20-12.4	90WHPL750	1.15	750	225	139.7	30.48	121	107		Al
WR90	8.20-12.4	90WHPL1100	1.1	1100	290	355.6	40.64	90	88		Al
WR90	8.20-12.4	90WHPL1700	1.1	1700	290	355.6	40.64	-	107		Al
WR90	8.20-12.4	90WHPL4500	1.15	4500	450	660.4	304.8	160	150.1		Al
WR75	10.0-15.0	75WHPL350	1.15	350	200	127	30.48	90	86	FBP120/ FBM120/ FBE120/ FDP120/ FDM120/ APF75B/ APF75A	Al
WR75	10.0-15.0	75WHPL550	1.15	550	200	127	30.48	121	105		Al
WR75	10.0-15.0	75WHPL1000	1.1	1000	200	355.6	40.64	90	86		Al
WR75	10.0-15.0	75WHPL1500	1.1	1500	250	355.6	40.64	121	105		Al
WR75	10.0-15.0	75WHPL3500	1.15	3500	270	660.4	304.8	160	150.1		Al
WR62	12.4-18.0	62WHPL300	1.15	300	200	114.3	30.48	85	82	FBP140/ FBM140/ FBE140/ FDP140/ FDM140/ APF62	Al
WR62	12.4-18.0	62WHPL800	1.1	800	200	203.2	38.1	-	-		Al
WR62	12.4-18.0	62WHPL1400	1.1	1400	200	203.2	38.1	121	111		Al
WR62	12.4-18.0	62WHPL3000	1.15	3000	200	660.4	304.8	160	150.1		Al
WR51	15.0-22.0	51WHPL260	1.15	260	120	114.3	30.48	-	-	FBP180/ FBM180/ FBE180/ FDP180/ FDM180/ APF51C/ APF51B/ APF51A	Al
WR51	15.0-22.0	51WHPL700	1.1	700	150	203.2	38.1	-	-		Al
WR51	15.0-22.0	51WHPL1200	1.1	1200	150	203.2	38.1	-	-		Al
WR42	18.0-26.5	42WHPL230	1.2	230	120	114.3	30.48	70	70.3	FBP220/ FBM220/ FBE220/ APF42	Al
WR42	18.0-26.5	42WHPL600	1.15	600	120	177.8	25.4	55	60.3		Al
WR42	18.0-26.5	42WHPL1000	1.15	1000	120	177.8	25.4	70	70.3		Al

EIA WR	*Freq. (GHz)	P/N	VSWR Max.	*Avg. Power (W)	Peak Power (KW)	L (mm)	L1 (mm)	B (mm)	C (mm)	Flange Type	*Mat.
WR34	22.0-33.0	34WHPL150	1.2	150	80	101.6	25.4	55	60.3	FBP260/ FBM260/ FBE260/ APF34	Al
WR34	22.0-33.0	34WHPL400	1.2	400	100	177.8	25.4	55	60.3		Al
WR34	22.0-33.0	34WHPL700	1.2	700	100	177.8	25.4	70	70.3		Al
WR28	26.5-40.0	28WHPL125	1.2	125	50	101.6	25.4	55	59.6	FBP320/ FBM320/ FBE320/ APF28	Al
WR28	26.5-40.0	28WHPL300	1.2	300	100	177.8	25.4	55	59.6		Al
WR28	26.5-40.0	28WHPL500	1.2	500	100	177.8	25.4	70	69.6		Al

WG Load - Double Ridge Low Power

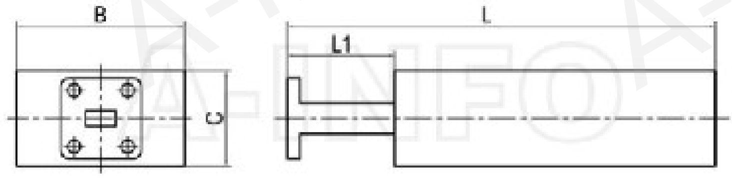
*Freq. = Frequency	*Avg. = Average
*Mat. = Material	

Ordering Information
P/N：

650	DRWLPL
WRD Size	Product Code

EIA WRD	*Freq. Range (GHz)	P/N	VSWR Max.	*Avg. Power (W)	Length (mm/inch)	Flange	*Mat.
WRD200	2.0-4.8	200DRWLPL	1.1	10	304.8/12	FPWRD200D24	Al
WRD250	2.6-7.8	250DRWLPL	1.1	10	279.4/11	FPWRD250D30	Al
WRD350	3.5-8.2	350DRWLPL	1.1	5	266.7/10.5	FPWRD350D24	Al
WRD475	4.75-11.0	475DRWLPL	1.1	5	215.9/8.5	FPWRD475D24	Al
WRD580	5.8-16.0	580DRWLPL	1.1	5	177.8/7	FPWRD580D28	Al
WRD650	6.5-18.0	650DRWLPL	1.1	5	101.6/4	FPWRD650D28	Al
WRD750	7.5-18.0	750DRWLPL	1.1	5	101.6/4	FPWRD750D24	Al
WRD110	11.0-26.5	110DRWLPL_Cu	1.15	3	76.2/3	FPWRD110C24	Cu
WRD180	18.0-40.0	180DRWLPL_Cu	1.15	3	55.9/2.2	FPWRD180C24	Cu

WG Load - Double Ridge Medium Power



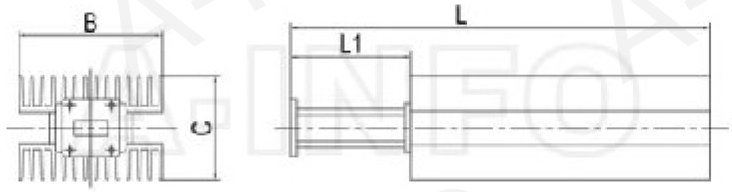
*Freq. = Frequency	*Avg. P. = Average Power
*Mat. = Material	*L= Length

Ordering Information
P/N：

650	DRWMPL
WRD Size	Product Code

EIA WRD	*Freq. Range (GHz)	P/N	VSWR	*Avg. P. (W)	L (mm)	L1 (mm)	B (mm)	C (mm)	Flange	*Mat.
WRD 650	6.5-18.0	650DRWMPL250	1.25	250	304.8	30.48	60	36	FPWRD650D28	Al
WRD 750	7.5-18.0	750DRWMPL250	1.25	250	304.8	30.48	60	36	FPWRD750D24	Al

WG Load - Double Ridge High Power



*Freq. = Frequency	*Avg. P. = Average Power
*Mat. = Material	*L= Length

Ordering Information
P/N：

650	DRWMPL
WRD Size	Product Code

EIA WRD	*Freq. Range (GHz)	P/N	VSWR	*Avg. P. (W)	L (mm)	L1 (mm)	B (mm)	C (mm)	Flange	*Mat.
WRD 200	2.0-4.8	200DRWHPL5500	1.25	5500	927.1	63.5	260	210.6	FPWRD200D24	Al
WRD 650	6.5-18.0	650DRWHPL400	1.25	400	304.8	30.48	70	74	FPWRD650D28	Al
WRD 650	6.5-18.0	650DRWHPL700	1.25	700	304.8	30.48	130	130	FPWRD650D28	Al
WRD 750	7.5-18.0	750DRWHPL400	1.25	400	304.8	30.48	70	74	FPWRD750D24	Al
WRD 750	7.5-18.0	750DRWHPL700	1.25	700	304.8	30.48	130	130	FPWRD750D24	Al

WG Ortho-Mode Transducer (OMT)

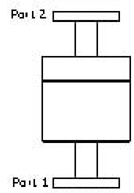
*Freq. = Frequency	*BW = Bandwidth
*Mat. = Material	

Ordering Information
P/N：

975	WOMT
WR Size	Product Code

P/N	*Freq. (GHz)	*BW	EIA WR	VSWR Typ.	Port to Port Isolation (dB) Min.	Flange	*Mat.
975WOMT	0.75-1.12	20%	WR975	1.5	30	FDP9	Al
770WOMT	0.96-1.45	20%	WR770	1.5	30	FDP12	Al
650WOMT	1.12-1.70	20%	WR650	1.5	30	FDP14	Al
510WOMT	1.45-2.20	20%	WR510	1.5	30	FDP18	Al/Cu
430WOMT	1.70-2.60	20%	WR430	1.5	30	FDP22	Al/Cu
340WOMT	2.20-3.30	20%	WR340	1.5	30	FDP26	Al/Cu
284WOMT	2.60-3.95	20%	WR284	1.5	30	FDP32	Al/Cu
229WOMT	3.30-4.90	20%	WR229	1.5	30	FDP40	Al/Cu
187WOMT	3.95-5.85	20%	WR187	1.5	30	FDP48	Al/Cu
159WOMT	4.90-7.05	20%	WR159	1.5	30	FDP58	Al/Cu
137WOMT	5.85-8.20	20%	WR137	1.5	30	FDP70	Al/Cu
112WOMT	7.05-10.0	20%	WR112	1.5	30	FBP84	Al/Cu
90WOMT	8.20-12.4	20%	WR90	1.5	30	FBP100	Al/Cu
75WOMT	10.0-15.0	20%	WR75	1.5	30	FBP120	Al/Cu
62WOMT	12.4-18.0	20%	WR62	1.5	30	FBP140	Al/Cu
51WOMT	15.0-22.0	20%	WR51	1.5	30	FBP180	Al/Cu
42WOMT	18.0-26.5	20%	WR42	1.5	30	FBP220	Al/Cu
34WOMT	22.0-33.0	20%	WR34	1.5	30	FBP260	Al/Cu
28WOMT	26.5-40.0	20%	WR28	1.5	30	FBP320	Al/Cu

WG Rotary Joint (I Type)



*Freq. = Frequency	*BW = Bandwidth
*I.L. = Insertion Loss	*Avg. = Average
*Mat. = Material	

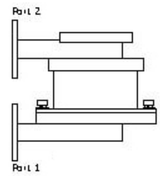
Ordering Information
P/N：

284	WRJI
WR Size	Product Code

P/N	*Freq. (GHz)	EIA WR	*BW (MHz)	VSWR	*I.L. (dB)	*Avg. Power (W)	Peak Power (KW)	Flange	*Mat.
284WRJI	2.60-3.95	WR284	200	1.20	0.3	600	600	FDP32/ FDM32	Al/ Cu
229WRJI	3.30-4.90	WR229	200	1.20	0.3	600	600	FDP40/ FDM40	Al/ Cu
187WRJI	3.95-5.85	WR187	200	1.20	0.3	600	600	FDP48/ FDM48	Al/ Cu
187WRJI-06A	4.4-4.6	WR187	FULL	1.20	0.3	600	600	FDP48	Al/ Cu
187WRJI-06B	4.8-5.0	WR187	FULL	1.20	0.3	600	600	FDP48	Al/ Cu
159WRJI	4.90-7.05	WR159	300	1.25	0.3	500	150	FDP58/ FDM58	Al/ Cu
137WRJI	5.85-8.20	WR137	300	1.25	0.3	500	150	FDP70/ FDM70	Al/ Cu
112WRJI	7.05-10.0	WR112	300	1.25	0.3	400	150	FBP84/ FBM84/ FBE84	Al/ Cu
112WRJI-06A	7.05-10.0	WR112	FULL	1.25	0.3	400	150	FBP84	Al
112WRJI-06B	7.50-8.50	WR112	FULL	1.25	0.3	400	150	FBP84	Al
112WRJI -06C	8.50-10.0	WR112	FULL	1.25	0.3	400	150	FBP84	Al
90WRJI	8.20-12.4	WR90	300	1.25	0.3	400	150	FBP100/ FBM100/ FBE100	Al/ Cu
90WRJI-06A	8.50-10.0	WR90	FULL	1.15	0.15	400	150	FBP100	Al

P/N	*Freq. (GHz)	EIA WR	*BW (MHz)	VSWR	*I.L. (dB)	*Avg. Power (W)	Peak Power (KW)	Flange	*Mat.
75WRJI	10.0-15.0	WR75	500	1.25	0.3	200	10	FBP120/ FBM120/ FBE120	Al/ Cu
62WRJI	12.4-18.0	WR62	1000	1.30	0.4	100	4	FBP140/ FBM140/ FBE140	Al/ Cu
62WRJI-06A	16.0-17.0	WR62	FULL	1.30	0.4	100	4	FBP140	Al
51WRJI	15.0-22.0	WR51	1000	1.30	0.4	100	3	FBP180/ FBM180/ FBE180	Cu/ Al
42WRJI	18.0-26.5	WR42	2000	1.40	1.0	50	0.5	FBP220/ FBM220/ FBE220	Cu/ Al
34WRJI	22.0-33.0	WR34	2000	1.40	1.0	30	0.3	FBP260/ FBM260/ FBE260	Cu/ Al
28WRJI	26.5-40.0	WR28	2000	1.40	1.0	30	0.3	FBP320/ FBM320/ FBE320	Cu/ Al

WG Rotary Joint (U Type)



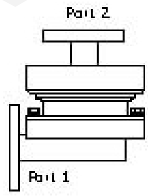
*Freq. = Frequency	*BW = Bandwidth
*I.L. = Insertion Loss	*Avg. = Average
*Mat. = Material	

Ordering Information
P/N：

284	WRJU
WR Size	Product Code

P/N	*Freq. (GHz)	EIA WR	*BW (MHz)	VSWR	*I.L. (dB)	*Avg. Power (W)	Peak Power (KW)	Flange	*Mat.
284WRJU	2.60-3.95	WR284	200	1.20	0.3	600	600	FDP32/ FDM32	Al/ Cu
229WRJU	3.30-4.90	WR229	200	1.20	0.3	600	600	FDP40/ FDM40	Al/ Cu
187WRJU	3.95-5.85	WR187	200	1.20	0.3	600	600	FDP48/ FDM48	Al/ Cu
159WRJU	4.90-7.05	WR159	300	1.25	0.3	500	150	FDP58/ FDM58	Al/ Cu
137WRJU	5.85-8.20	WR137	300	1.25	0.3	500	150	FDP70/ FDM70	Al/ Cu
112WRJU	7.05-10.0	WR112	300	1.25	0.3	400	150	FBP84/ FBM84/ FBE84	Al/ Cu
90WRJU	8.20-12.4	WR90	300	1.25	0.3	400	150	FBP100/ FBM100/ FBE100	Al/ Cu
75WRJU	10.0-15.0	WR75	500	1.25	0.3	200	10	FBP120/ FBM120/ FBE120	Al/ Cu
62WRJU	12.4-18.0	WR62	1000	1.30	0.4	100	4	FBP140/ FBM140/ FBE140	Al/ Cu
51WRJU	15.0-22.0	WR51	1000	1.30	0.4	100	3	FBP180/ FBM180/ FBE180	Cu/ Al
42WRJU	18.0-26.5	WR42	2000	1.40	1.0	50	0.5	FBP220/ FBM220/ FBE220	Cu/ Al
34WRJU	22.0-33.0	WR34	2000	1.40	1.0	30	0.3	FBP260/ FBM260/ FBE260	Cu/ Al
28WRJU	26.5-40.0	WR28	2000	1.40	1.0	30	0.3	FBP320/ FBM320/ FBE320	Cu/ Al

WG Rotary Joint (L Type)



*Freq. = Frequency	*BW = Bandwidth
*I.L. = Insertion Loss	*Avg. = Average
*Mat. = Material	

Ordering Information
P/N：

284	WRJL
WR Size	Product Code

P/N	*Freq. (GHz)	EIA WR	*BW (MHz)	VSWR	*I.L. (dB)	*Avg. Power (W)	Peak Power (KW)	Flange	*Mat.
284WRJL	2.60-3.95	WR284	200	1.20	0.3	600	600	FDP32/ FDM32	Al/ Cu
229WRJL	3.30-4.90	WR229	200	1.20	0.3	600	600	FDP40/ FDM40	Al/ Cu
187WRJL	3.95-5.85	WR187	200	1.20	0.3	600	600	FDP48/ FDM48	Al/ Cu
159WRJL	4.90-7.05	WR159	300	1.25	0.3	500	150	FDP58/ FDM58	Al/ Cu
137WRJL	5.85-8.20	WR137	300	1.25	0.3	500	150	FDP70/ FDM70	Al/ Cu
112WRJL	7.05-10.0	WR112	300	1.25	0.3	400	150	FBP84/ FBM84/ FBE84	Al/ Cu
90WRJL	8.20-12.4	WR90	300	1.25	0.3	400	150	FBP100/ FBM100/ FBE100	Al/ Cu
90WRJL-06A	8.50-10.0	WR90	FULL	1.25	0.3	400	150	FBP100	Al
75WRJL	10.0-15.0	WR75	500	1.25	0.3	200	10	FBP120/ FBM120/ FBE120	Al/ Cu
75WRJL_Cu	10.0-15.0	WR75	750	1.30	0.3	-	-	FBP120	Cu
62WRJL	12.4-18.0	WR62	1000	1.30	0.4	100	4	FBP140/ FBM140/ FBE140	Al/ Cu
51WRJL	15.0-22.0	WR51	1000	1.30	0.4	100	3	FBP180/ FBM180/ FBE180	Cu/ Al
42WRJL	18.0-26.5	WR42	2000	1.40	1.0	50	0.5	FBP220/ FBM220/ FBE220	Cu/ Al

A-INFO

WG Rotary Joint

P/N	*Freq. (GHz)	EIA WR	*BW (MHz)	VSWR	*I.L. (dB)	*Avg. Power (W)	Peak Power (KW)	Flange	*Mat.
34WRJL	22.0-33.0	WR34	2000	1.40	1.0	30	0.3	FBP260/ FBM260/ FBE260	Cu/ Al
28WRJL	26.5-40.0	WR28	2000	1.40	1.0	30	0.3	FBP320/ FBM320/ FBE320	Cu/ Al

WG Short Plates

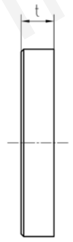


Figure 1

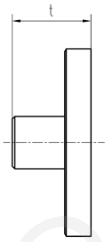


Figure 2

Ordering Information
P/N：

975	WS
WR Size	Product Code

*Freq. = Frequency	*T = Thickness
*Mat. = Material	*N.W.= Net Weight

EIA WR	*Freq. (GHz)	WG Fixed Flush Shorts			Flange	*Mat.	*N.W.
		P/N	Figure	*T (mm)			
WR975	0.75-1.12	975WS	Figure1	14	FDP9	Al	2.70
WR770	0.96-1.45	770WS	Figure1	12	FDP12	Al	1.75
WR650	1.12-1.70	650WS	Figure1	12	FDP14	Al	1.00
WR510	1.45-2.20	510WS	Figure1	12	FDP18	Al	0.75
WR430	1.70-2.60	430WS	Figure1	10	FDP22	Al	0.50
WR340	2.20-3.30	340WS	Figure1	10	FDP26	Al	0.40
WR284	2.60-3.95	284WS	Figure1	8	FDP32	Al	0.20
		284WS_PB			APF284B		
WR229	3.30-4.90	229WS	Figure1	8	FDP40	Al	0.15
WR187	3.95-5.85	187WS	Figure1	7	FDP48	Al	0.13
		187WS_P0			APF187		
WR159	4.90-7.05	159WS	Figure1	7	FDP58	Al	0.10
WR137	5.85-8.20	137WS	Figure1	7	FDP70	Al	0.07
		137WS_P0			APF137		
WR112	7.05-10.0	112WS	Figure1	5	FBP84	Al	0.05
		112WS_P0			APF112		
WR90	8.20-12.4	90WS_Cu	Figure1	5	FBP100	Cu	0.07
		90WS_Cu_P0			APF90		
		90WS_Cu_PA			APF90A		
WR75	10.0-15.0	75WS_Cu	Figure1	5	FBP120	Cu	0.06
WR62	12.4-18.0	62WS_Cu	Figure1	5	FBP140	Cu	0.05
WR51	15.0-22.0	51WS_Cu	Figure1	5	FBP180	Cu	0.03
		51WS_Cu_PA			APF51A		
		51WS_Cu_PB			APF51B		
WR42	18.0-26.5	42WS_Cu	Figure1	4	FBP220	Cu	0.01
WR34	22.0-33.0	34WS_Cu	Figure1	4	FBP260	Cu	0.01
		34WS_Cu_P0			APF34		
WR28	26.5-40.0	28WS_Cu	Figure1	3	FBP320	Cu	0.01

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WG Short Plates

EIA WR	*Freq. (GHz)	WG Fixed Flush Shorts			Flange	*Mat.	*N.W.
		P/N	Figure	*T (mm)			
WR22	33.0-50.0	22WS_Cu	Figure2	12	FUGP400	Cu	0.02
WR19	40.0-60.0	19WS_Cu	Figure2	12	FUGP500	Cu	0.02
WR15	50.0-75.0	15WS_Cu	Figure2	10	FUGP620	Cu	0.01
WR12	60.0-90.0	12WS_Cu	Figure2	10	FUGP740	Cu	0.01
WR10	75.0-110.0	10WS_Cu	Figure2	10	FUGP900	Cu	0.01

Offset Short - 1/8 & 3/8 Wavelength

*Freq. = Frequency	*T = Thickness
*Mat. = Material	

Ordering Information
P/N：

975	WOFS	18
WR Size	Product Code	1/8 Wavelength

EIA WR	*Freq. (GHz)	1/8 WOFS		3/8 WOFS		Flange	*Mat.
		P/N	Offset (mm)	P/N	Offset (mm)		
WR975	0.75-1.12	975WOFS18	54.09	975WOFS38	162.32	FDP9	Al
WR770	0.96-1.45	770WOFS18	41.43	770WOFS38	124.29	FDP12	Al
WR650	1.12-1.70	650WOFS18	35.81	650WOFS38	107.42	FDP14/ FDM14	Al
WR510	1.45-2.20	510WOFS18	27.3	510WOFS38	81.91	FDP18/ FDM18	Al
WR430	1.70-2.60	430WOFS18	23.34	430WOFS38	70.01	FDP22/ FDM22/ APF430	Al
WR340	2.20-3.30	340WOFS18	18.02	340WOFS38	54.07	FDP26/ FDM26/ APF340	Al
WR284	2.60-3.95	284WOFS18	15.23	284WOFS38	45.68	FDP32/ FDM32/ APF284/ APF284B/ APF284C	Al
WR229	3.30-4.90	229WOFS18	12.03	229WOFS38	36.1	FDP40/ FDM40/ APF22/ APF229B	Al
WR187	3.95-5.85	187WOFS18	10.26	187WOFS38	30.77	FDP48/ FDM48/ APF187/ APF187C	Al
WR159	4.90-7.05	159WOFS18	8.15	159WOFS38	24.46	FDP58/ FDM58/ APF159/ APF159B	Al

EIA WR	*Freq. (GHz)	1/8 WOFS		3/8 WOFS		Flange	*Mat.
		P/N	Offset (mm)	P/N	Offset (mm)		
WR137	5.85-8.20	137WOFS18	6.85	137WOFS38	20.54	FDP70/ FDM70/ APF137/ APF137C	Al
WR112	7.05-10.0	112WOFS18	5.68	112WOFS38	17.03	FBP84/ FBM84/ FBE84/ APF112/ APF112B	Al
WR90	8.20-12.4	90WOFS18_Cu	4.85	90WOFS38_Cu	14.55	FBP100/ FBM100/ FBE100/ APF90/ APF90A/ APF90B	Cu
WR75	10.0-15.0	75WOFS18_Cu	3.96	75WOFS38_Cu	11.87	FBP120/ FBM120/ FBE120/ APF75A/ APF75B	Cu
WR62	12.4-18.0	62WOFS18_Cu	3.22	62WOFS38_Cu	9.66	FBP140/ FBM140/ FBE140/ APF62	Cu
WR51	15.0-22.0	51WOFS18_Cu	2.65	51WOFS38_Cu	7.96	FBP180/ FBM180/ FBE180/ APF51A/ APF51B/ APF51C	Cu
WR42	18.0-26.5	42WOFS18_Cu	2.22	42WOFS38_Cu	6.67	FBP220/ FBM220/ FBE220/ APF42	Cu
WR34	22.0-33.0	34WOFS18_Cu	1.8	34WOFS38_Cu	5.41	FBP260/ FBM260/ FBE260/ APF34	Cu
WR28	26.5-40.0	28WOFS18_Cu	1.51	28WOFS38_Cu	4.49	FBP320/ FBM320/ FBE320/ APF28	Cu
WR22	33.0-50.0	22WOFS18_Cu	1.21	22WOFS38_Cu	3.6	FUGP400/ APF22/ APF22A	Cu
WR19	40.0-60.0	19WOFS18_Cu	0.99	19WOFS38_Cu	2.96	FUGP500/ APF19/ APF19A	Cu

WG Offset Short

EIA WR	*Freq. (GHz)	1/8 WOFS		3/8 WOFS		Flange	*Mat.
		P/N	Offset (mm)	P/N	Offset (mm)		
WR15	50.0-75.0	15WOFS18_Cu	0.8	15WOFS38_Cu	2.4	FUGP620/ APF15/ APF15A	Cu
WR12	60.0-90.0	12WOFS18_Cu	0.67	12WOFS38_Cu	2.02	FUGP740/ APF12/ APF12A	Cu
WR10	75.0-110.0	10WOFS18_Cu	0.54	10WOFS38_Cu	1.62	FUGP900/ APF10/ APF10A	Cu

Offset Short - 1/4 Wavelength

*Freq. = Frequency	*T = Thickness
*Mat. = Material	

Ordering Information
P/N :

975	WOFS	14
WR Size	Product Code	1/4 Wavelength

EIA WR	*Freq. (GHz)	1/4 WOFS		Flange	*Mat.
		P/N	*T (mm)		
WR975	0.75-1.12	975WOFS14	108.21	FDP9	Al
WR770	0.96-1.45	770WOFS14	82.86	FDP12	Al
WR650	1.12-1.70	650WOFS14	71.62	FDP14/FDM14	Al
WR510	1.45-2.20	510WOFS14	54.61	FDP18/FDM18	Al
WR430	1.70-2.60	430WOFS14	46.68	FDP22/FDM22/APF430	Al
WR340	2.20-3.30	340WOFS14	36.05	FDP26/FDM26/APF340	Al
WR284	2.60-3.95	284WOFS14	30.45	FDP32/FDM32/APF284/ APF284B/APF284C	Al
WR229	3.30-4.90	229WOFS14	24.06	FDP40/FDM40/ APF22/APF229B	Al
WR187	3.95-5.85	187WOFS14	20.51	FDP48/FDM48/ APF187/APF187C	Al
WR159	4.90-7.05	159WOFS14	16.31	FDP58/FDM58/ APF159/APF159B	Al
WR137	5.85-8.20	137WOFS14	13.69	FDP70/FDM70/ APF137/APF137C	Al
WR112	7.05-10.0	112WOFS14	11.36	FBP84/FBM84/FBE84/ APF112/APF112B	Al
WR90	8.20-12.4	90WOFS14_Cu	9.7	FBP100/FBM100/FBE100/ APF90/APF90A/APF90B	Cu
WR75	10.0-15.0	75WOFS14_Cu	7.91	FBP120/FBM120/FBE120/ APF75A/APF75B	Cu
WR62	12.4-18.0	62WOFS14_Cu	6.44	FBP140/FBM140/ FBE140/APF62	Cu
WR51	15.0-22.0	51WOFS14_Cu	5.31	FBP180/FBM180/FBE180/ APF51A/APF51B/APF51C	Cu
WR42	18.0-26.5	42WOFS14_Cu	4.45	FBP220/FBM220/ FBE220/APF42	Cu
WR34	22.0-33.0	34WOFS14_Cu	3.6	FBP260/FBM260/ FBE260/APF34	Cu

A-INFO

WG Offset Short

EIA WR	*Freq. (GHz)	1/4 WOFS		Flange	*Mat.
		P/N	*T (mm)		
WR28	26.5-40.0	28WOFS14_Cu	2.99	FBP320/FBM320/FBE320/APF28	Cu
WR22	33.0-50.0	22WOFS14_Cu	2.4	FUGP400/APF22/APF22A	Cu
WR19	40.0-60.0	19WOFS14_Cu	1.97	FUGP500/APF19/APF19A	Cu
WR15	50.0-75.0	15WOFS14_Cu	1.6	FUGP620/APF15/APF15A	Cu
WR12	60.0-90.0	12WOFS14_Cu	1.35	FUGP740/APF12/APF12A	Cu
WR10	75.0-110.0	10WOFS14_Cu	1.08	FUGP900/APF10/APF10A	Cu

Double Ridge Waveguide Short Plates

Ordering Information
P/N：

84	DRWS
WR Size	Product Code

EIA WRD	Frequency (GHz)	WG Fixed Flush Shorts	Flange	Material
		P/N		
WRD84	0.84-2.0	84DRWS	FPWRD84D24	Al
WRD200	2.0-4.8	200DRWS	FPWRD200D24	Al
WRD250	2.6-7.8	250DRWS	FPWRD250D30	Al
WRD350	3.5-8.2	350DRWS	FPWRD350D24	Al
WRD475	4.75-11.0	475DRWS_Cu	FPWRD475D24	Cu
WRD580	5.8-16.0	580DRWS_Cu	FPWRD580D28	Cu
WRD650	6.5-18.0	650DRWS_Cu	FPWRD650D28	Cu
WRD750	7.5-18.0	750DRWS_Cu	FPWRD750D24	Cu
WRD110	11.0-26.5	110DRWS_Cu	FPWRD110C24	Cu
WRD180	18.0-40.0	180DRWS_Cu	FPWRD180C24	Cu

Double Ridge Offset Short - 1/8 & 3/8 Wavelength

Ordering Information
P/N：

84	DRWOFS	18
WR Size	Product Code	1/8 Wavelength

EIA WRD	Frequency (GHz)	1/8 DRWOFS	3/8 DRWOFS	Flange	Material
		P/N	P/N		
WRD84	0.84-2.0	84DRWOFS18	84DRWOFS38	FPWRD84D24	Al
WRD200	2.0-4.8	200DRWOFS18	200DRWOFS38	FPWRD200D24	Al
WRD250	2.6-7.8	250DRWOFS18	250DRWOFS38	FPWRD250D30	Al
WRD350	3.5-8.2	350DRWOFS18	350DRWOFS38	FPWRD350D24	Al
WRD475	4.75-11.0	475DRWOFS18_Cu	475DRWOFS38_Cu	FPWRD475D24	Cu
WRD580	5.8-16.0	580DRWOFS18_Cu	580DRWOFS38_Cu	FPWRD580D28	Cu
WRD650	6.5-18.0	650DRWOFS18_Cu	650DRWOFS38_Cu	FPWRD650D28	Cu
WRD750	7.5-18.0	750DRWOFS18_Cu	750DRWOFS38_Cu	FPWRD750D24	Cu
WRD110	11.0-26.5	110DRWOFS18_Cu	110DRWOFS38_Cu	FPWRD110C24	Cu
WRD180	18.0-40.0	180DRWOFS18_Cu	180DRWOFS38_Cu	FPWRD180C24	Cu

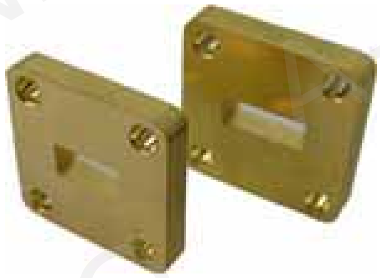
Double Ridge Offset Short - 1/4 Wavelength

Ordering Information
P/N：

84	DRWOFS	14
WR Size	Product Code	1/4 Wavelength

EIA WRD	Frequency (GHz)	P/N	Flange	Material
WRD84	0.84-2.0	84DRWOFS14	FPWRD84D24	Al
WRD200	2.0-4.8	200DRWOFS14	FPWRD200D24	Al
WRD250	2.6-7.8	250DRWOFS14	FPWRD250D30	Al
WRD350	3.5-8.2	350DRWOFS14	FPWRD350D24	Al
WRD475	4.75-11.0	475DRWOFS14_Cu	FPWRD475D24	Cu
WRD580	5.8-16.0	580DRWOFS14_Cu	FPWRD580D28	Cu
WRD650	6.5-18.0	650DRWOFS14_Cu	FPWRD650D28	Cu
WRD750	7.5-18.0	750DRWOFS14_Cu	FPWRD750D24	Cu
WRD110	11.0-26.5	110DRWOFS14_Cu	FPWRD110C24	Cu
WRD180	18.0-40.0	180DRWOFS14_Cu	FPWRD180C24	Cu

WG Spacer - 1/4 Wavelength (Shim)



*Freq. = Frequency	*T = Thickness
*Mat. = Material	

Ordering Information
P/N：

975	WSPA	14
WR Size	Product Code	1/4 Wavelength

EIA WR	*Freq. (GHz)	1/4 WSPA (Shim)		Flange	*Mat.
		P/N	*T (mm)		
WR975	0.75-1.12	975WSPA14	108.21	FDP9	Al
WR770	0.96-1.45	770WSPA14	82.86	FDP12	Al
WR650	1.12-1.70	650WSPA14	71.62	FDP14	Al
WR510	1.45-2.20	510WSPA14	54.61	FDP18	Al
WR430	1.70-2.60	430WSPA14	46.68	APF430	Al
WR340	2.20-3.30	340WSPA14	36.05	APF340	Al
WR284	2.60-3.95	284WSPA14	30.45	FDP32	Al
		284WSPA14_PB		APF284B	
WR229	3.30-4.90	229WSPA14	24.06	APF229	Al
WR187	3.95-5.85	187WSPA14	20.51	FDP48	Al
		187WSPA14_P0		APF187	
WR159	4.90-7.05	159WSPA14	16.31	APF159	Al
WR137	5.85-8.20	137WSPA14	13.69	FDP70	Al
		137WSPA14_P0		APF137	
WR112	7.05-10.0	112WSPA14	11.36	APF112B	Al
		112WSPA14_P0		APF112	
WR90	8.20-12.4	90WSPA14_Cu	9.7	APF90B	Cu
		90WSPA14_Cu_P0		APF90	
		90WSPA14_Cu_PA		APF90A	
WR75	10.0-15.0	75WSPA14_Cu	7.91	APF75B	Cu
WR62	12.4-18.0	62WSPA14_Cu	6.44	APF62	Cu
WR51	15.0-22.0	51WSPA14_Cu	5.31	APF51C	Cu
		51WSPA14_Cu_PA		APF51A	
		51WSPA14_Cu_PB		APF51B	
WR42	18.0-26.5	42WSPA14_Cu	4.45	APF42	Cu
WR34	22.0-33.0	34WSPA14_Cu	3.6	FBP260	Cu
		34WSPA14_Cu_P0		APF34	
WR28	26.5-40.0	28WSPA14_Cu	2.99	APF28	Cu

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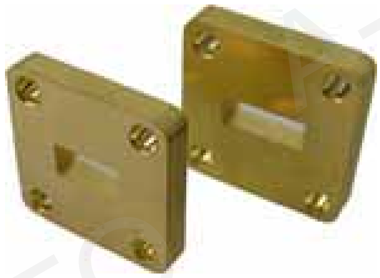
EIA WR	*Freq. (GHz)	1/4 WSPA (Shim)		Flange	*Mat.
		P/N	*T (mm)		
WR22	33.0-50.0	22WSPA14_Cu	2.4	APF22	Cu
WR19	40.0-60.0	19WSPA14_Cu	1.97	APF19	Cu
WR15	50.0-75.0	15WSPA14_Cu	1.6	APF15	Cu
WR12	60.0-90.0	12WSPA14_Cu	1.35	APF12	Cu
WR10	75.0-110.0	10WSPA14_Cu	1.08	APF10	Cu

WG Spacer - Customized (Shim)



Ordering Information
P/N：

975	WSPA	-XX
WR Size	Product Code	Thickness, mm

*Freq. = Frequency	*Mat. = Material

EIA WR	*Freq. (GHz)	P/N	Flange	*Mat.
WR975	0.75-1.12	975WSPA-XX	FDP9	Al
WR770	0.96-1.45	770WSPA-XX	FDP12	Al
WR650	1.12-1.70	650WSPA-XX	FDP14	Al
WR510	1.45-2.20	510WSPA-XX	FDP18	Al
WR430	1.70-2.60	430WSPA-XX	APF430	Al
WR340	2.20-3.30	340WSPA-XX	APF340	Al
WR284	2.60-3.95	284WSPA-XX	FDP32	Al
		284WSPA-XX _PB	APF284B	
WR229	3.30-4.90	229WSPA-XX	APF229	Al
WR187	3.95-5.85	187WSPA-XX	FDP48	Al
		187WSPA-XX _P0	APF187	
WR159	4.90-7.05	159WSPA-XX	APF159	Al
WR137	5.85-8.20	137WSPA-XX	FDP70	Al
		137WSPA-XX _P0	APF137	
WR112	7.05-10.0	112WSPA-XX	APF112B	Al
		112WSPA-XX _P0	APF112	
WR90	8.20-12.4	90WSPA-XX _Cu	APF90B	Cu
		90WSPA-XX _Cu_P0	APF90	
		90WSPA-XX _Cu_PA	APF90A	
WR75	10.0-15.0	75WSPA-XX _Cu	APF75B	Cu
WR62	12.4-18.0	62WSPA-XX _Cu	APF62	Cu
WR51	15.0-22.0	51WSPA-XX _Cu	APF51C	Cu
		51WSPA-XX _Cu_PA	APF51A	
		51WSPA-XX _Cu_PB	APF51B	
WR42	18.0-26.5	42WSPA-XX _Cu	APF42	Cu
WR34	22.0-33.0	34WSPA-XX _Cu	FBP260	Cu
		34WSPA-XX _Cu_P0	APF34	
WR28	26.5-40.0	28WSPA-XX _Cu	APF28	Cu

EIA WR	*Freq. (GHz)	P/N	Flange	*Mat.
WR22	33.0-50.0	22WSPA-XX _Cu	APF22	Cu
WR19	40.0-60.0	19WSPA-XX _Cu	APF19	Cu
WR15	50.0-75.0	15WSPA-XX_Cu	APF15	Cu
WR12	60.0-90.0	12WSPA-XX _Cu	APF12	Cu
WR10	75.0-110.0	10WSPA-XX_Cu	APF10	Cu

Double Ridge WG Spacer
- 1/4 Wavelength (Shim)

Ordering Information
P/N：

84	DRWSPA	14
WR Size	Product Code	1/4 Wavelength

EIA WRD	Frequency (GHz)	1/4 DRWSPA (Shim) P/N	Flange	Material
WRD84	0.84-2.0	84DRWSPA14	FPWRD84D24	Al
WRD200	2.0-4.8	200DRWSPA14	FPWRD200D24	Al
WRD250	2.6-7.8	250DRWSPA14	FPWRD250D30	Al
WRD350	3.5-8.2	350DRWSPA14	FPWRD350D24	Al
WRD475	4.75-11.0	475DRWSPA14_Cu	FPWRD475D24	Cu
WRD580	5.8-16.0	580DRWSPA14_Cu	FPWRD580D28	Cu
WRD650	6.5-18.0	650DRWSPA14_Cu	FPWRD650D28	Cu
WRD750	7.5-18.0	750DRWSPA14_Cu	FPWRD750D24	Cu
WRD110	11.0-26.5	110DRWSPA14_Cu	FPWRD110C24	Cu
WRD180	18.0-40.0	180DRWSPA14_Cu	FPWRD180C24	Cu

Double Ridge WG Spacer - Customized (Shim)

Ordering Information
P/N：

84	DRWSPA	XX
WR Size	Product Code	Thickness, mm

EIA WRD	Frequency (GHz)	P/N	Flange	Material
WRD84	0.84-2.0	84DRWSPA-XX	FPWRD84D24	Al
WRD200	2.0-4.8	200DRWSPA-XX	FPWRD200D24	Al
WRD250	2.6-7.8	250DRWSPA-XX	FPWRD250D30	Al
WRD350	3.5-8.2	350DRWSPA-XX	FPWRD350D24	Al
WRD475	4.75-11.0	475DRWSPA-XX_Cu	FPWRD475D24	Cu
WRD580	5.8-16.0	580DRWSPA-XX_Cu	FPWRD580D28	Cu
WRD650	6.5-18.0	650DRWSPA-XX_Cu	FPWRD650D28	Cu
WRD750	7.5-18.0	750DRWSPA-XX_Cu	FPWRD750D24	Cu
WRD110	11.0-26.5	110DRWSPA-XX_Cu	FPWRD110C24	Cu
WRD180	18.0-40.0	180DRWSPA-XX_Cu	FPWRD180C24	Cu

Waveguide VNA Calibration Kits

CLKA1 Kits Series

Components included in CLKA1 Series Waveguide Calibration Kits

QTY	Description	Notes
2	WG to Coaxial Adapter	Refer below table for each WG band.
1	Precision fixed termination	-
1	1/4-λ Spacer (shim)	-
1	Fixed (reference plane) Short	-
1~3	Screw Pack	Qty is depending on WG band.
1	Dowel Pack*	For APF flange only.
1	Hex Ball Driver	-
1	Calibration Software**	Optional, not included in standard Model.
1	Carrying Case	-

Notes:
*Indexing refer Precision Flange (APF)
**Calibration Software currently supports Keysight 872x Series, PNA Series. Please ask A-INFO for more information when place order.

Model Information

Example Part Number: 430 CLKA1 -XABAB _DP

Waveguide Size: WR975 to WR10

Product Code, CLKA1 Series WG Calibration Kits

Test Port Adapter Connector Option:
X: Connector type, S for SMA; N for N type; 3.5 for 3.5mm, K for 2.92mm, 2.4 for 2.4mm, 1.85 for 1.85mm.
A: Type for WG to coaxial adapter, R for Right Angle, E for Endlunch.
B: Gender for each adapter, F for female, M for Male.
For Examp: -SRFEF, **S** means the connector type of WG to coaxial adapters in Calibration Kits is SMA. **RF** means one adapter is **R**ight Angle with **F**emale connector, **EF** means another one is **E**ndlaunch with **F**emale connector.
Order Kits with no Adapter Option: use **-0**

Flange Code, refer below model list table.

Standard CLKA1 Series Waveguide Calibration Kits Model List

EIA WR	Freq. Range (GHz)	One Right Angle Adp. One Endlaunch Adp. P/N	Two Right Angle Adps. P/N	Two Endlaunch Adps. P/N	Adapter Connector	Adapter Flange
WR975	0.75-1.12	-	975CLKA1-NRFRF_DP	-	N type Female	FDP9
		-	975CLKA1-SRFRF_DP	-	SMA Female	FDP9
WR770	0.96-1.45	-	770CLKA1-NRFRF_DP	-	N type Female	FDP12
		-	770CLKA1-SRFRF_DP	-	SMA Female	FDP12
WR650	1.12-1.7	-	650CLKA1-NRFRF_DP	-	N type Female	FDP14
		-	650CLKA1-SRFRF_DP	-	SMA Female	FDP14
WR510	1.45-2.2	-	510CLKA1-NRFRF_DP	-	N type Female	FDP18
		-	510CLKA1-SRFRF_DP	-	SMA Female	FDP18
WR430	1.7-2.6	430CLKA1-NRFEF_P0	-	430CLKA1-NEFEF_P0	N type Female	APF430
		430CLKA1-SRFEF_P0	-	430CLKA1-SEFEF_P0	SMA Female	APF430
WR340	2.2-3.3	340CLKA1-NRFEF_P0	-	340CLKA1-NEFEF_P0	N type Female	APF340
		340CLKA1-SRFEF_P0	-	340CLKA1-SEFEF_P0	SMA Female	APF340
WR284	2.6-3.95	284CLKA1-NRFEF_DP	-	284CLKA1-NEFEF_DP	N type Female	FDP32
		284CLKA1-SRFEF_DP	-	284CLKA1-SEFEF_DP	SMA Female	FDP32
		284CLKA1-NRFEF_AP	284CLKA1-NRFRF_AP	284CLKA1-NEFEF_AP	N type Female	FAP32
		284CLKA1-SRFEF_AP	284CLKA1-SRFRF_AP	284CLKA1-SEFEF_AP	SMA Female	FAP32
		284CLKA1-NRFEF_PB	284CLKA1-NRFRF_PB	284CLKA1-NEFEF_PB	N type Female	APF284B
		284CLKA1-SRFEF_PB	284CLKA1-SRFRF_PB	284CLKA1-SEFEF_PB	SMA Female	APF284B
WR229	3.3-4.9	229CLKA1-SRFEF_DP	-	229CLKA1-SEFEF_DP	SMA Female	FDP40
		229CLKA1-NRFEF_DP	-	229CLKA1-NEFEF_DP	N type Female	FDP40
		229CLKA1-SRFEF_P0	-	229CLKA1-SEFEF_P0	SMA Female	APF229
		229CLKA1-NRFEF_P0	-	229CLKA1-NEFEF_P0	N type Female	APF229
WR187	3.95-5.85	187CLKA1-SRFEF_DP	187CLKA1-SRFRF_DP	187CLKA1-SEFEF_DP	SMA Female	FDP48
		-	187CLKA1-3.5RFRF_DP	-	3.5mm Female	FDP48
		187CLKA1-NRFEF_DP	187CLKA1-NRFRF_DP	187CLKA1-NEFEF_DP	N type Female	FDP48
		-	187CLKA1-7RFRF_DP	-	7mm	FDP48
		187CLKA1-SRFEF_AP	187CLKA1-SRFRF_AP	187CLKA1-SEFEF_AP	SMA Female	FAP48
		-	187CLKA1-3.5RFRF_AP	-	3.5mm Female	FAP48
		187CLKA1-NRFEF_AP	-	187CLKA1-NEFEF_AP	N type Female	FAP48
		187CLKA1-SRFEF_P0	187CLKA1-SRFRF_P0	187CLKA1-SEFEF_P0	SMA Female	APF187
		-	187CLKA1-3.5RFRF_P0	-	3.5mm Female	APF187
		187CLKA1-NRFEF_P0	-	187CLKA1-NEFEF_P0	N type Female	APF187
WR159	4.90-7.05	159CLKA1-SRFEF_DP	159CLKA1-SRFRF_DP	159CLKA1-SEFEF_DP	SMA Female	FDP58
		-	159CLKA1-3.5RFRF_DP	-	3.5mm Female	FDP58
		159CLKA1-NRFEF_DP	159CLKA1-NRFRF_DP	159CLKA1-NEFEF_DP	N type Female	FDP58
		-	159CLKA1-7RFRF_DP	-	7mm	FDP58
		159CLKA1-SRFEF_P0	159CLKA1-SRFRF_P0	159CLKA1-SEFEF_P0	SMA Female	APF159
		-	159CLKA1-3.5RFRF_P0	-	3.5mm Female	APF159
		159CLKA1-NRFEF_P0	159CLKA1-NRFRF_P0	159CLKA1-NEFEF_P0	N type Female	APF159
		-	159CLKA1-7RFRF_P0	-	7mm	APF159

EIA WR	Freq. Range (GHz)	One Right Angle Adp. One Endlaunch Adp. P/N	Two Right Angle Adps. P/N	Two Endlaunch Adps. P/N	Adapter Connector	Adapter Flange
WR137	5.85-8.20	137CLKA1-SRFEF_DP	137CLKA1-SRFRF_DP	137CLKA1-SEFEF_DP	SMA Female	FDP70
		-	137CLKA1-3.5RFRF_DP	-	3.5mm Female	FDP70
		137CLKA1-NRFEF_DP	137CLKA1-NRFRF_DP	137CLKA1-NEFEF_DP	N type Female	FDP70
		-	137CLKA1-7RFRF_DP	-	7mm	FDP70
		137CLKA1-SRFEF_AP	137CLKA1-SRFRF_AP	137CLKA1-SEFEF_AP	SMA Female	FAP70
		-	137CLKA1-3.5RFRF_AP	-	3.5mm Female	FAP70
		137CLKA1-NRFEF_AP	-	137CLKA1-NEFEF_AP	N type Female	FAP70
		137CLKA1-SRFEF_P0	137CLKA1-SRFRF_P0	137CLKA1-SEFEF_P0	SMA Female	APF137
		-	137CLKA1-3.5RFRF_P0	-	3.5mm Female	APF137
		137CLKA1-NRFEF_P0	-	137CLKA1-NEFEF_P0	N type Female	APF137
WR112	7.05-10.0	112CLKA1-SRFEF_PB	112CLKA1-SRFRF_PB	112CLKA1-SEFEF_PB	SMA Female	APF112B
		-	112CLKA1-3.5RFRF_PB	-	3.5mm Female	APF112B
		112CLKA1-NRFEF_PB	112CLKA1-NRFRF_PB	112CLKA1-NEFEF_PB	N type Female	APF112B
		-	112CLKA1-7RFRF_PB	-	7mm	APF112B
		112CLKA1-SRFEF_DP	112CLKA1-SRFRF_DP	112CLKA1-SEFEF_DP	SMA Female	FDP84
		-	112CLKA1-3.5RFRF_DP	-	3.5mm Female	FDP84
		112CLKA1-NRFEF_DP	-	112CLKA1-NEFEF_DP	N type Female	FDP84
		112CLKA1-SRFEF_P0	112CLKA1-SRFRF_P0	112CLKA1-SEFEF_P0	SMA Female	APF112
		-	112CLKA1-3.5RFRF_P0	-	3.5mm Female	APF112
		112CLKA1-NRFEF_P0	-	112CLKA1-NEFEF_P0	N type Female	APF112
WR90	8.2-12.4	90CLKA1-SRFEF_PB	90CLKA1-SRFRF_PB	90CLKA1-SEFEF_PB	SMA Female	APF90B
		-	90CLKA1-3.5RFRF_PB	-	3.5mm Female	APF90B
		90CLKA1-NRFEF_PB	90CLKA1-NRFRF_PB	90CLKA1-NEFEF_PB	N type Female	APF90B
		-	90CLKA1-7RFRF_PB	-	7mm	APF90B
		90CLKA1-SRFEF_DP	-	90CLKA1-SEFEF_DP	SMA Female	FDP100
		90CLKA1-NRFEF_DP	-	90CLKA1-NEFEF_DP	N type Female	FDP100
		90CLKA1-SRFEF_P0	-	90CLKA1-SEFEF_P0	SMA Female	APF90
		90CLKA1-NRFEF_P0	-	90CLKA1-NEFEF_P0	N type Female	APF90
		90CLKA1-SRFEF_PA	-	90CLKA1-SEFEF_PA	SMA Female	APF90A
		90CLKA1-NRFEF_PA	-	90CLKA1-NEFEF_PA	N type Female	APF90A
WR75	10.0-15.0	75CLKA1-SRFEF_PB	75CLKA1-SRFRF_PB	75CLKA1-SEFEF_PB	SMA Female	APF75B
		-	75CLKA1-3.5RFRF_PB	-	3.5mm Female	APF75B
		75CLKA1-NRFEF_PB	75CLKA1-NRFRF_PB	75CLKA1-NEFEF_PB	N type Female	APF75B
		-	75CLKA1-7RFRF_PB	-	7mm	APF75B
		75CLKA1-SRFEF_DP	-	75CLKA1-SEFEF_DP	SMA Female	FDP120
		75CLKA1-NRFEF_DP	-	75CLKA1-NEFEF_DP	N type Female	FDP120
WR62	12.4-18.0	62CLKA1-SRFEF_P0	62CLKA1-SRFRF_P0	62CLKA1-SEFEF_P0	SMA Female	APF62
		-	62CLKA1-3.5RFRF_P0	-	3.5mm Female	APF62
		62CLKA1-NRFEF_P0	62CLKA1-NRFRF_P0	62CLKA1-NEFEF_P0	N type Female	APF62
		-	62CLKA1-7RFRF_P0	-	7mm	APF62
		62CLKA1-SRFEF_DP	-	62CLKA1-SEFEF_DP	SMA Female	FDP140
		62CLKA1-NRFEF_DP	-	62CLKA1-NEFEF_DP	N type Female	FDP140
WR51	15.0-22.0	51CLKA1-SRFEF_PC	51CLKA1-SRFRF_PC	51CLKA1-SEFEF_PC	SMA Female	APF51C
		51CLKA1-SRFEF_PA	51CLKA1-SRFRF_PA	51CLKA1-SEFEF_PA	SMA Female	APF51A
		51CLKA1-SRFEF_PB	51CLKA1-SRFRF_PB	51CLKA1-SEFEF_PB	SMA Female	APF51B
		51CLKA1-SRFEF_DP	-	51CLKA1-SEFEF_DP	SMA Female	FDP180

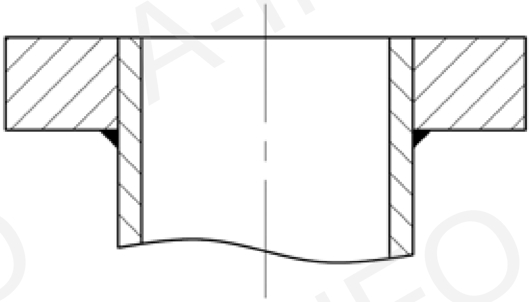
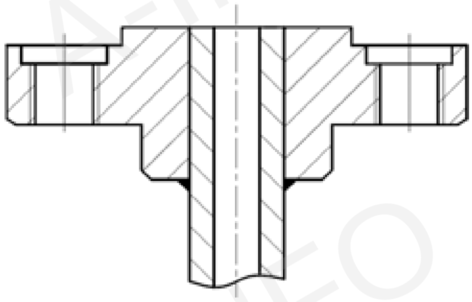
EIA WR	Freq. Range (GHz)	One Right Angle Adp. One Endlaunch Adp. P/N	Two Right Angle Adps. P/N	Two Endlaunch Adps. P/N	Adapter Connector	Adapter Flange
WR42	18.0-26.5	42CLKA1-SRFEF_P0	-	42CLKA1-SEFEF_P0	SMA Female	APF42
		42CLKA1-KRFEF_P0	-	42CLKA1-KEFEF_P0	2.92mm Female	APF42
		-	42CLKA1-3.5RFRF_P0	-	3.5mm Female	APF42
WR34	22.0-33.0	34CLKA1-KRFEF_BP	34CLKA1-KRFRF_BP	34CLKA1-KEFEF_BP	2.92mm Female	FBP260
		34CLKA1-KRFEF_P0	34CLKA1-KRFRF_P0	34CLKA1-KEFEF_P0	2.92mm Female	APF34
WR28	26.5-40.0	28CLKA1-KRFEF_P0	-	28CLKA1-KEFEF_P0	2.92mm Female	APF28
		28CLKA1-2.4RFEF_P0	-	28CLKA1-2.4EFEF_P0	2.4mm Female	APF28
WR22	33.0-50.0	22CLKA1-2.4RFEF_UP	-	22CLKA1-2.4EFEF_UP	2.4mm Female	FUGP400
		22CLKA1-2.4RFEF_P0	-	22CLKA1-2.4EFEF_P0	2.4mm Female	APF22
WR19	40.0-50.0	19CLKA1-2.4RFEF_UP	-	19CLKA1-2.4EFEF_UP	2.4mm Female	FUGP500
	40.0-60.0	19CLKA1-1.85RFEF_UP	-	19CLKA1-1.85EFEF_UP	1.85mm Female	FUGP500
	40.0-50.0	19CLKA1-2.4RFEF_P0	-	19CLKA1-2.4EFEF_UP	2.4mm Female	APF19
	40.0-60.0	19CLKA1-1.85RFEF_P0	-	19CLKA1-1.85EFEF_P0	1.85mm Female	APF19
WR15	50.0-65.0	15CLKA1-1.85RFEF_UP	-	15CLKA1-1.85EFEF_UP	1.85mm Female	FUGP620
		15CLKA1-1.85RFEF_P0	-	15CLKA1-1.85EFEF_P0	1.85mm Female	APF15
WR12	60.0-90.0	12CLKA1-0_UP	-	-	-	FUGP740
		12CLKA1-0_P0	-	-	-	APF12
WR10	75.0-110.0	10CLKA1-0_UP	-	-	-	FUGP900
		10CLKA1-0_P0	-	-	-	APF10

Flange Description

Below flanges are available for WG Calibration Kits
- Standard Flange
- Precision Flange (APF)

The AINFO Precision Flanges(APF) on these components have precision indexing holes and indexing pins for precise mating alignment that maximizes measurement repeatability. They conform to all EIA WR standards for rectangular or round waveguide flanges.

WG Flange

Ordering Information
P/N：

2300	-FDP3
Waveguide Type (WR2300)	Flange Type

EIA WR	Frequency Range (GHz)	P/N	Flange Type	Material
WR2300	0.32-0.49	2300-FDP3	FDP3	Al
WR2100	0.35-0.53	2100-FDP4	FDP4	Al
WR1800	0.41-0.62	1800-FDP5	FDP5	Al
WR1500	0.49-0.75	1500-FDP6	FDP6	Al
WR1150	0.64-0.96	1150-FDP8	FDP8	Al
WR975	0.75-1.12	975-FDP9	FDP9	Al
WR770	0.96-1.45	770-FDP12	FDP12	Al
WR650	1.12-1.70	650-FDP14	FDP14	Al
WR650	1.12-1.70	650-FDM14	FDM14	Al
WR510	1.45-2.20	510-FDP18	FDP18	Al
WR510	1.45-2.20	510-FDM18	FDM18	Al
WR430	1.70-2.60	430-FDP22	FDP22	Al/Cu
WR430	1.70-2.60	430-FDM22	FDM22	Al/Cu
WR430	1.70-2.60	430-APF430	APF430	Al/Cu
WR340	2.20-3.30	340-FDP26	FDP26	Al/Cu
WR340	2.20-3.30	340-FDM26	FDM26	Al/Cu
WR340	2.20-3.30	340-APF340	APF340	Al/Cu
WR284	2.60-3.95	284-FDP32	FDP32	Al/Cu
WR284	2.60-3.95	284-FDM32	FDM32	Al/Cu

EIA WR	Frequency Range (GHz)	P/N	Flange Type	Material
WR284	2.60-3.95	284-FAP32	FAP32	Al/Cu
WR284	2.60-3.95	284-FAM32	FAM32	Al/Cu
WR284	2.60-3.95	284-FAE32	FAE32	Al/Cu
WR284	2.60-3.95	284-FEP32	FEP32	Al/Cu
WR284	2.60-3.95	284-APF284B	APF284B	Al/Cu
WR284	2.60-3.95	284-APF284	APF284	Al/Cu
WR284	2.60-3.95	284-APF284C	APF284C	Al/Cu
WR229	3.30-4.90	229-FDP40	FDP40	Al/Cu
WR229	3.30-4.90	229-FDM40	FDM40	Al/Cu
WR229	3.30-4.90	229-FAP40	FAP40	Al/Cu
WR229	3.30-4.90	229-FAM40	FAM40	Al/Cu
WR229	3.30-4.90	229-FAE40	FAE40	Al/Cu
WR229	3.30-4.90	229-FEP40	FEP40	Al/Cu
WR229	3.30-4.90	229-APF229	APF229	Al/Cu
WR229	3.30-4.90	229-APF229B	APF229B	Al/Cu
WR187	3.95-5.85	187-FDP48	FDP48	Al/Cu
WR187	3.95-5.85	187-FDM48	FDM48	Al/Cu
WR187	3.95-5.85	187-FAP48	FAP48	Al/Cu
WR187	3.95-5.85	187-FAM48	FAM48	Al/Cu
WR187	3.95-5.85	187-FAE48	FAE48	Al/Cu
WR187	3.95-5.85	187-FEP48	FEP48	Al/Cu
WR187	3.95-5.85	187-APF187	APF187	Al/Cu
WR187	3.95-5.85	187-APF187C	APF187C	Al/Cu
WR159	4.90-7.05	159-FDP58	FDP58	Al/Cu
WR159	4.90-7.05	159-FDM58	FDM58	Al/Cu
WR159	4.90-7.05	159-FAP58	FAP58	Al/Cu
WR159	4.90-7.05	159-FAM58	FAM58	Al/Cu
WR159	4.90-7.05	159-FAE58	FAE58	Al/Cu
WR159	4.90-7.05	159-FEP58	FEP58	Al/Cu
WR159	4.90-7.05	159-APF159	APF159	Al/Cu
WR159	4.90-7.05	159-APF159B	APF159B	Al/Cu
WR137	5.85-8.20	137-FDP70	FDP70	Al/Cu
WR137	5.85-8.20	137-FDM70	FDM70	Al/Cu
WR137	5.85-8.20	137-FAP70	FAP70	Al/Cu
WR137	5.85-8.20	137-FAM70	FAM70	Al/Cu
WR137	5.85-8.20	137-FAE70	FAE70	Al/Cu
WR137	5.85-8.20	137-FEP70	FEP70	Al/Cu
WR137	5.85-8.20	137-APF137	APF137	Al/Cu
WR137	5.85-8.20	137-APF137C	APF137C	Al/Cu
WR112	7.05-10.0	112-FBP84	FBP84	Al/Cu
WR112	7.05-10.0	112-FBM84	FBM84	Al/Cu
WR112	7.05-10.0	112-FBE84	FBE84	Al/Cu

EIA WR	Frequency Range (GHz)	P/N	Flange Type	Material
WR112	7.05-10.0	112-FDP84	FDP84	Al/Cu
WR112	7.05-10.0	112-FDM84	FDM84	Al/Cu
WR112	7.05-10.0	112-FEP84	FEP84	Al/Cu
WR112	7.05-10.0	112-APF112B	APF112B	Al/Cu
WR112	7.05-10.0	112-APF112	APF112	Al/Cu
WR90	8.20-12.4	90-FBP100	FBP100	Cu/Al
WR90	8.20-12.4	90-FBM100	FBM100	Cu/Al
WR90	8.20-12.4	90-FBE100	FBE100	Cu/Al
WR90	8.20-12.4	90-FDP100	FDP100	Cu/Al
WR90	8.20-12.4	90-FDM100	FDM100	Cu/Al
WR90	8.20-12.4	90-FEP100	FEP100	Cu/Al
WR90	8.20-12.4	90-APF90B	APF90B	Cu/Al
WR90	8.20-12.4	90-APF90	APF90	Cu/Al
WR90	8.20-12.4	90-APF90A	APF90A	Cu/Al
WR75	10.0-15.0	75-FBP120	FBP120	Cu/Al
WR75	10.0-15.0	75-FBM120	FBM120	Cu/Al
WR75	10.0-15.0	75-FBE120	FBE120	Cu/Al
WR75	10.0-15.0	75-FDP120	FDP120	Cu/Al
WR75	10.0-15.0	75-FDM120	FDM120	Cu/Al
WR75	10.0-15.0	75-APF75B	APF75B	Cu/Al
WR75	10.0-15.0	75-APF75A	APF75A	Cu/Al
WR62	12.4-18.0	62-FBP140	FBP140	Cu/Al
WR62	12.4-18.0	62-FBM140	FBM140	Cu/Al
WR62	12.4-18.0	62-FBE140	FBE140	Cu/Al
WR62	12.4-18.0	62-FDP140	FDP140	Cu/Al
WR62	12.4-18.0	62-FDM140	FDM140	Cu/Al
WR62	12.4-18.0	62-APF62	APF62	Cu/Al
WR51	15.0-22.0	51-FBP180	FBP180	Cu/Al
WR51	15.0-22.0	51-FBM180	FBM180	Cu/Al
WR51	15.0-22.0	51-FBE180	FBE180	Cu/Al
WR51	15.0-22.0	51-FDP180	FDP180	Cu/Al
WR51	15.0-22.0	51-FDM180	FDM180	Cu/Al
WR51	15.0-22.0	51-APF51C	APF51C	Cu/Al
WR51	15.0-22.0	51-APF51B	APF51B	Cu/Al
WR51	15.0-22.0	51-APF51A	APF51A	Cu/Al
WR42	18.0-26.5	42-FBP220	FBP220	Cu/Al
WR42	18.0-26.5	42-FBM220	FBM220	Cu/Al
WR42	18.0-26.5	42-FBE220	FBE220	Cu/Al
WR42	18.0-26.5	42-APF42	APF42	Cu/Al
WR34	22.0-33.0	34-FBP260	FBP260	Cu/Al
WR34	22.0-33.0	34-FBM260	FBM260	Cu/Al

EIA WR	Frequency Range (GHz)	P/N	Flange Type	Material
WR34	22.0-33.0	34-FBE260	FBE260	Cu/Al
WR34	22.0-33.0	34-APF34	APF34	Cu/Al
WR28	26.5-40.0	28-FBP320	FBP320	Cu/Al
WR28	26.5-40.0	28-FBM320	FBM320	Cu/Al
WR28	26.5-40.0	28-FBE320	FBE320	Cu/Al
WR28	26.5-40.0	28-APF28	APF28	Cu/Al
WR22	33.0-50.0	22-FUGP400_Cu	FUGP400	Cu
WR22	33.0-50.0	22-APF22_Cu	APF22	Cu
WR22	33.0-50.0	22-APF22A_Cu	APF22A	Cu
WR19	40.0-60.0	19-FUGP500_Cu	FUGP500	Cu
WR19	40.0-60.0	19-APF19_Cu	APF19	Cu
WR19	40.0-60.0	19-APF19A_Cu	APF19A	Cu
WR15	50.0-75.0	15-FUGP620_Cu	FUGP620	Cu
WR15	50.0-75.0	15-APF15_Cu	APF15	Cu
WR15	50.0-75.0	15-APF15A_Cu	APF15A	Cu
WR12	60.0-90.0	12-FUGP740_Cu	FUGP740	Cu
WR12	60.0-90.0	12-APF12_Cu	APF12	Cu
WR12	60.0-90.0	12-APF12A_Cu	APF12A	Cu
WR10	75.0-110.0	10-FUGP900_Cu	FUGP900	Cu
WR10	75.0-110.0	10-FAP900_Cu	FAP900	Cu
WR10	75.0-110.0	10-APF10_Cu	APF10	Cu
WR10	75.0-110.0	10-APF10A_Cu	APF10A	Cu
WR8	90.0-140.0	8-UG387_Cu	UG387	Cu
WR6	110.0-170.0	6-UG387_Cu	UG387	Cu
WR5	140.0-220.0	5-UG387_Cu	UG387	Cu

Double Ridge WG Flange

Ordering Information
P/N：

WRD84	-FPWRD84D24
WR Size	Flange Type

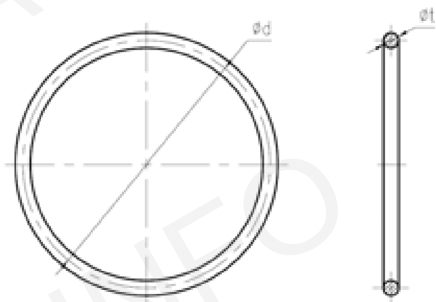
EIA WRD	Frequency (GHz)	P/N	Flange	Material
WRD84	0.84-2.0	WRD84-FPWRD84D24	FPWRD84D24	Al/Cu
WRD200	2.0-4.8	WRD200-FPWRD200D24	FPWRD200D24	Al/Cu
WRD250	2.6-7.8	WRD250-FPWRD250D30	FPWRD250D30	Al/Cu
WRD350	3.5-8.2	WRD350-FPWRD350D24	FPWRD350D24	Al/Cu
WRD475	4.75-11.0	WRD475-FPWRD475D24	FPWRD475D24	Al/Cu
WRD580	5.8-16.0	WRD580-FPWRD580D28_Cu	FPWRD580D28	Cu
WRD650	6.5-18.0	WRD650-FPWRD650D28_Cu	FPWRD650D28	Cu
WRD750	7.5-18.0	WRD750-FPWRD750D24_Cu	FPWRD750D24	Cu
WRD110	11.0-26.5	WRD110-FPWRD110C24_Cu	FPWRD110C24	Cu
WRD180	18.0-40.0	WRD180-FPWRD180C24_Cu	FPWRD180C24	Cu

WG Gasket

Ordering Information
P/N：

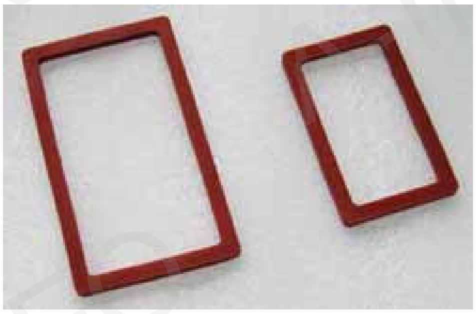
90	-FBM100	-R
WR Size	Flange Type	Material (M): R=Silicone Rubber, RC=Conductive Silicone Rubber

Circular Waveguide Gasket



EIA WR	P/N	Flange	Size (mm)	
			Φd	Φt
WR284	284-FAM32-R	FAM32/FAE32	-	-
WR229	229-FAM40-R	FAM40/FAE40	-	-
WR187	187-FAM48-R	FAM48/FAE48	-	-
WR159	159-FAM58-R	FAM58/FAE58	-	-
WR137	137-FAM70-R	FAM70/FAE70	56.3	3.5
WR112	112-FBM84-R	FBM84/FBE84	42.5	2.6
WR90	90-FBM100-R	FBM100/FBE100	36.2	2.6
WR75	75-FBM120-R	FBM120/FBE120	30.3	2.6
WR62	62-FBM140-R	FBM140/FBE140	26.1	2.6
WR51	51-FBM180-R	FBM180/FBE180	22.2	2.6
WR42	42-FBM220-R	FBM220/FBE220	17.1	1.9
WR34	34-FBM260-R	FBM260/FBE260	15.7	1.9
WR28	28-FBM320-R	FBM320/FBE320	12.5	1.9

Rectangular Waveguide Gasket



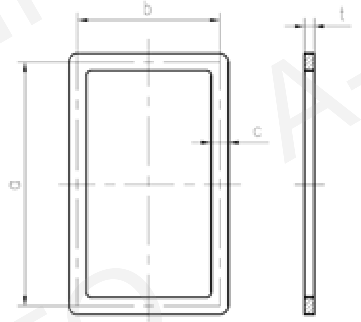


Figure1

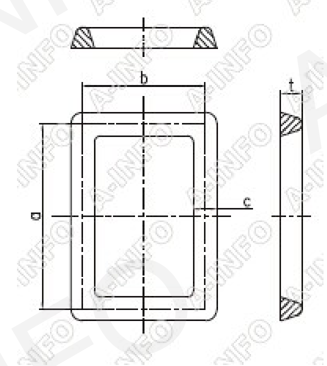


Figure2

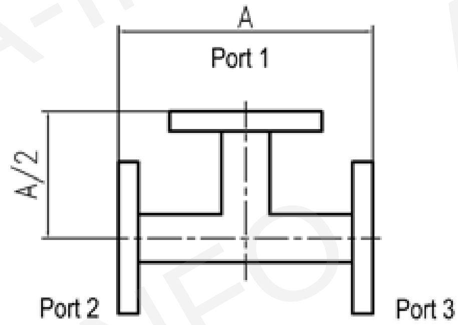
EIA WR	P/N	Flange	Figure	Size(mm)			
				a	b	c	t
WR650	650-FDM14-R	FDM14	Figure 2	-	-	-	-
WR510	510-FDM18-R	FDM18	Figure 2	-	-	-	-
WR430	430-FDM22-R	FDM22	Figure 2	125.7	71.1	7.3	4
WR340	340-FDM26-R	FDM26	Figure 2	102.9	59.7	7.3	4
WR284	284-FDM32-R	FDM32	Figure 2	84.2	46.1	4.8	2.8
WR229	229-FDM40-R	FDM40	Figure 2	69.3	40.2	4.8	2.8
WR187	187-FDM48-R	FDM48	Figure 1	58.7	33.3	4.8	2.8
WR159	159-FDM58-R	FDM58	Figure 1	51.5	31.3	4.8	2.8
WR137	137-FDM70-R	FDM70	Figure 1	44.8	25.8	3	2.7
WR112	112-FDM84-R	FDM84	Figure 1	38.5	22.6	3.6	2.7
WR90	90-FDM100-R	FDM100	Figure 1	32.2	19.5	3.6	2.7
WR75	75-FDM120-R	FDM120	Figure 2	28.2	18.7	3.6	3.2
WR62	62-FDM140-R	FDM140	Figure 2	-	-	-	-
WR51	51-FDM180-R	FDM180	Figure 2	-	-	-	-

WG Switch - Electric Double Ridge

*Freq. = Frequency Range
*I.L.= Insertion Loss
*Iso.=Isolation
*S.S.=Switching Speed

EIA WRD	P/N	*Freq. (GHz)	Flange	VSWR	*I. L. (dB)	*Iso. (dB)	*S. S. (ms)
WRD580	580DRWHSMD	5.8-16.0	FPWRD580D28	1.2	0.5	50	60
WRD580	580DRWESMD	5.8-16.0	FPWRD580D28	1.2	0.5	50	60
WRD650	650DRWHSMD	6.5-18.0	FPWRD650D28	1.2	0.5	50	60
WRD650	650DRWESMD	6.5-18.0	FPWRD650D28	1.2	0.5	50	60
WRD750	750DRWHSMD	7.5-18.0	FPWRD750D24	1.2	0.5	50	60
WRD750	750DRWESMD	7.5-18.0	FPWRD750D24	1.2	0.5	50	60
WRD110	110DRWHSMD	11.0-26.5	FPWRD110C24	1.2	0.5	50	60
WRD110	110DRWESMD	11.0-26.5	FPWRD110C24	1.2	0.5	50	60
WRD180	180DRWHSMD	18.0-40.0	FPWRD180C24	1.2	0.5	50	60
WRD180	180DRWESMD	18.0-40.0	FPWRD180C24	1.2	0.5	50	60

WG ET



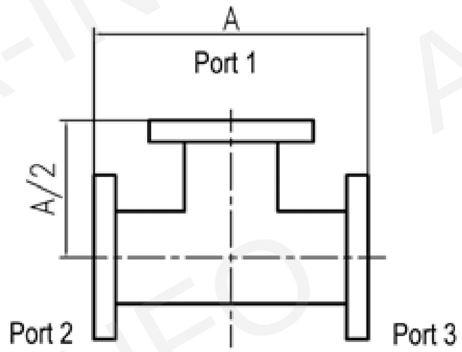
*Freq. = Frequency	*BW. = Bandwidth
*Unb. = Unbalance	*Mat. = Material

Ordering Information
P/N：

650	WET
WR Size	Product Code

P/N	*Freq. (GHz)	VSWR	*Unb. (dB)	*BW	EIA WR	Flange	*Mat.	Net Weight
650WET	1.12-1.70	1.50	±0.25	FULL	WR650	FDP14/FDM14	Al	-
510WET	1.45-2.20	1.50	±0.25	FULL	WR510	FDP18/FDM18	Al	-
430WET	1.70-2.60	1.50	±0.25	FULL	WR430	FDP22/FDM22	Al	-
340WET	2.20-3.30	1.50	±0.25	FULL	WR340	FDP26/FDM26	Al	-
284WET	2.60-3.95	1.50	±0.25	FULL	WR284	FDP32/FDM32	Al	-
229WET	3.30-4.90	1.50	±0.25	FULL	WR229	FDP40/FDM40	Al	-
187WET	3.95-5.85	1.50	±0.25	FULL	WR187	FDP48/FDM48	Al	0.4
187WET/C10	4.40-5.00	1.50	±0.25	FULL	WR187	FDP48/FDM48	Al	0.4
159WET	4.90-7.05	1.50	±0.25	FULL	WR159	FDP58/FDM58	Al	0.3
137WET	5.85-8.20	1.50	±0.25	FULL	WR137	FDP70/FDM70	Al	-
112WET	7.05-10.0	1.50	±0.25	FULL	WR112	FBP84/FBM84/ FBE84	Al	-
90WET	8.20-12.4	1.50	±0.25	FULL	WR90	FBP100/FBM100/ FBE100	Al	0.1
75WET	10.0-15.0	1.50	±0.25	FULL	WR75	FBP120/FBM120/ FBE120	Al	0.1
62WET	12.4-18.0	1.50	±0.25	FULL	WR62	FBP140/FBM140/ FBE140	Al	-
51WET_Cu	15.0-22.0	1.50	±0.25	FULL	WR51	FBP180/FBM180/ FBE180	Cu	-
42WET_Cu	18.0-26.5	1.50	±0.30	FULL	WR42	FBP220/FBM220/ FBE220	Cu	-
34WET_Cu	22.0-33.0	1.50	±0.30	FULL	WR34	FBP260/FBM260/ FBE260	Cu	-
28WET_Cu	26.5-40.0	1.50	±0.30	FULL	WR28	FBP320/FBM320/ FBE320	Cu	-

WG HT



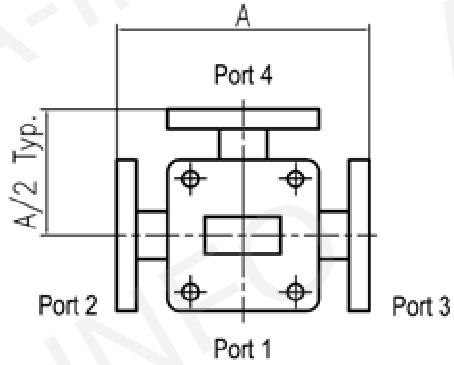
*Freq. = Frequency	*BW. = Bandwidth
*Unb. = Unbalance	*Mat. = Material

Ordering Information
P/N :

650	WHT
WR Size	Product Code

P/N	*Freq. (GHz)	VSWR	*Unb. (dB)	*BW	EIA WR	Flange	*Mat.	Net Weight
650WHT	1.12-1.70	1.50	±0.25	FULL	WR650	FDP14/FDM14	Al	-
510WHT	1.45-2.20	1.50	±0.25	FULL	WR510	FDP18/FDM18	Al	-
430WHT	1.70-2.60	1.50	±0.25	FULL	WR430	FDP22/FDM22	Al	-
340WHT	2.20-3.30	1.50	±0.25	FULL	WR340	FDP26/FDM26	Al	-
284WHT	2.60-3.95	1.50	±0.25	FULL	WR284	FDP32/FDM32	Al	0.65
229WHT	3.30-4.90	1.50	±0.25	FULL	WR229	FDP40/FDM40	Al	-
187WHT	3.95-5.85	1.50	±0.25	FULL	WR187	FDP48/FDM48	Al	-
159WHT	4.90-7.05	1.50	±0.25	FULL	WR159	FDP58/FDM58	Al	0.3
137WHT	5.85-8.20	1.50	±0.25	FULL	WR137	FDP70/FDM70	Al	-
112WHT	7.05-10.0	1.50	±0.25	FULL	WR112	FBP84/FBM84/ FBE84	Al	-
90WHT	8.20-12.4	1.50	±0.25	FULL	WR90	FBP100/FBM100/ FBE100	Al	0.1
75WHT	10.0-15.0	1.50	±0.25	FULL	WR75	FBP120/FBM120/ FBE120	Al	-
75WHT/C10	10.70-12.75	1.50	±0.25	FULL	WR75	FBP120/FBM120/ FBE120	Al	0.1
62WHT	12.4-18.0	1.50	±0.25	FULL	WR62	FBP140/FBM140/ FBE140	Al	-
51WHT_Cu	15.0-22.0	1.50	±0.25	FULL	WR51	FBP180/FBM180/ FBE180	Cu	-
42WHT_Cu	18.0-26.5	1.50	±0.30	FULL	WR42	FBP220/FBM220/ FBE220	Cu	-
34WHT_Cu	22.0-33.0	1.50	±0.30	FULL	WR34	FBP260/FBM260/ FBE260	Cu	-
28WHT_Cu	26.5-40.0	1.50	±0.30	FULL	WR28	FBP320/FBM320/ FBE320	Cu	-

WG Magic Tee



*Freq. = Frequency	*BW. = Bandwidth
*Unb. = Unbalance	*Mat. = Material
*Iso. = Isolation	*N.W.=Net Weight

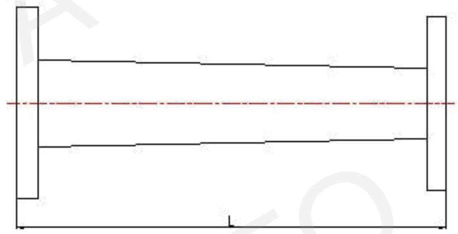
Ordering Information
P/N：

430	WMT
WR Size	Product Code

P/N	*Freq. (GHz)	VSWR H-Plane	VSWR E-Plane	*Unb. (dB)	*BW	*Iso. (dB)	EIA WR	Flange	*Mat.	*N.W.
430WMT	1.70-2.60	1.30	1.50	±0.40	FULL	30	WR430	FDP22/ FDM22	Al	-
340WMT	2.20-3.30	1.30	1.50	±0.40	FULL	30	WR340	FDP26/ FDM26	Al	1.6
284WMT	2.60-3.95	1.30	1.50	±0.40	FULL	30	WR284	FDP32/ FDM32	Al	1.0
229WMT	3.30-4.90	1.30	1.50	±0.40	FULL	30	WR229	FDP40/ FDM40	Al	-
187WMT	3.95-5.85	1.30	1.50	±0.40	FULL	30	WR187	FDP48/ FDM48	Al	-
159WMT	4.90-7.05	1.30	1.50	±0.40	FULL	30	WR159	FDP58/ FDM58	Al	-
137WMT	5.85-8.20	1.30	1.50	±0.40	FULL	30	WR137	FDP70/ FDM70	Al	-
112WMT	7.05-10.0	1.30	1.50	±0.40	FULL	30	WR112	FBP84/ FBM84/ FBE84	Al	-
90WMT	8.20-12.4	1.30	1.50	±0.40	FULL	30	WR90	FBP100/ FBM100/ FBE100	Al	0.3
75WMT	10.0-15.0	1.30	1.50	±0.40	FULL	30	WR75	FBP120/ FBM120/ FBE120	Al	0.3
62WMT	12.4-18.0	1.30	1.50	±0.40	FULL	30	WR62	FBP140/ FBM140/ FBE140	Al	0.12

P/N	*Freq. (GHz)	VSWR H-Plane	VSWR E-Plane	*Unb. (dB)	*BW	*Iso. (dB)	EIA WR	Flange	*Mat.	*N.W.
51WMT_Cu	15.0-22.0	1.30	1.50	±0.40	FULL	30	WR51	FBP180/ FBM180/ FBE180	Cu	-
42WMT_Cu	18.0-26.5	1.30	1.50	±0.40	FULL	30	WR42	FBP220/ FBM220/ FBE220	Cu	-
34WMT_Cu	22.0-33.0	1.30	1.50	±0.40	FULL	30	WR34	FBP260/ FBM260/ FBE260	Cu	-
28WMT_Cu	26.5-40.0	1.30	1.50	±0.40	FULL	30	WR28	FBP320/ FBM320/ FBE320	Cu	-

WG Transition - Rectangular to Rectangular



*Freq. = Frequency	*Mat. = Material
*N.W.=Net Weight	

Ordering Information
P/N：

430340	WA	-330.2
WR Size	Product Code	Length(mm)

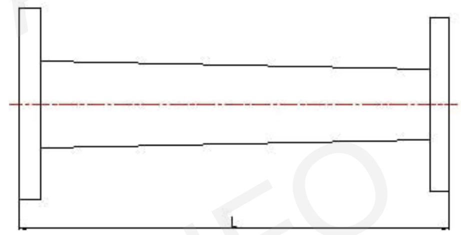
EIA WR	*Freq. (GHz)	Length (mm/inch)	P/N	VSWR	Flange	*Mat.	*N.W.
WR430 to WR340	2.20 - 2.60	330.2/13	430340WA-330.2	1.05	WR430: FDP22/FDM22 WR340: FDP26/FDM26	Al/ Cu	-
WR340 to WR284	2.60-3.30	292.1/11.5	340284WA-292.1	1.05	WR340: FDP26/FDM26 WR284: FDP32/FDM32/FEP32/ FAP32/FAM32/FAE32	Al/ Cu	-
WR284 to WR229	3.30-3.95	279.4/11	284229WA-279.4	1.05	WR284: FDP32/FDM32/FEP32/ FAP32/FAM32/FAE32 WR229: FDP40/FDM40/FEP40/ FAP40/FAM40/FAE40	Al/ Cu	-
WR229 to WR187	3.95-4.90	254/10	229187WA-254	1.05	WR229: FDP40/FDM40/FEP40/ FAP40/FAM40/FAE40 WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48	Al/ Cu	-
WR187 to WR159	4.90-5.85	228.6/9	187159WA-228.6	1.05	WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48 WR159: FDP58/FDM58/FEP58/ FAP58/FAM58/FAE58	Al/ Cu	-

EIA WR	*Freq. (GHz)	Length (mm/inch)	P/N	VSWR	Flange	*Mat.	* N.W.
WR159 to WR137	5.85-7.05	152.4/6	159137WA-152.4	1.1	WR159: FDP58/FDM58/FEP58/ FAP58/FAM58/FAE58 WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70	Al/ Cu	-
WR159 to WR137	5.85-7.05	203.2/8	159137WA-203.2	1.05	WR159: FDP58/FDM58/FEP58/ FAP58/FAM58/FAE58 WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70	Al/ Cu	-
WR137 to WR112	7.05-8.20	101.6/4	137112WA-101.6	1.05	WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70 WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84	Al/ Cu	0.10
WR137 to WR112	7.05-8.20	152.4/6	137112WA-152.4	1.05	WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70 WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84	Al/ Cu	-
WR112 to WR90	8.20-10.0	101.6/4	11290WA-101.6	1.05	WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Al/ Cu	0.06
WR112 to WR90	8.20-10.0	152.4/6	11290WA-152.4	1.08	WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Al/ Cu	-
WR90 to WR75	10.0-12.4	76.2/3	9075WA-76.2	1.05	WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100 WR75: FBP120/FBM120/FBE120/ FDP120/FDM120	Cu/ Al	0.06

EIA WR	*Freq. (GHz)	Length (mm/inch)	P/N	VSWR	Flange	*Mat.	* N.W.
WR90 to WR75	10.0-12.4	127/5	9075WA-127	1.08	WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100 WR75: FBP120/FBM120/FBE120/ FDP120/FDM120	Cu/ Al	-
WR75 to WR62	12.4-15.0	50/2	7562WA-50_Cu	1.05	WR75: FBP120/FBM120/FBE120/ FDP120/FDM120 WR62: FBP140/FBM140/FBE140/ FDP140/FDM140	Cu	0.12
WR75 to WR62	12.4-15.0	101.6/4	7562WA-101.6_Cu	1.08	WR75: FBP120/FBM120/FBE120/ FDP120/FDM120 WR62: FBP140/FBM140/FBE140/ FDP140/FDM140	Cu	0.18
WR62 to WR51	15.0-18.0	50/2	6251WA-50_Cu	1.05	WR62:FBP140/FBM140/ FBE140/FDP140/FDM140 WR51: FBP180/FBM180/FBE180/ FDP180/FDM180	Cu	0.10
WR62 to WR51	15.0-18.0	101.6/4	6251WA-101.6_Cu	1.08	WR62: FBP140/FBM140/FBE140/ FDP140/FDM140 WR51: FBP180/FBM180/FBE180/ FDP180/FDM180	Cu	-
WR51 to WR42	18.0-22.0	50/2	5142WA-50_Cu	1.05	WR51: FBP180/FBM180/FBE180/ FDP180/FDM180 WR42: FBP220/FBM220/FBE220	Cu	0.08
WR51 to WR42	18.0-22.0	101.6/4	5142WA-101.6_Cu	1.1	WR51: FBP180/FBM180/FBE180 WR42: FBP220/FBM220/FBE220	Cu	-

EIA WR	*Freq. (GHz)	Length (mm/inch)	P/N	VSWR	Flange	*Mat.	* N.W.
WR42 to WR34	22.0-26.5	50/2	4234WA-50_Cu	1.17	WR42:FBP220/FBM220/ FBE220 WR34:FBP260/FBM260/ FBE260	Cu	-
WR42 to WR34	22.0-26.5	101.6/4	4234WA-101.6_Cu	1.1	WR42:FBP220/FBM220/ FBE220 WR34:FBP260/FBM260/ FBE260	Cu	-
WR34 to WR28	26.5-33.0	50/2	3428WA-50_Cu	1.05	WR34:FBP260/FBM260/ FBE260 WR28:FBP320/FBM320/ FBE320	Cu	0.04
WR28 to WR22	33.0-40.0	50/2	2822WA-50_Cu	1.10	WR28:FBP320/FBM320/ FBE320 WR22: FUGP400	Cu	0.04
WR22 to WR19	40.0-50.0	50/2	2219WA-50_Cu	1.1	WR22:FUGP400 WR19:FUGP500	Cu	0.04
WR19 to WR15	50.0-60.0	50/2	1915WA-50_Cu	1.1	WR19:FUGP500 WR15:FUGP620	Cu	0.04
WR15 to WR12	60.0-75.0	35.6/1.4	1512WA-35.6_Cu	1.1	WR15:FUGP620 WR12:FUGP740	Cu	0.03
WR15 to WR12	60.0-75.0	50/2	1512WA-50_Cu	1.1	WR15:FUGP620 WR12:FUGP740	Cu	0.03
WR12 to WR10	75.0-90.0	33/1.3	1210WA-33_Cu	1.1	WR12:FUGP740 WR10:FUGP900	Cu	0.03
WR12 to WR10	75.0-90.0	50/2	1210WA-50_Cu	1.1	WR12:FUGP740 WR10:FUGP900	Cu	0.03
WR10 to WR8	90.0-110.0	30/1.2	108WA-30_Cu	1.2	UG387	Cu	0.03
WR8 to WR6	110.0-140.0	30/1.2	86WA-30_Cu	1.2	UG387	Cu	-
WR6 to WR5	140.0-170.0	25.4/1	65WA-25.4_Cu	1.2	UG387	Cu	-

WG Transition - Rectangular to Rectangular Transition Specials



*Mat. = Material	*N.W. = Net Weight

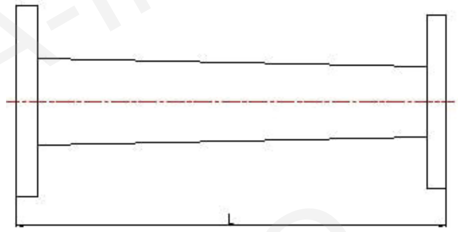
Ordering Information
P/N：

284187	WA	-304.8
WR Size	Product Code	Length(mm)

EIA WR	Length (mm/inch)	P/N	Flange	*Mat.	*N.W.
WR284 to WR187	304.8/12	284187WA-304.8	WR284: FDP32/FDM32/FEP32/ FAP32/FAM32/FAE32 WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48	Al/ Cu	-
WR284 to WR137	254/10	284137WA-254	WR284: FDP32/FDM32/FEP32/ FAP32/FAM32/FAE32 WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70	Al/ Cu	-
WR284 to WR90	304.8/12	28490WA-304.8	WR284: FDP32/FDM32/FEP32/ FAP32/FAM32/FAE32 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Al/ Cu	-
WR187 to WR137	136.6/5.38	187137WA-136.6	WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48 WR137:FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70	Al/ Cu	0.30
WR187 to WR90	279.4/11	18790WA-279.4	WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Al/ Cu	-
WR187 to WR90	400/15.75	18790WA-400	WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Al/ Cu	-
WR187 to WR75	304.8/12	18775WA-304.8	WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48 WR75:FBP120/FBM120/FBE120/ FDP120/FDM120	Al/ Cu	-

EIA WR	Length (mm/inch)	P/N	Flange	*Mat.	*N.W.
WR137 to WR90	254/10	13790WA-254	WR137:FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Al/ Cu	-
WR137 to WR75	304.8/12	13775WA-304.8	WR137:FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70 WR75:FBP120/FBM120/FBE120/ FDP120/FDM120	Al/ Cu	-
WR112 to WR75	119.1/4.69	11275WA-119.1	WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84 WR75:FBP120/FBM120/FBE120/ FDP120/FDM120	Al/ Cu	-
WR112 to WR28	254/10	11228WA-254	WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84 WR28:FBP320/FBM320/FBE320	Al/ Cu	-
WR90 to WR62	152.4/6	9062WA-152.4	WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100 WR62:FBP140/FBM140/FBE140/ FDP140/FDM140	Cu/ Al	-
WR90 to WR42	203.2/8	9042WA-203.2	WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100 WR42:FBP220/FBM220/FBE220	Cu/ Al	-
WR90 to WR28	203.2/8	9028WA-203.2	WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100 WR28:FBP320/FBM320/FBE320	Cu/ Al	-
WR62 to WR42	25.4/1	6242WA-25.4	WR62:FBP140/FBM140/FBE140/ FDP140/FDM140 WR42:FBP220/FBM220/FBE220	Cu/ Al	-
WR62 to WR42	152.4/6	6242WA-152.4	WR62:FBP140/FBM140/FBE140/ FDP140/FDM140 WR42:FBP220/FBM220/FBE220	Cu/ Al	-
WR42 to WR28	50/2	4228WA-50_Cu	WR42:FBP220/FBM220/FBE220 WR28:FBP320/FBM320/FBE320	Cu	0.04

WG Transition - Double Ridge to Rectangular



*Freq. = Frequency
*Mat. = Material
*N.W. = Net Weight

Ordering Information

P/N：

84D	975	WA	-304.8
WRD Size	WR Size	Product Code	Length (mm)

EIA WR	*Freq. (GHz)	Length (mm/inch)	P/N	VSWR	WRD Flange	WR Flange	*Mat.	*N.W.
WRD84 to WR975	0.84-1.12	304.8/12	84D975WA-304.8	1.15	Cover or Groove	WRD84:FPWRD84D24 WR975: FDP9	Al	-
WRD84 to WR770	0.96-1.45	304.8/12	84D770WA-304.8	1.15	Cover or Groove	WRD84:FPWRD84D24 WR770: FDP12	Al	-
WRD84 to WR650	1.12-1.70	304.8/12	84D650WA-304.8	1.15	Cover or Groove	WRD84:FPWRD84D24 WR650: FDP14/FDM14	Al	-
WRD84 to WR510	1.45-2.0	228.6/9	84D510WA-228.6	1.15	Cover or Groove	WRD84:FPWRD84D24 WR510: FDP18/FDM18	Al	-
WRD84 to WR430	1.70-2.0	228.6/9	84D430WA-228.6	1.15	Cover or Groove	WRD84:FPWRD84D24 WR430: FDP22/FDM22	Al/ Cu	-
WRD200 to WR430	2.0-2.60	228.6/9	200D430WA-228.6	1.15	Cover or Groove	WRD200:FPWRD200D24 WR430: FDP22/FDM22	Al/ Cu	-
WRD200 to WR340	2.20-3.30	228.6/9	200D340WA-228.6	1.15	Cover or Groove	WRD200:FPWRD200D24 WR340: FDP26/FDM26	Al/ Cu	-
WRD200 to WR284	2.60-3.95	228.6/9	200D284WA-228.6	1.15	Cover or Groove	WRD200:FPWRD200D24 WR284: FDP32/FDM32/FEP32/ FAP32/FAM32/FAE32	Al/ Cu	-
WRD200 to WR229	3.30-4.80	228.6/9	200D229WA-228.6	1.15	Cover or Groove	WRD200:FPWRD200D24 WR229: FDP40/FDM40/FEP40/ FAP40/FAM40/FAE40	Al/ Cu	-

EIA WR	*Freq. (GHz)	Length (mm/inch)	P/N	VSWR	WRD Flange	WR Flange	*Mat.	*N.W.
WRD200 to WR187	3.95-4.80	228.6/9	200D187WA-228.6	1.15	Cover or Groove	WRD200:FPWRD200D24 WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48	Al/ Cu	-
WRD250 to WR340	2.60-3.30	228.6/9	250D340WA-228.6	1.15	Cover or Groove	WRD250:FPWRD250D30 WR340: FDP26/FDM26	Al/ Cu	-
WRD250 to WR284	2.60-3.95	228.6/9	250D284WA-228.6	1.15	Cover or Groove	WRD250:FPWRD250D30 WR284: FDP32/FDM32/FEP32/ FAP32/FAM32/FAE32	Al/ Cu	-
WRD250 to WR229	3.30-4.90	228.6/9	250D229WA-228.6	1.15	Cover or Groove	WRD250:FPWRD250D30 WR229: FDP40/FDM40/FEP40/ FAP40/FAM40/FAE40	Al/ Cu	-
WRD250 to WR187	3.95-5.85	228.6/9	250D187WA-228.6	1.15	Cover or Groove	WRD250:FPWRD250D30 WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48	Al	-
WRD250 to WR159	4.90-7.05	203.2/8	250D159WA-203.2	1.15	Cover or Groove	WRD250:FPWRD250D30 WR159: FDP58/FDM58/FEP58/ FAP58/FAM58/FAE58	Al/ Cu	-
WRD250 to WR137	5.85-7.80	203.2/8	250D137WA-203.2	1.15	Cover or Groove	WRD250:FPWRD250D30 WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70	Al/ Cu	-
WRD250 to WR112	7.05-7.80	177.8/7	250D112WA-177.8	1.15	Cover or Groove	WRD250:FPWRD250D30 WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84	Al/ Cu	-
WRD350 to WR284	3.50-3.95	152.4/6	350D284WA-152.4	1.20	Cover or Groove	WRD350:FPWRD350D24 WR284: FDP32/FDM32/FEP32/ FAP32/FAM32/FAE32	Al/ Cu	-
WRD350 to WR229	3.50-4.90	152.4/6	350D229WA-152.4	1.20	Cover or Groove	WRD350:FPWRD350D24 WR229: FDP40/FDM40/FEP40/ FAP40/FAM40/FAE40	Al/ Cu	-
WRD350 to WR187	3.95-5.85	152.4/6	350D187WA-152.4	1.20	Cover or Groove	WRD350:FPWRD350D24 WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48	Al/ Cu	0.30
WRD350 to WR159	4.90-7.05	152.4/6	350D159WA-152.4	1.15	Cover or Groove	WRD350:FPWRD350D24 WR159: FDP58/FDM58/FEP58/ FAP58/FAM58/FAE58	Al/ Cu	-

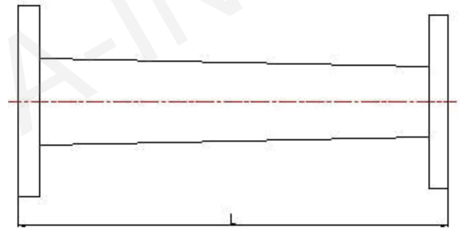
EIA WR	*Freq. (GHz)	Length (mm/inch)	P/N	VSWR	WRD Flange	WR Flange	*Mat.	*N.W.
WRD350 to WR137	5.85-8.20	152.4/6	350D137WA-152.4	1.15	Cover or Groove	WRD350:FPWRD350D24 WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70	Al/ Cu	0.25
WRD350 to WR112	7.05-8.20	152.4/6	350D112WA-152.4	1.15	Cover or Groove	WRD350:FPWRD350D24 WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84	Al/ Cu	-
WRD475 to WR187	4.75-5.85	152.4/6	475D187WA-152.4	1.15	Cover or Groove	WRD475:FPWRD475D24/ FMWRD475D24 WR187: FDP48/FDM48/FEP48/ FAP48/FAM48/FAE48	Al/ Cu	-
WRD475 to WR159	4.90-7.05	152.4/6	475D159WA-152.4	1.15	Cover or Groove	WRD475:FPWRD475D24/ FMWRD475D24 WR159: FDP58/FDM58/FEP58/ FAP58/FAM58/FAE58	Al/ Cu	-
WRD475 to WR137	5.85-8.20	147.3/5.8	475D137WA-147.3	1.15	Cover or Groove	WRD475:FPWRD475D24/ FMWRD475D24 WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70	Al/ Cu	-
WRD475 to WR112	7.05-10.0	114.3/4.5	475D112WA-114.3	1.15	Cover or Groove	WRD475:FPWRD475D24/ FMWRD475D24 WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84	Al/ Cu	0.10
WRD475 to WR90	8.20-11.0	152.4/6	475D90WA-152.4	1.15	Cover or Groove	WRD475:FPWRD475D24/ FMWRD475D24 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Al/ Cu	0.17
WRD475 to WR75	10.0-11.0	152.4/6	475D75WA-152.4	1.15	Cover or Groove	WRD475:FPWRD475D24/ FMWRD475D24 WR75: FBP120/FBM120/FBE120/ FDP120/FDM120	Al/ Cu	-
WRD580 to WR159	5.80-7.05	152.4/6	580D159WA-152.4	1.15	Cover or Groove	WRD580:FPWRD580D28/ FMWRD580D28 WR159: FDP58/FDM58/FEP58/ FAP58/FAM58/FAE58	Al/ Cu	-

EIA WR	*Freq. (GHz)	Length (mm/inch)	P/N	VSWR	WRD Flange	WR Flange	*Mat.	*N.W.
WRD580 to WR137	5.85-8.20	152.4/6	580D137WA-152.4	1.15	Cover or Groove	WRD580:FPWRD580D28/ FMWRD580D28 WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70	Al/ Cu	-
WRD580 to WR112	7.05-10.0	114.3/4.5	580D112WA-114.3	1.15	Cover or Groove	WRD580:FPWRD580D28/ FMWRD580D28 WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84	Al/ Cu	-
WRD580 to WR90	8.20-12.4	127/5	580D90WA-127	1.15	Cover or Groove	WRD580:FPWRD580D28/ FMWRD580D28 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Cu/ Al	-
WRD580 to WR75	10.0-15.0	114.3/4.5	580D75WA-114.3	1.15	Cover or Groove	WRD580:FPWRD580D28/ FMWRD580D28 WR75:FBP120/FBM120/ FBE120/FDP120/FDM120	Cu/ Al	0.10/ Al
WRD580 to WR62	12.4-16.0	101.6/4	580D62WA-101.6	1.15	Cover or Groove	WRD580:FPWRD580D28/ FMWRD580D28 WR62:FBP140/FBM140/ FBE140/FDP140/FDM140	Cu/ Al	-
WRD580 to WR51	15.0-16.0	152.4/6	580D51WA-152.4	1.15	Cover or Groove	WRD580:FPWRD580D28/ FMWRD580D28 WR51:FBP180/FBM180/ FBE180/FDP180/FDM180	Cu/ Al	-
WRD650 to WR159	6.50-7.05	152.4/6	650D159WA-152.4	1.25	Cover or Groove	WRD650:FPWRD650D28/ FMWRD650D28 WR159: FDP58/FDM58/FEP58/ FAP58/FAM58/FAE58	Al/ Cu	-
WRD650 to WR137	6.50-8.20	152.4/6	650D137WA-152.4	1.15	Cover or Groove	WRD650:FPWRD650D28/ FMWRD650D28 WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70	Al/ Cu	-
WRD650 to WR112	7.05-10.0	114.3/4.5	650D112WA-114.3	1.15	Cover or Groove	WRD650:FPWRD650D28/ FMWRD650D28 WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84	Al/ Cu	-
WRD650 to WR90	8.20-12.4	127/5	650D90WA-127	1.15	Cover or Groove	WRD650:FPWRD650D28/ FMWRD650D28 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Cu/ Al	-

EIA WR	*Freq. (GHz)	Length (mm/inch)	P/N	VSWR	WRD Flange	WR Flange	*Mat.	*N.W.
WRD580 to WR137	5.85-8.20	152.4/6	580D137WA-152.4	1.15	Cover or Groove	WRD580:FPWRD580D28/ FMWRD580D28 WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70	Al/ Cu	-
WRD580 to WR112	7.05-10.0	114.3/4.5	580D112WA-114.3	1.15	Cover or Groove	WRD580:FPWRD580D28/ FMWRD580D28 WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84	Al/ Cu	-
WRD580 to WR90	8.20-12.4	127/5	580D90WA-127	1.15	Cover or Groove	WRD580:FPWRD580D28/ FMWRD580D28 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Cu/ Al	-
WRD580 to WR75	10.0-15.0	114.3/4.5	580D75WA-114.3	1.15	Cover or Groove	WRD580:FPWRD580D28/ FMWRD580D28 WR75:FBP120/FBM120/ FBE120/FDP120/FDM120	Cu/ Al	0.10/ Al
WRD580 to WR62	12.4-16.0	101.6/4	580D62WA-101.6	1.15	Cover or Groove	WRD580:FPWRD580D28/ FMWRD580D28 WR62:FBP140/FBM140/ FBE140/FDP140/FDM140	Cu/ Al	-
WRD580 to WR51	15.0-16.0	152.4/6	580D51WA-152.4	1.15	Cover or Groove	WRD580:FPWRD580D28/ FMWRD580D28 WR51:FBP180/FBM180/ FBE180/FDP180/FDM180	Cu/ Al	-
WRD650 to WR159	6.50-7.05	152.4/6	650D159WA-152.4	1.25	Cover or Groove	WRD650:FPWRD650D28/ FMWRD650D28 WR159: FDP58/FDM58/FEP58/ FAP58/FAM58/FAE58	Al/ Cu	-
WRD650 to WR137	6.50-8.20	152.4/6	650D137WA-152.4	1.15	Cover or Groove	WRD650:FPWRD650D28/ FMWRD650D28 WR137: FDP70/FDM70/FEP70/ FAP70/FAM70/FAE70	Al/ Cu	-
WRD650 to WR112	7.05-10.0	114.3/4.5	650D112WA-114.3	1.15	Cover or Groove	WRD650:FPWRD650D28/ FMWRD650D28 WR112: FBP84/FBM84/FBE84/ FDP84/FDM84/FEP84	Al/ Cu	-
WRD650 to WR90	8.20-12.4	127/5	650D90WA-127	1.15	Cover or Groove	WRD650:FPWRD650D28/ FMWRD650D28 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Cu/ Al	-

EIA WR	*Freq. (GHz)	Length (mm/inch)	P/N	VSWR	WRD Flange	WR Flange	*Mat.	*N.W.
WRD110 to WR90	11.0-12.4	76.2/3	110D90WA-76.2_Cu	1.15	Cover or Groove	WRD110:FPWRD110C24/ FPWRD110C24 WR90: FBP100/FBM100/FBE100/ FDP100/FDM100/FEP100	Cu	-
WRD110 to WR75	11.0-15.0	76.2/3	110D75WA-76.2_Cu	1.15	Cover or Groove	WRD110:FPWRD110C24/ FPWRD110C24 WR75: FBP120/FBM120/FBE120/ FDP120/FDM120	Cu	-
WRD110 to WR62	12.4-18.0	63.5/2.5	110D62WA-63.5_Cu	1.15	Cover or Groove	WRD110:FPWRD110C24/ FPWRD110C24 WR62: FBP140/FBM140/FBE140/ FDP140/FDM140	Cu	-
WRD110 to WR51	15.0-22.0	63.5/2.5	110D51WA-63.5_Cu	1.15	Cover or Groove	WRD110:FPWRD110C24/ FPWRD110C24 WR51: FBP180/FBM180/FBE180/ FDP180/FDM180	Cu	-
WRD110 to WR42	18.0-26.5	50.8/2	110D42WA-50.8_Cu	1.15	Cover or Groove	WRD110:FPWRD110C24/ FPWRD110C24 WR42: FBP220/FBM220/FBE220	Cu	-
WRD110 to WR34	22.0-26.5	50.8/2	110D34WA-50.8_Cu	1.15	Cover or Groove	WRD110:FPWRD110C24/ FPWRD110C24 WR34: FBP260/FBM260/FBE260	Cu	-
WRD180 to WR42	18.0-26.5	50.8/2	180D42WA-50.8_Cu	1.2	Cover or Groove	WRD180:FPWRD180C24/ FMWRD180C24 WR42: FBP220/FBM220/FBE220	Cu	-
WRD180 to WR34	22.0-33.0	50.8/2	180D34WA-50.8_Cu	1.2	Cover or Groove	WRD180:FPWRD180C24/ FMWRD180C24 WR34: FBP260/FBM260/FBE260	Cu	-
WRD180 to WR28	26.5-40.0	50.8/2	180D28WA-50.8_Cu	1.2	Cover or Groove	WRD180:FPWRD180C24/ FMWRD180C24 WR28: FBP320/FBM320/FBE320	Cu	-

WG Transition - Double Ridge to Double Ridge



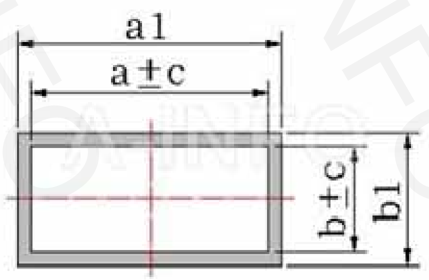
*Freq. = Frequency
*Mat. = Material

Ordering Information
P/N：

250D	350D	WA	-203.2
WRD Size	WRD Size	Product Code	Length (mm)

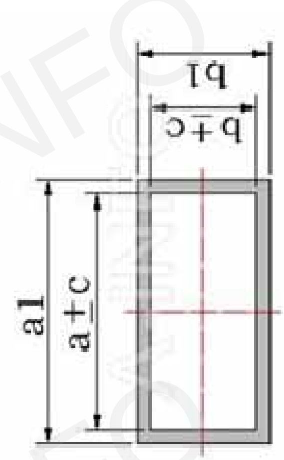
EIA WR	*Freq. (GHz)	Length (mm/inch)	P/N	VSWR	WR Flange	*Mat.
WRD250 to WRD350	3.5-7.8	203.2/8	250D350DWA-203.2	1.15	WRD250:FPWRD250D30 WRD350:FPWRD350D24	Al/Cu
WRD475 to WRD580	5.8-11.0	165.1/6.5	475D580DWA-165.1	1.15	WRD475:FPWRD475D24 WRD580:FPWRD580D28	Cu/Al
WRD475 to WRD650	6.5-11.0	165.1/6.5	475D650DWA-165.1	1.15	WRD475:FPWRD475D24 WRD650:FPWRD650D28	Cu/Al
WRD475 to WRD750	7.5-11.0	165.1/6.5	475D750DWA-165.1	1.15	WRD475:FPWRD475D24 WRD750:FPWRD750D24	Cu/Al
WRD580 to WRD650	6.5-16.0	152.4/6	580D650DWA-152.4	1.15	WRD580:FPWRD580D28 WRD650:FPWRD650D28	Cu/Al
WRD580 to WRD750	7.5-16.0	152.4/6	580D750DWA-152.4	1.15	WRD580:FPWRD580D28 WRD750:FPWRD750D24	Cu/Al
WRD650 to WRD750	7.5-18.0	152.4/6	650D750DWA-152.4	1.15	WRD650:FPWRD650D28 WRD750:FPWRD750D24	Cu/Al

Regular Waveguide Information



BJ	IEC 153 R	EIA WR	Frequency Range(GHz)	Inside Dimension Width a(mm)	Inside Dimension Height b(mm)	Inside Dimension Std. Tol. +/-c(mm)	Wall Thickness (nominal)(mm)	Outside Dimension(mm) Width a1(mm)	Outside Dimension(mm) Height b1(mm)	Outside Dimension(mm) Std. Tol. +/-(mm)	Attenuation(dB/m) Freq. (GHz)	Attenuation(dB/m) Theoretical	Attenuation(dB/m) Max.
BJ3	R3	WR2300	0.32-0.49	584.2	292.1	-	-	-	-	-	0.385	0.00078	-
BJ4	R4	WR2100	0.35-0.53	533.4	266.7	-	-	-	-	-	0.422	0.0009	0.001
BJ5	R5	WR1800	0.41-0.62	457.2	228.6	-	-	-	-	-	0.49	0.00113	0.0012
BJ6	R6	WR1500	0.49-0.75	381	190.5	-	-	-	-	-	0.59	0.00149	0.0015
BJ8	R8	WR1150	0.64-0.96	292.1	146.05	-	-	-	-	-	0.77	0.00221	0.002
BJ9	R9	WR975	0.75-1.12	247.65	123.82	-	-	-	-	-	0.91	0.00283	0.003
BJ12	R12	WR770	0.96-1.45	195.58	97.79	-	-	-	-	-	1.15	0.00405	0.004
BJ14	R14	WR650	1.12-1.70	165.1	82.55	0.33	2.030	169.16	86.61	0.2	1.36	0.00522	0.005
BJ18	R18	WR510	1.45-2.20	129.54	64.77	0.26	2.030	133.6	68.83	0.2	1.74	0.00748	0.007
BJ22	R22	WR430	1.70-2.60	109.22	54.61	0.22	2.030	113.28	58.67	0.2	2.06	0.00967	0.01
BJ26	R26	WR340	2.20-3.30	86.36	43.18	0.17	2.030	90.42	47.24	0.17	2.6	0.00138	0.013
BJ32	R32	WR284	2.60-3.95	72.14	34.04	0.14	2.030	76.2	38.1	0.14	3.12	0.0188	0.018
BJ40	R40	WR229	3.30-4.90	58.17	29.08	0.12	1.625	61.42	32.33	0.12	3.87	0.0249	0.024
BJ48	R48	WR187	3.95-5.85	47.549	22.149	0.095	1.625	50.8	25.4	0.1	4.73	0.0354	0.032
BJ58	R58	WR159	4.90-7.05	40.386	20.193	0.081	1.625	43.64	23.44	0.08	5.57	0.043	0.046
BJ70	R70	WR137	5.85-8.20	34.849	15.799	0.07	1.625	38.1	19.05	0.08	6.45	0.0575	0.056
BJ84	R84	WR112	7.05-10.0	28.499	12.624	0.057	1.625	31.75	15.88	0.05	7.89	0.0791	0.075

Regular Waveguide Information



BJ	IEC 153 R	EIA WR	Frequency Range(GHz)	Inside Dimension: Width a(mm)	Inside Dimension: Height b(mm)	Inside Dimension: Std. Tol. +/- c(mm)	Wall Thickness (nominal)(mm)	Outside Dimension(mm): Width a1(mm)	Outside Dimension(mm): Height b1(mm)	Outside Dimension(mm): Std. Tol. +/- (mm)	Attenuation(dB/m): Freq. (GHz)	Attenuation(dB/m): Theoretical	Attenuation(dB/m): Max.
BJ100	R100	WR90	8.20-12.4	22.86	10.16	0.046	1.270	25.4	12.7	0.05	9.84	0.11	0.103
BJ120	R120	WR75	10.0-15.0	19.05	9.525	0.038	1.270	21.59	12.06	0.05	11.8	0.133	0.143
BJ140	R140	WR62	12.4-18.0	15.799	7.899	0.031	1.015	17.83	9.93	0.05	14.2	0.176	-
BJ180	R180	WR51	15.0-22.0	12.954	6.477	0.026	1.015	14.99	8.51	0.05	17.4	0.236	-
BJ220	R220	WR42	18.0-26.5	10.668	4.318	0.021	1.015	12.7	6.35	0.05	21.1	0.368	-
BJ260	R260	WR34	22.0-33.0	8.636	4.318	0.02	1.015	10.67	6.35	0.05	26	0.436	-
BJ320	R320	WR28	26.5-40.0	7.112	3.556	0.02	1.015	9.14	5.59	0.05	31.6	0.583	-
BJ400	R400	WR22	33.0-50.0	5.69	2.845	0.02	1.015	7.72	4.88	0.05	39.5	0.815	-
BJ500	R500	WR19	40.0-60.0	4.775	2.388	0.02	1.015	6.81	4.42	0.05	47.1	1.058	-
BJ620	R620	WR15	50.0-75.0	3.759	1.88	0.02	1.015	5.79	3.91	0.05	59.8	1.52	-
BJ740	R740	WR12	60.0-90.0	3.0988	1.5494	0.0127	1.015	5.13	3.58	0.05	72.6	2.02	-
BJ900	R900	WR10	75.0-110.0	2.54	1.27	0.0127	1.015	4.57	3.3	0.05	88.5	2.73	-
BJ1200	R1200	WR8	90.0-140.0	2.032	1.016	0.0076	0.760	3.556	2.54	0.025	110.7	3.81	-
BJ1400	R1400	WR6	110.0-170.0	1.651	0.8255	0.0064	0.760	3.175	2.35	0.025	136.2	5.21	-
BJ1800	R1800	WR5	140.0-220.0	1.2954	0.6477	0.0064	0.760	2.819	2.172	0.025	173.6	7.49	-
BJ2200	R2200	WR4	170.0-260.0	1.0922	0.5461	0.0051	0.760	2.616	2.07	0.025	205.9	9.68	-
BJ2600	R2600	WR3	220.0-325.0	0.8636	0.4318	0.0051	0.760	2.388	1.956	0.025	260.2	13.76	-

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Standard Flange Information

1. Standard Flange Information

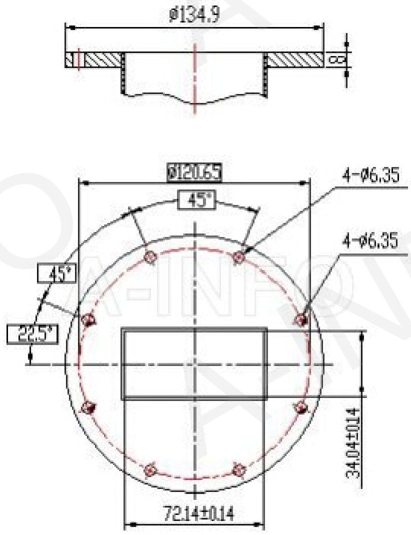
International Standard Waveguide	A Type			B Type			C Type		D Type		E Type	LD Type		UG
	FAP	FAM	FAE	FBP	FBM	FBE	FCP	FCM	FDP	FDM	FEP	LFDP	LFDM	FUGP
WR2300									FDP3					
WR2100									FDP4					
WR1800									FDP5					
WR1500									FDP6					
WR1150									FDP8					
WR975									FDP9					
WR770									FDP12					
WR650									FDP14	FDM14		LFDP14	LFDM14	
WR510									FDP18	FDM18		LFDP18	LFDM18	
WR430									FDP22	FDM22		LFDP22	LFDM22	
WR340									FDP26	FDM26		LFDP26	LFDM26	
WR284	FAP32	FAM32	FAE32						FDP32	FDM32	FEP32	LFDP32	LFDM32	
WR229	FAP40	FAM40	FAE40						FDP40	FDM40	FEP40	LFDP40	LFDM40	
WR187	FAP48	FAM48	FAE48						FDP48	FDM48	FEP48	LFDP48	LFDM48	
WR159	FAP58	FAM58	FAE58						FDP58	FDM58	FEP58	LFDP58	LFDM58	
WR137	FAP70	FAM70	FAE70						FDP70	FDM70	FEP70	LFDP70	LFDM70	
WR112				FBP84	FBM84	FBE84			FDP84	FDM84	FEP84			
WR90				FBP100	FBM100	FBE100			FDP100	FDM100	FEP100			
WR75				FBP120	FBM120	FBE120			FDP120	FDM120				
WR62				FBP140	FBM140	FBE140			FDP140	FDM140				
WR51				FBP180	FBM180	FBE180			FDP180	FDM180				
WR42				FBP220	FBM220	FBE220	FCP220	FCM220						
WR34				FBP260	FBM260	FBE260	FCP260	FCM260						
WR28				FBP320	FBM320	FBE320	FCP320	FCM320						
WR22	FAP400	FAM400					FCP400	FCM400						FUGP400
WR19	FAP500	FAM500					FCP500	FCM500						FUGP500
WR15	FAP620	FAM620												FUGP620
WR12	FAP740	FAM740												FUGP740
WR10	FAP900	FAM900												FUGP900
WR8	Refer Precision Flange Information													
WR6	Refer Precision Flange Information													
WR5	Refer Precision Flange Information													
WR4	Refer Precision Flange Information													
WR3	Refer Precision Flange Information													

2. Waveguide Flange Equivalent

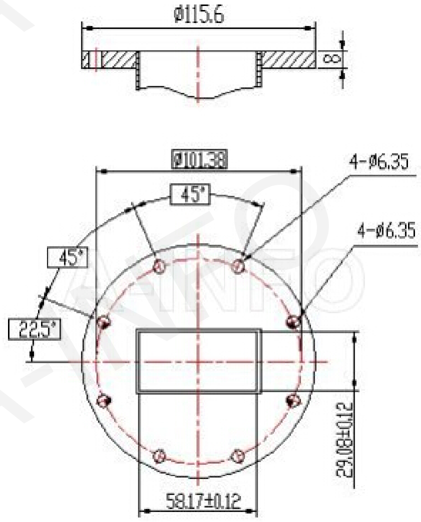
GB 11449-1989	IEC Std. Flange	UG Flange
FAE	CAR	-
FAM	PAR	-
FAP	UAR	-
FBE	CBR	-
FBM	PBR	-
FBP	UBR	-
FCM	PCR	-
FCP	VCR	-
FDM	PDR	-
FDP	UDR	-
FEP	UER	-
FUGP400	-	UG-383/U
FUGP500	-	UG-383/U modified
FUGP620	-	UG-385/U modified
FUGP740	–	UG-387/U
FUGP900	-	UG-387/U modified

3. Flange Drawing

3.1 A Type Flange (FAP, FAM, FAE)



FAP32



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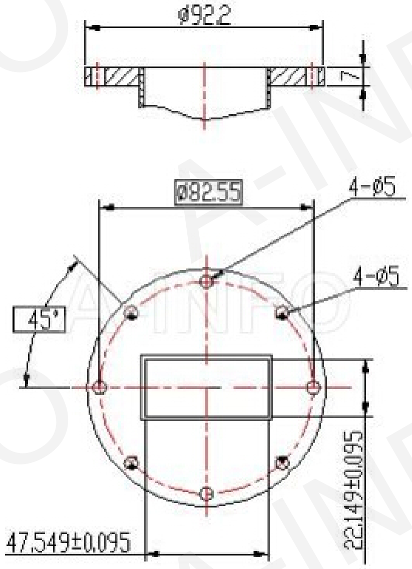
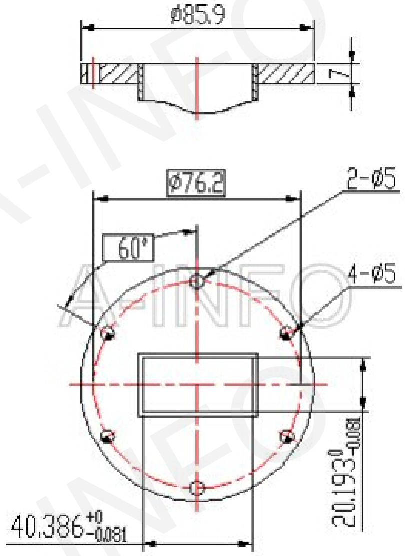


FAP48



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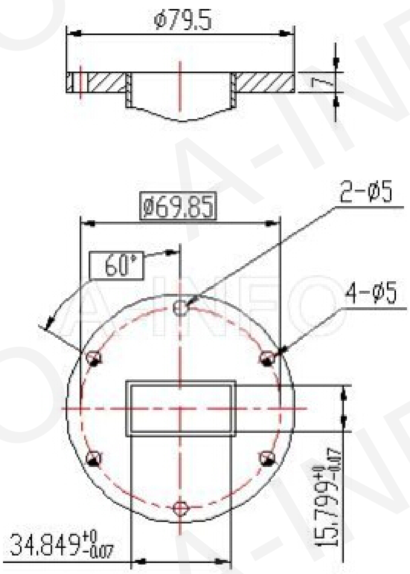

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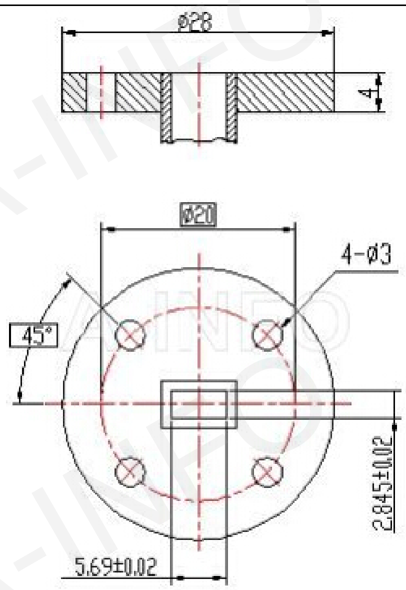

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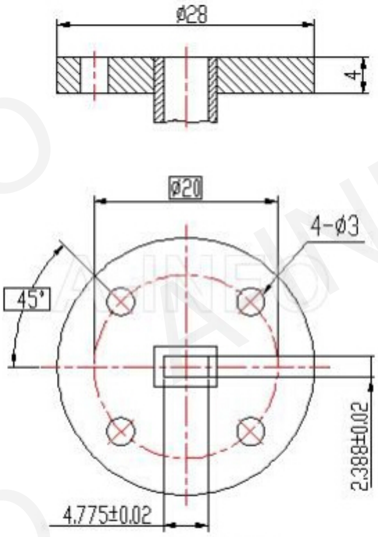
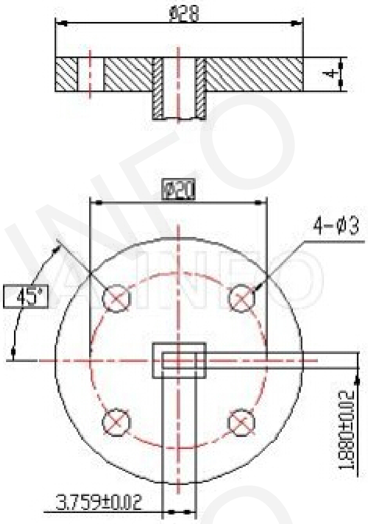
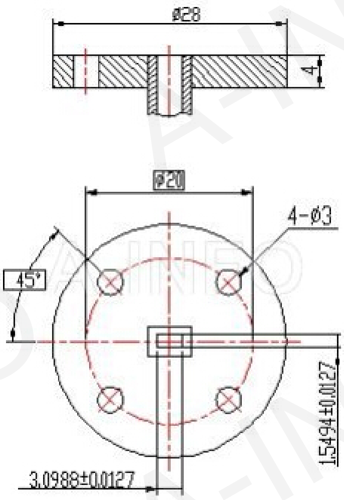


FAP500



FAP620



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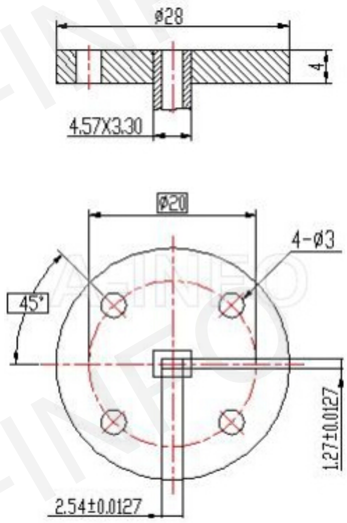
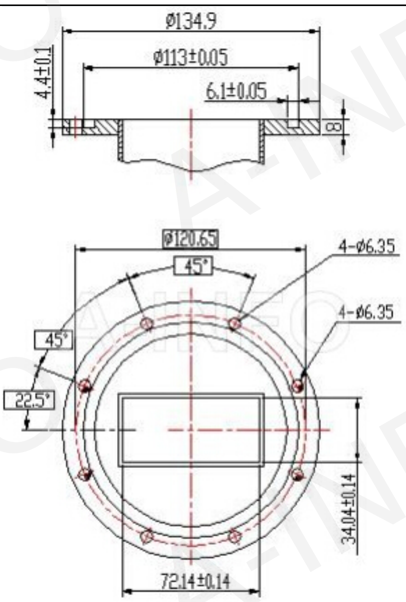


FAP900



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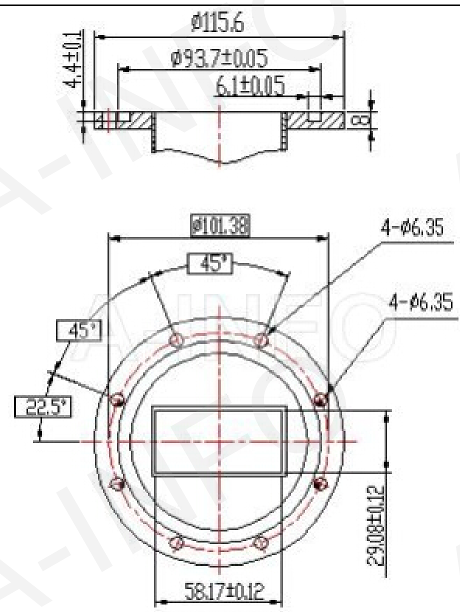

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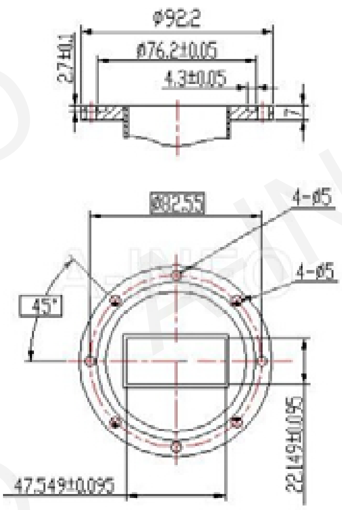

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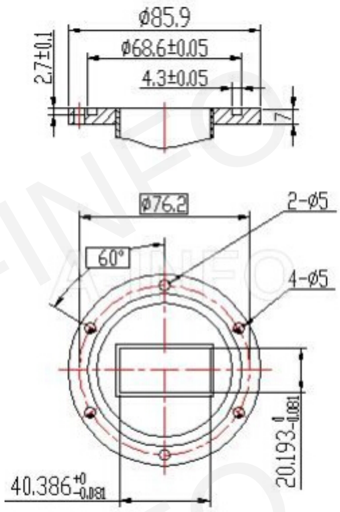

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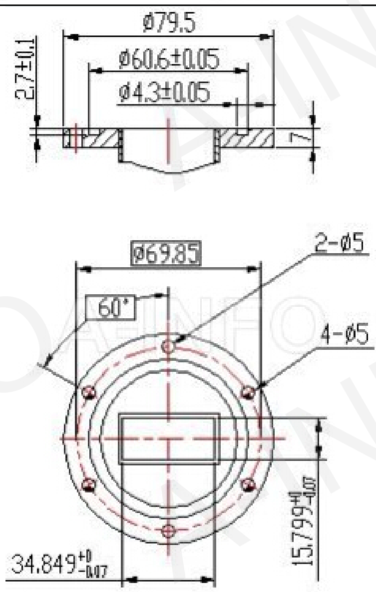

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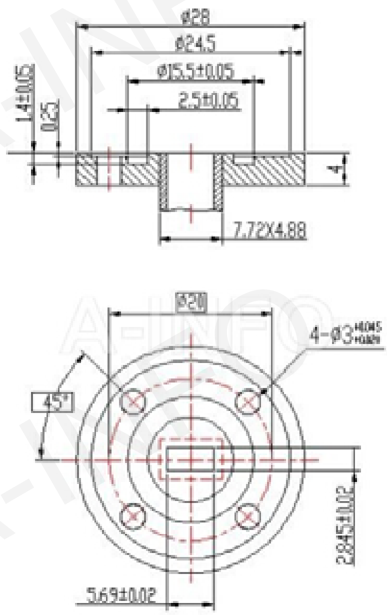

FAM400

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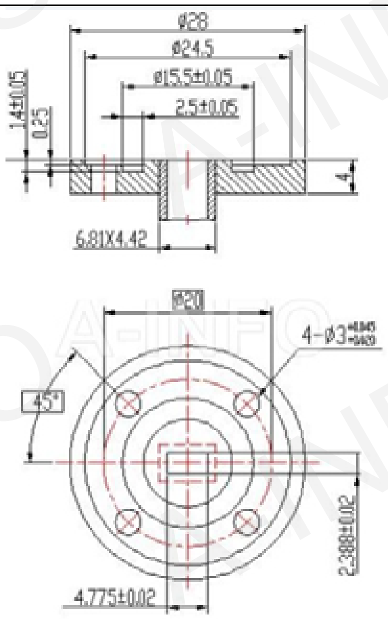
Flange Information



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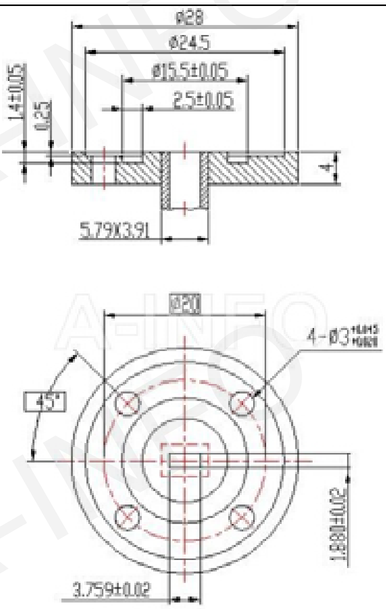

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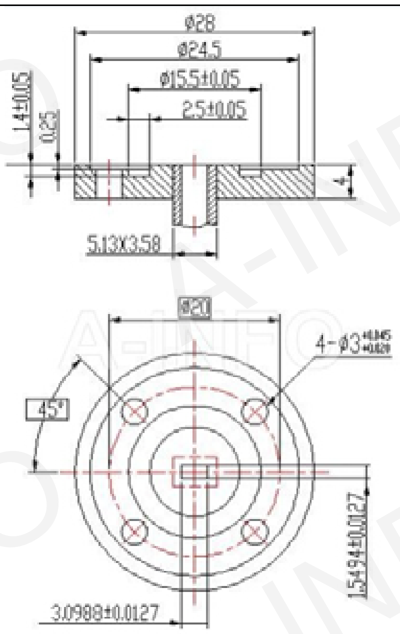

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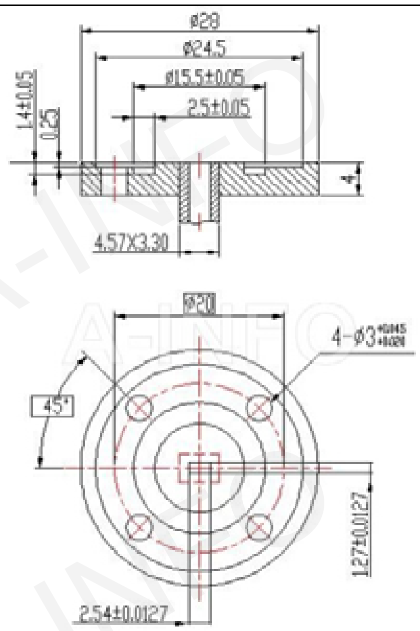

FAM900

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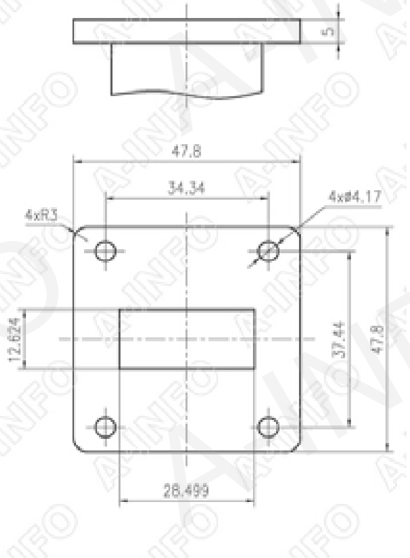
3.2 B Type Flange (FBP, FBM, FBE)



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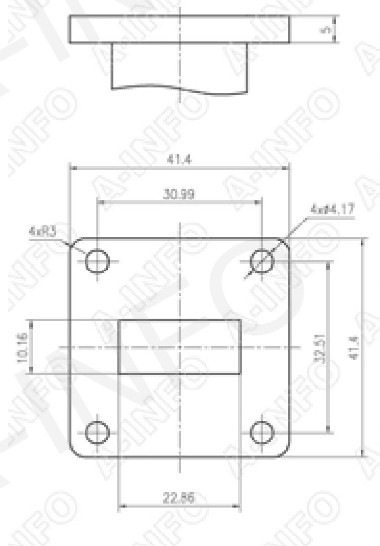
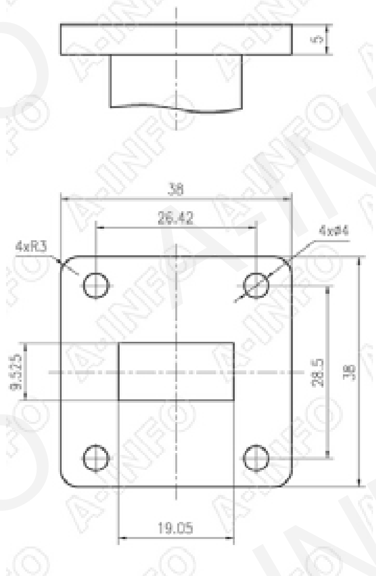
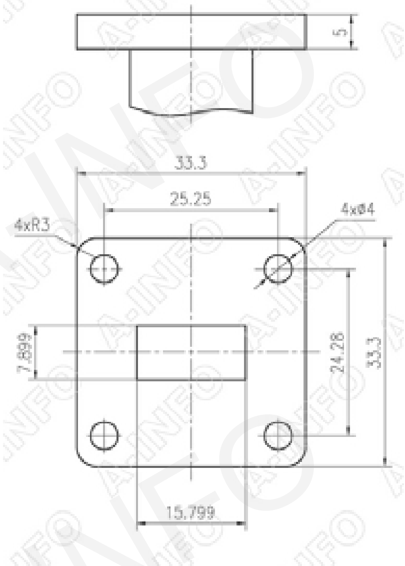


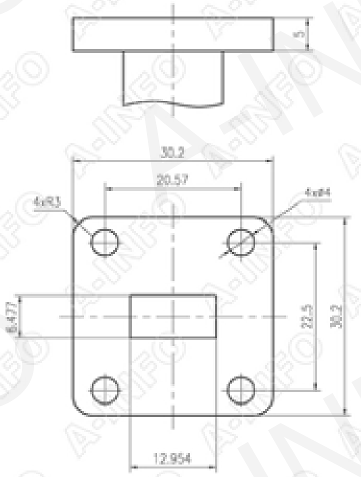
FBP100



FBP120



FBP140



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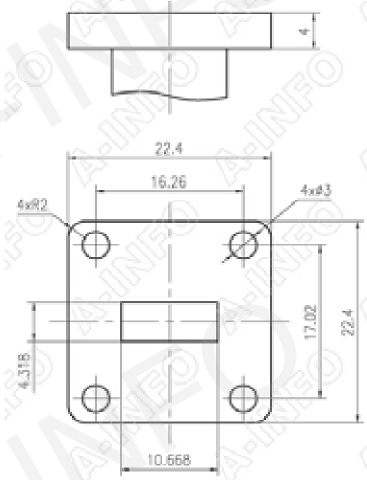

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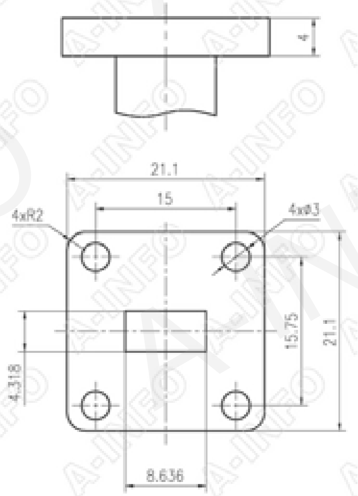

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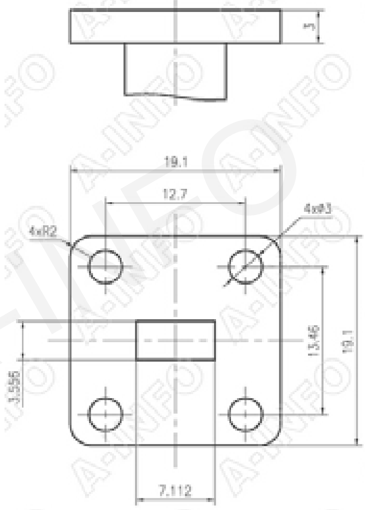

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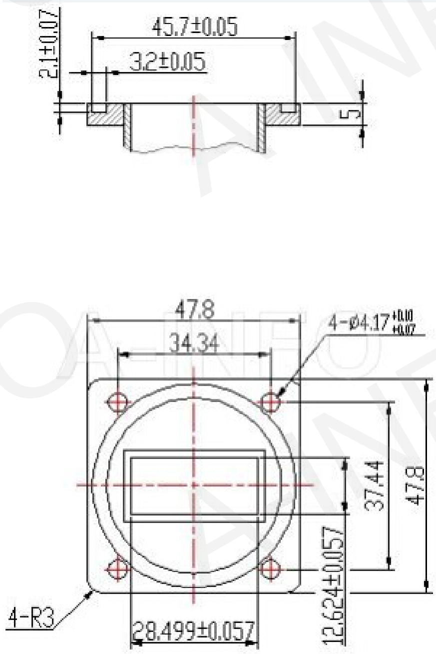

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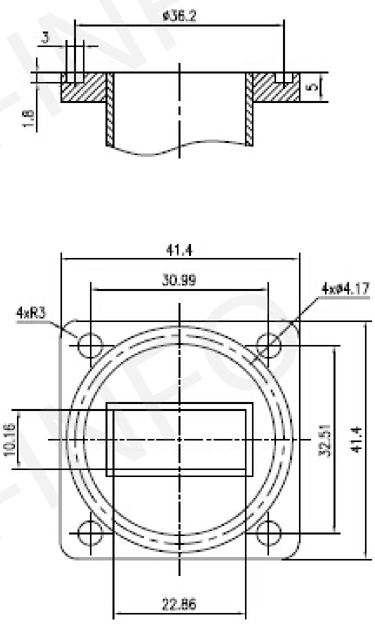

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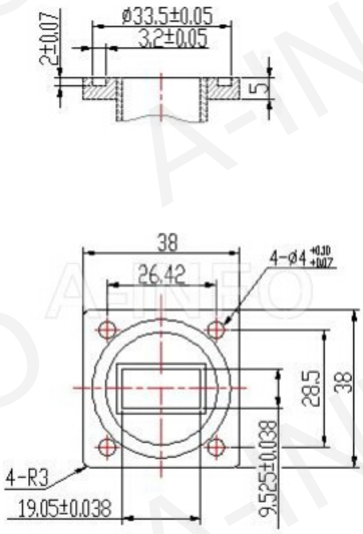

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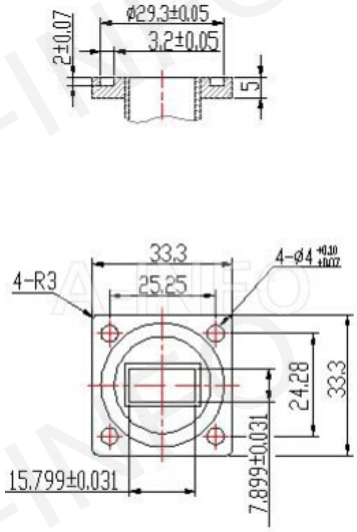

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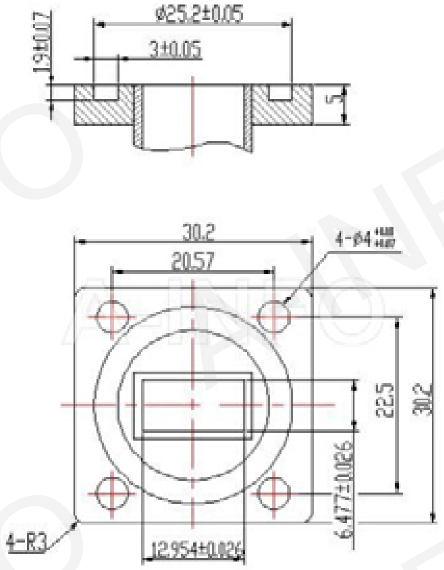

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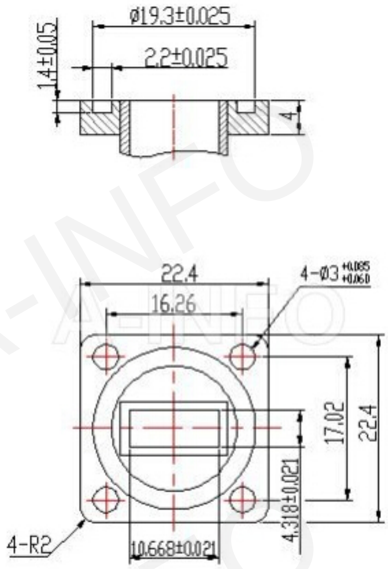

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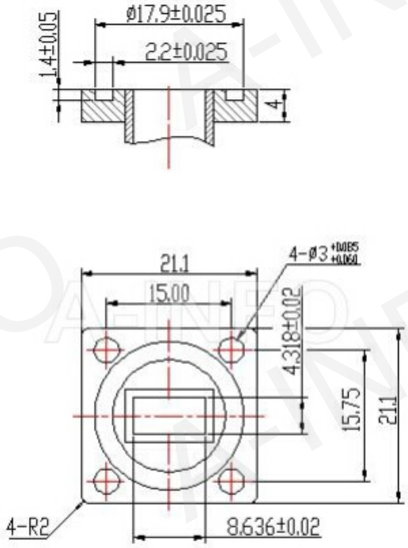

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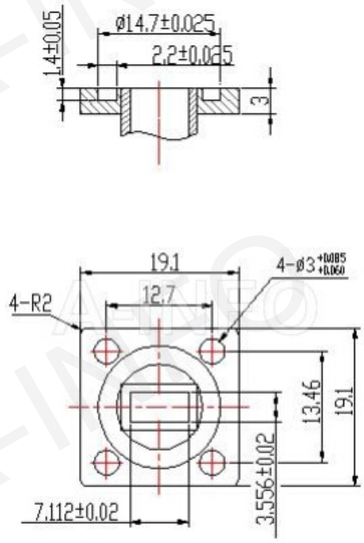

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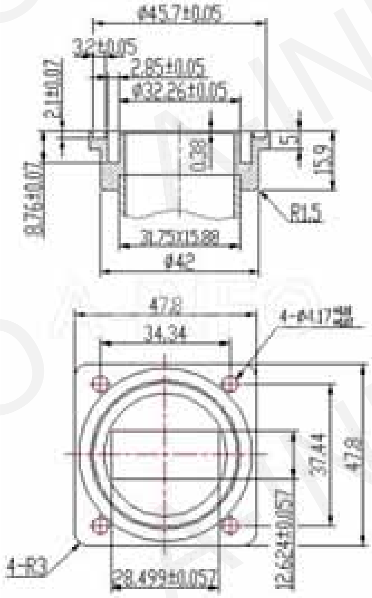

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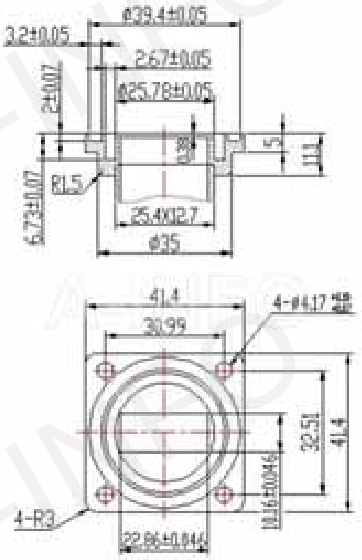

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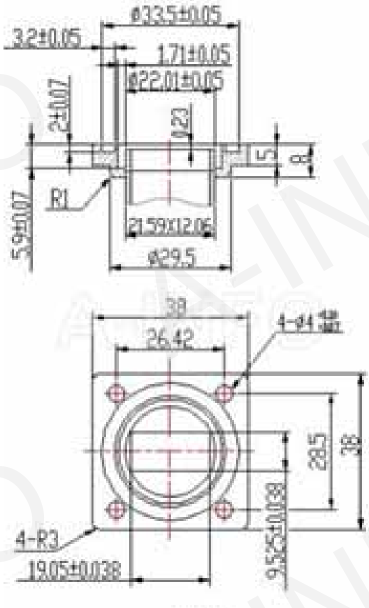

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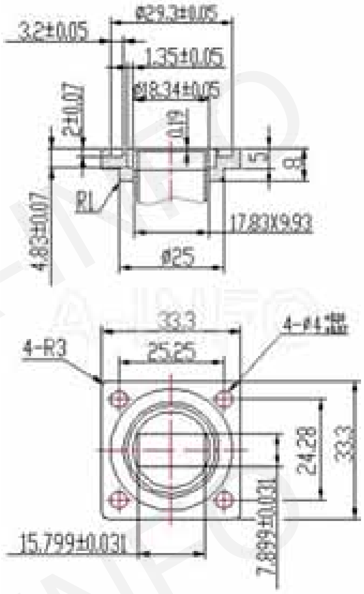

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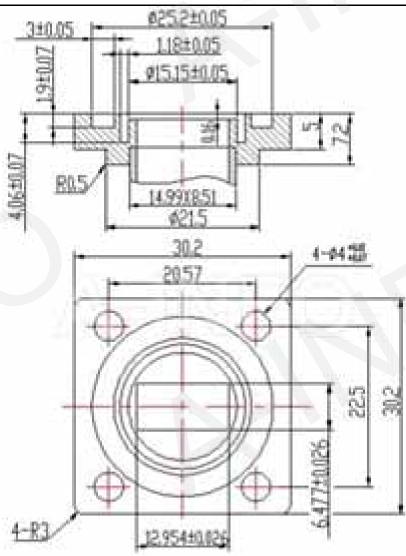

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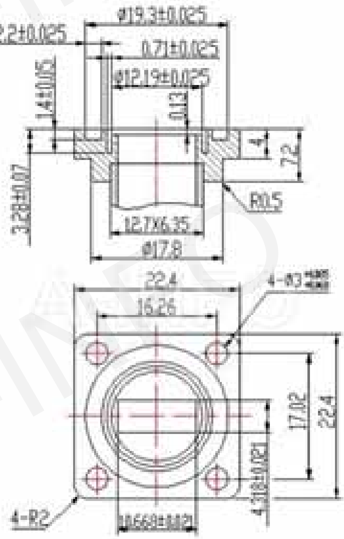

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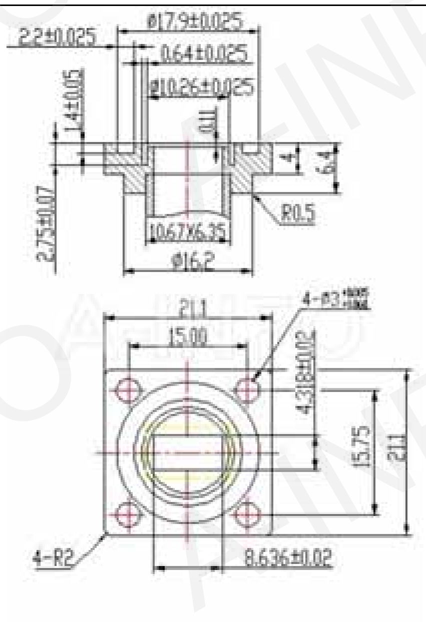

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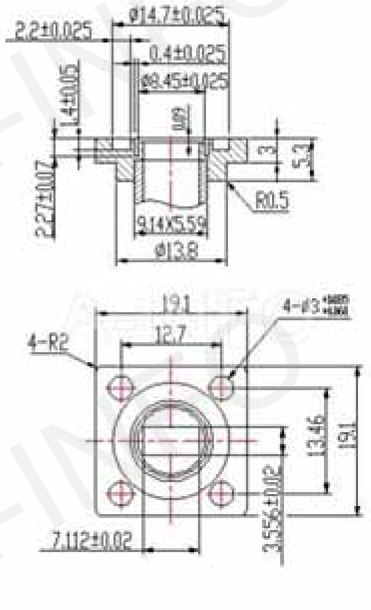

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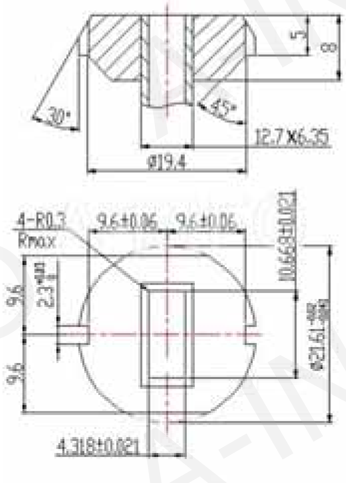
3.3 C Type Flange (FCP, FCM)



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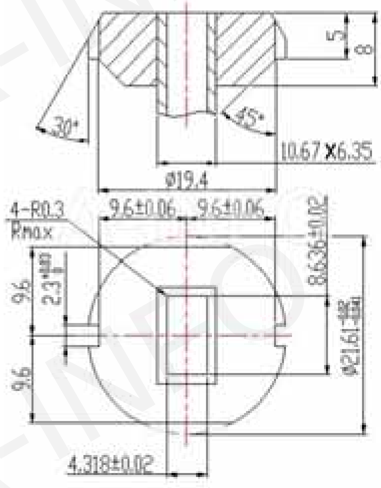

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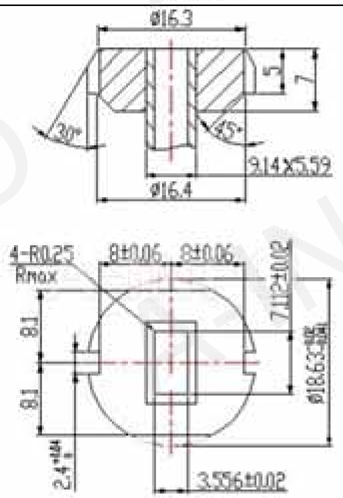

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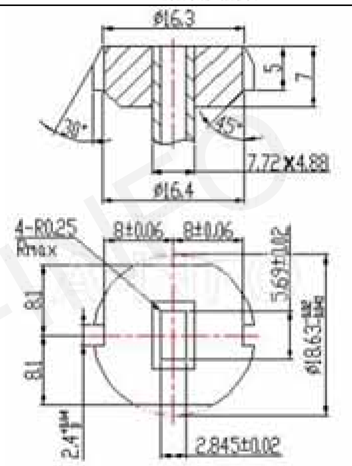
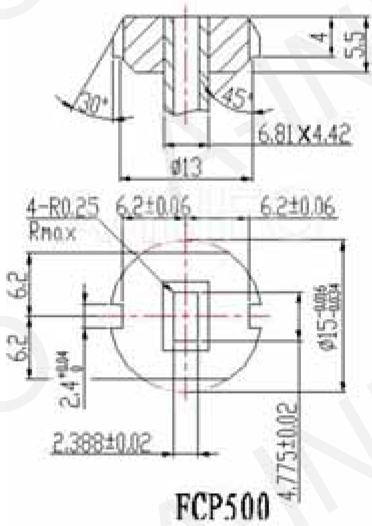


FCP400

Flange Information



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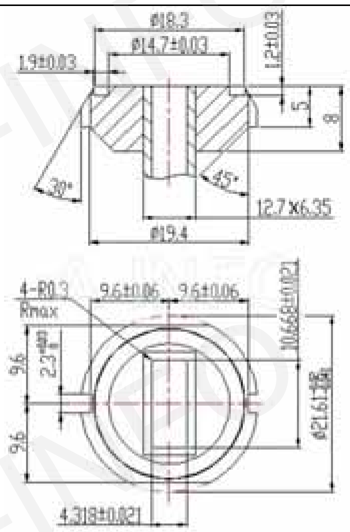

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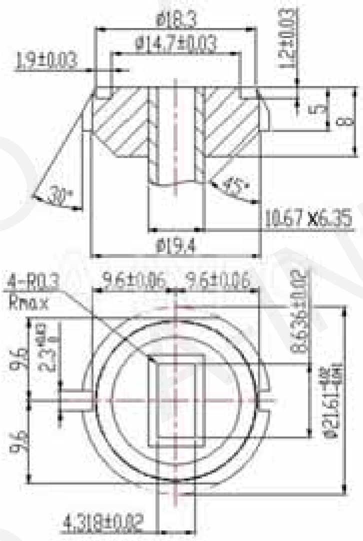

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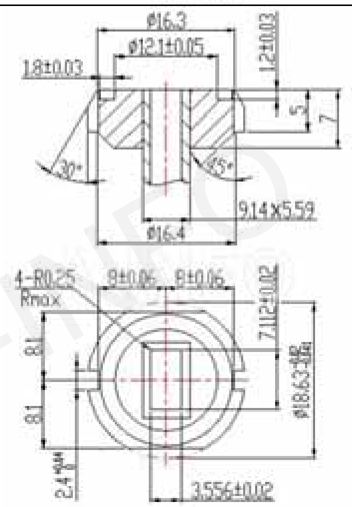

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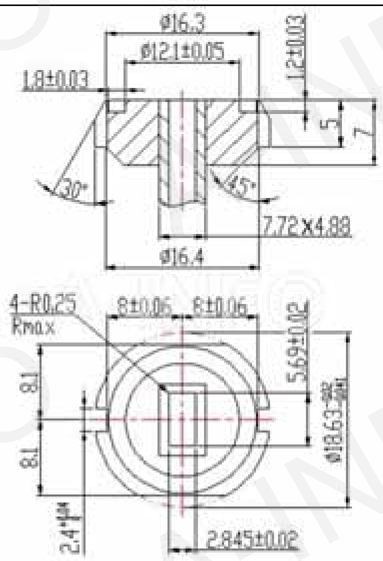

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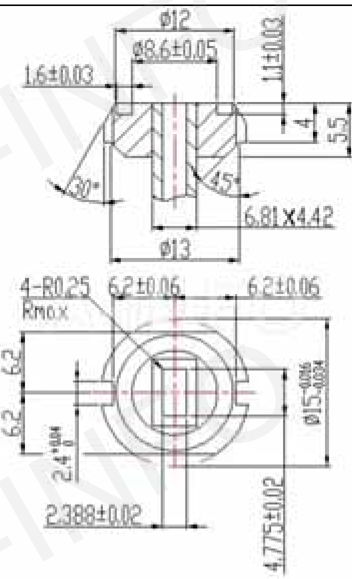

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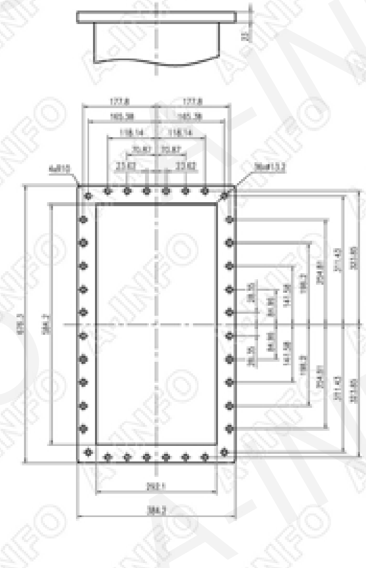
3.4 D Type Flange (FDP, FDM)



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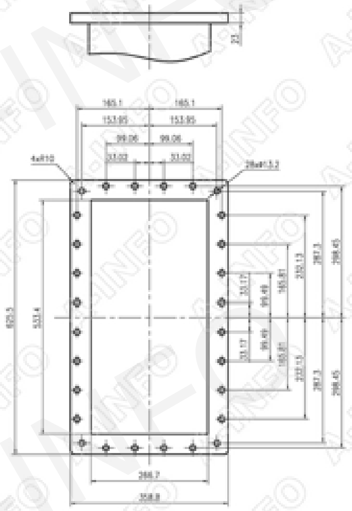

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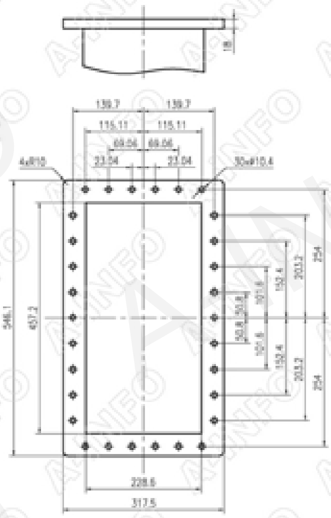

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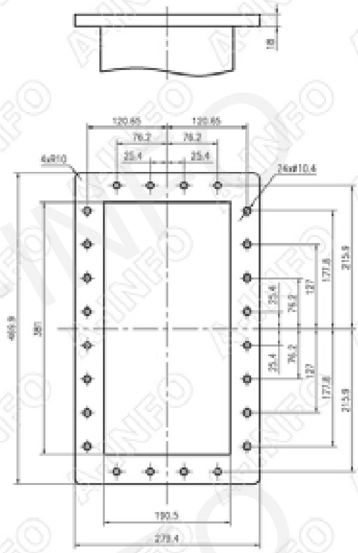

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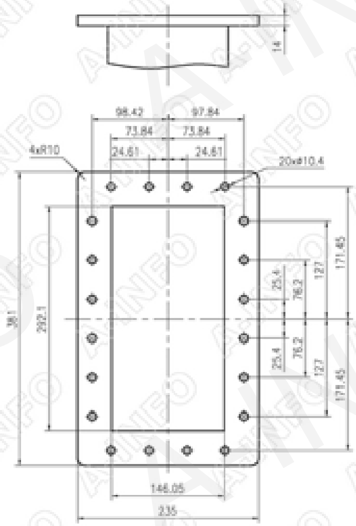

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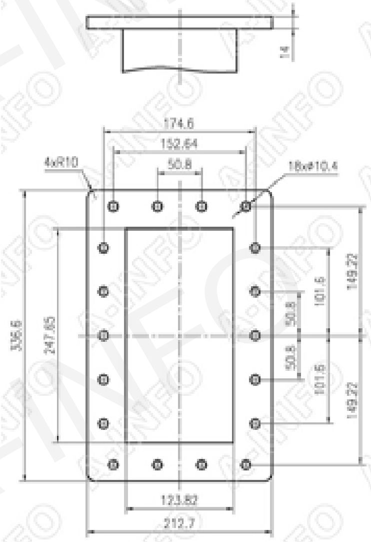

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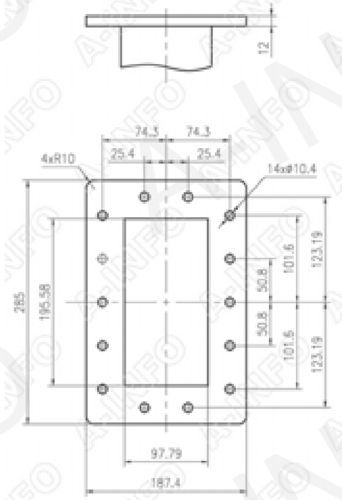

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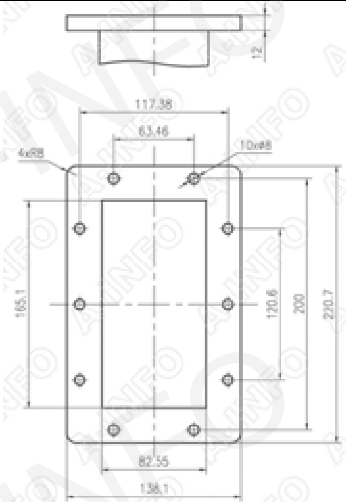

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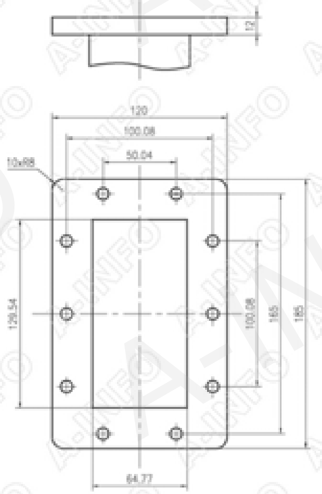

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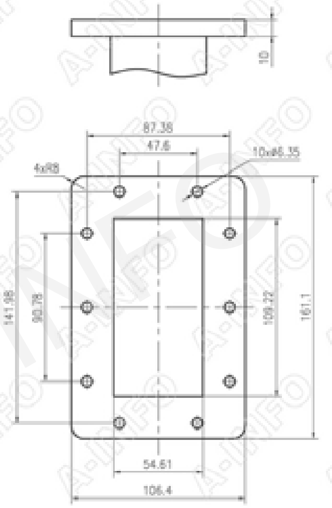

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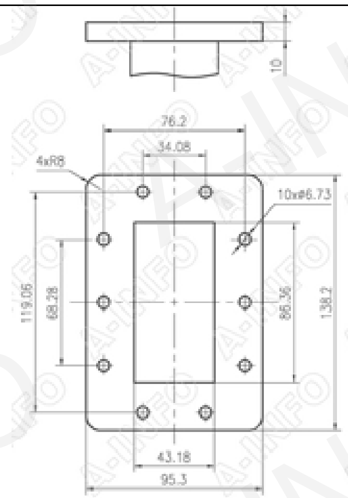

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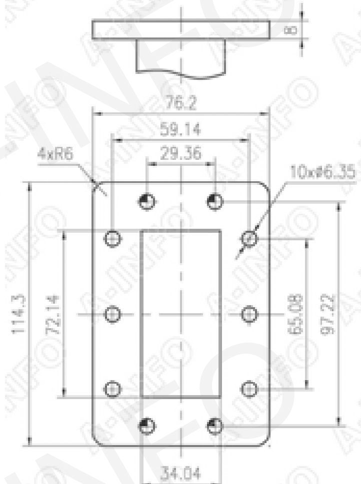

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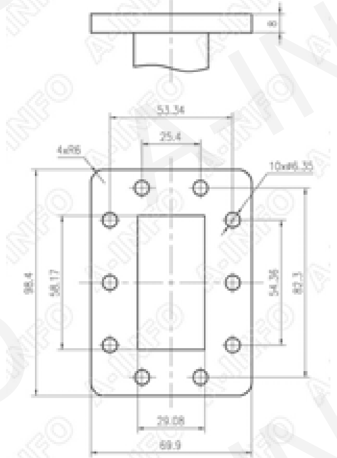

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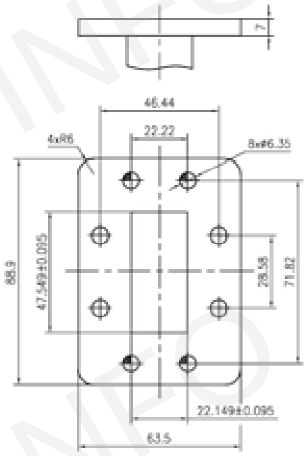

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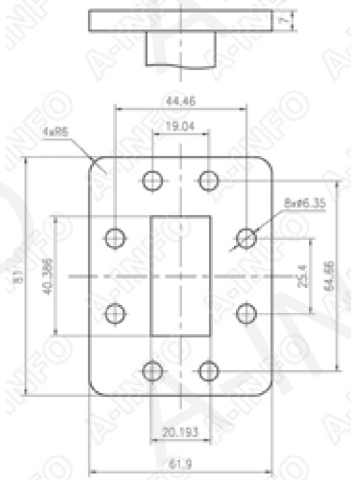

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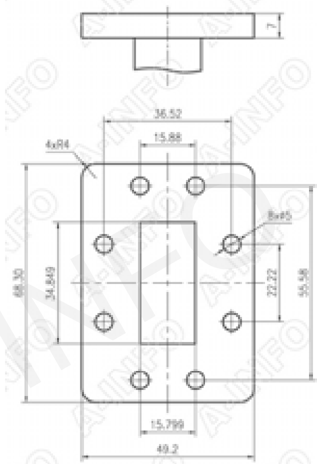

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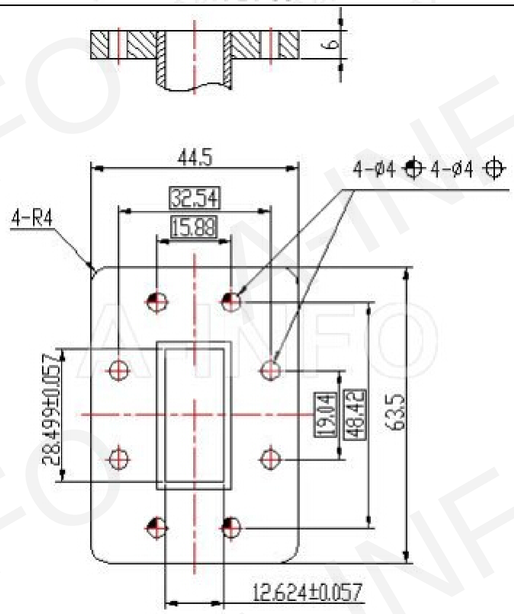

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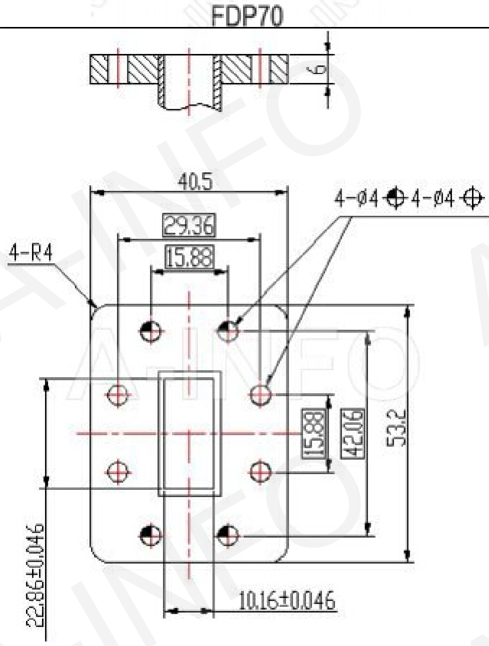

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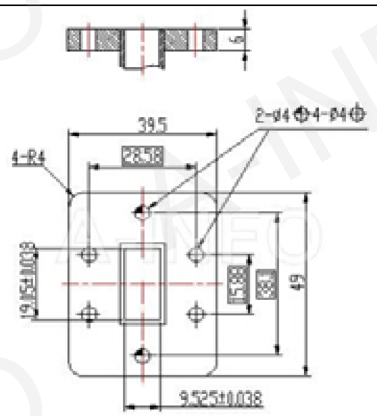

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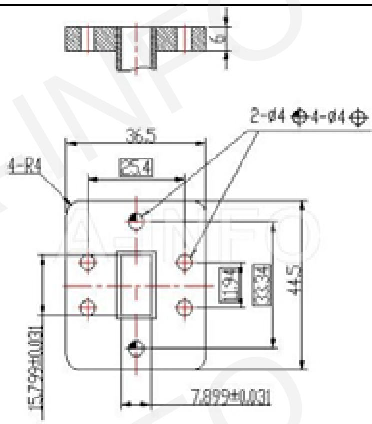

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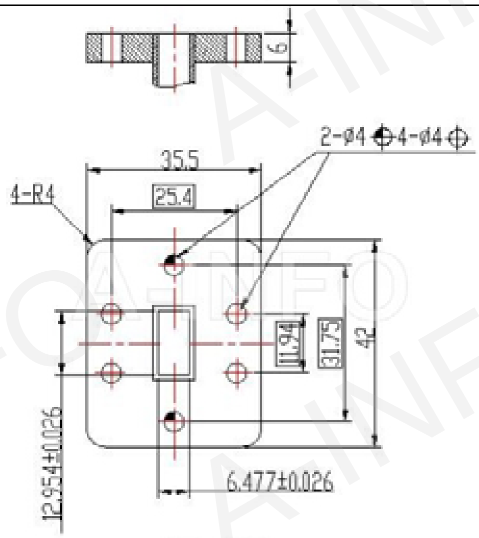

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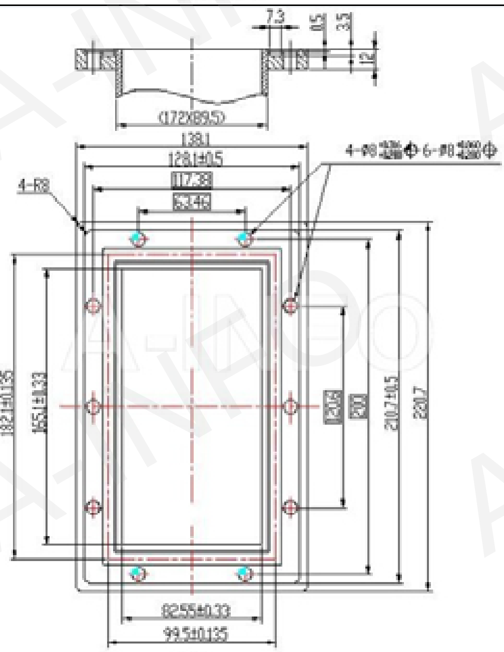

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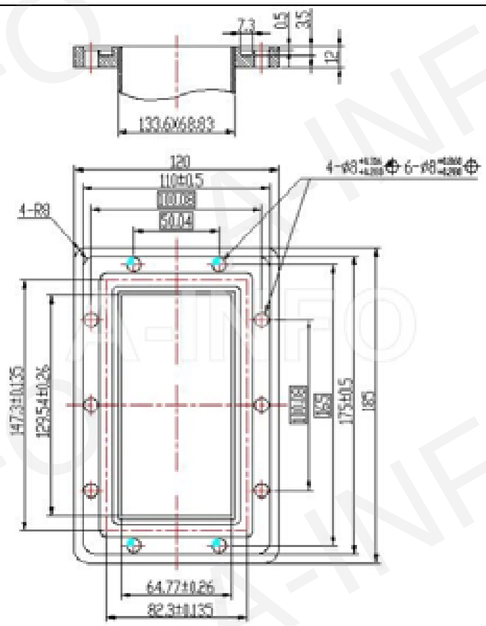

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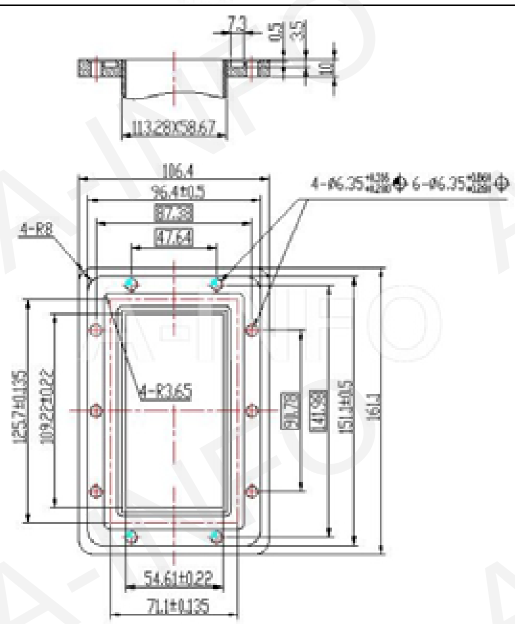

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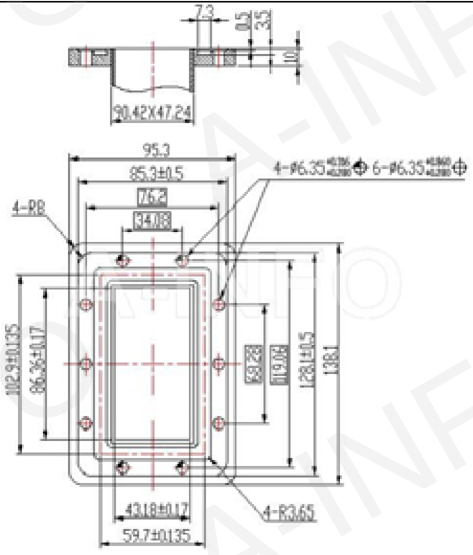

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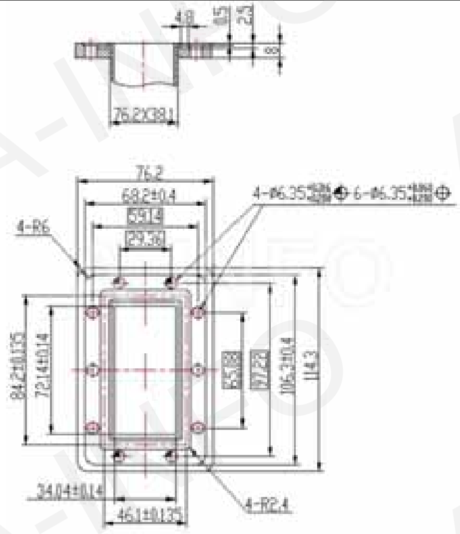

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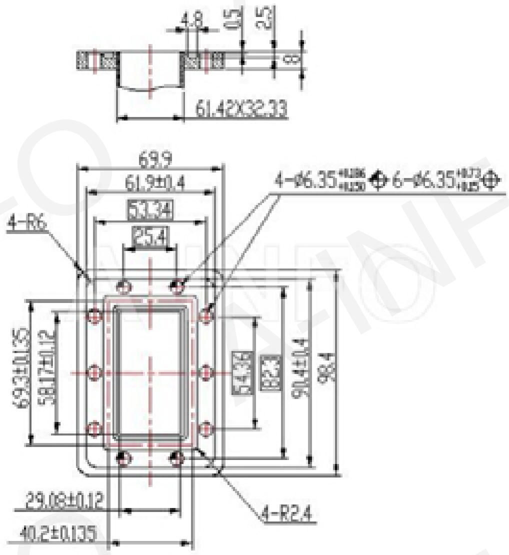

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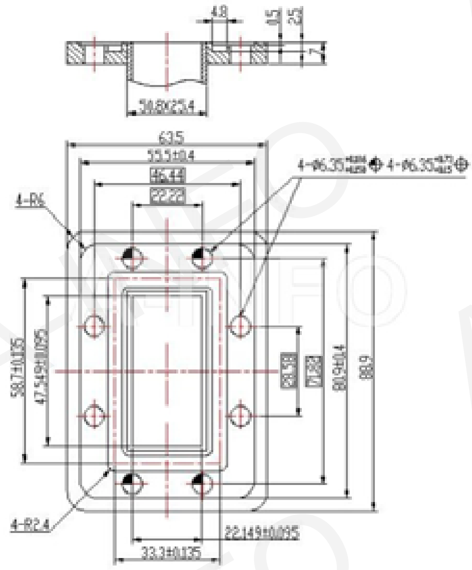

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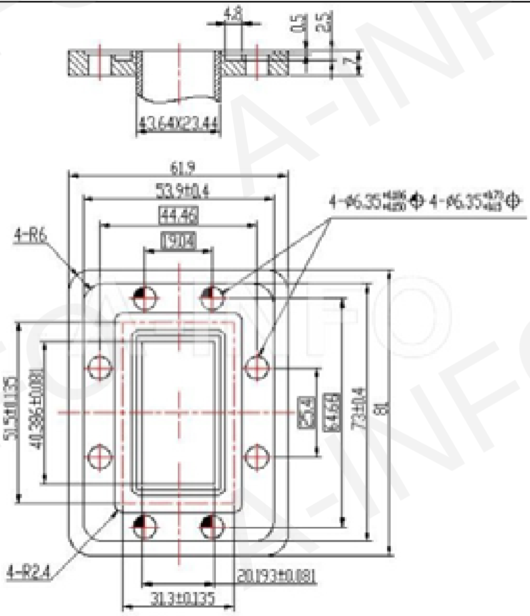

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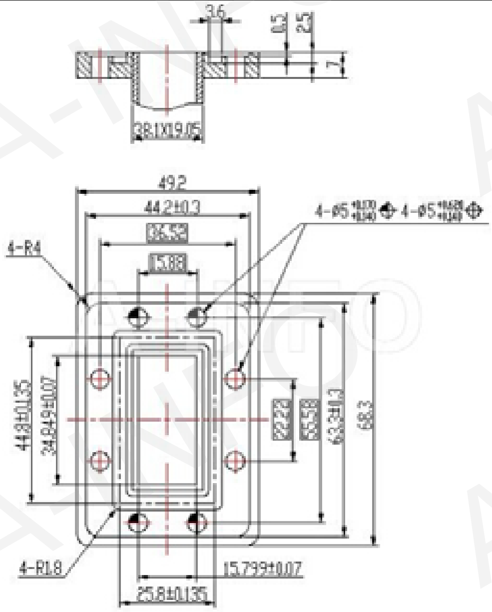

FDM70

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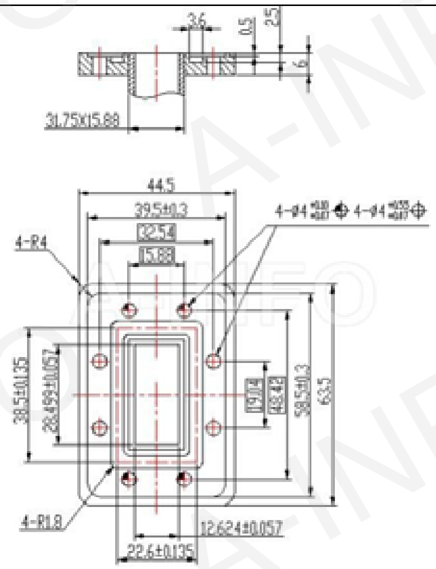
Tél. 01 47 95 99 60 - Fax. 01 47 01 16 22 - e-mail: hyper@es-france.com - Site Web: www.es-france.com

Flange Information



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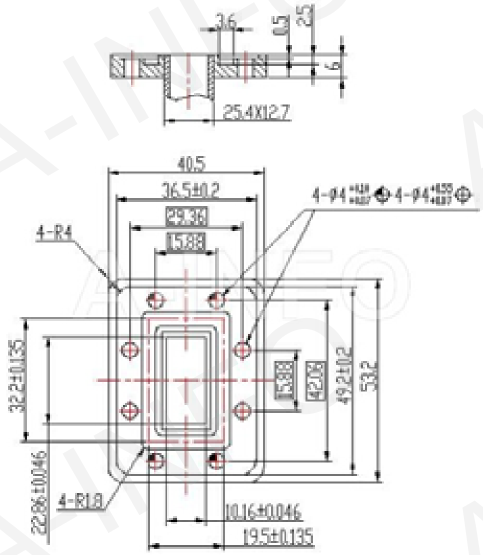

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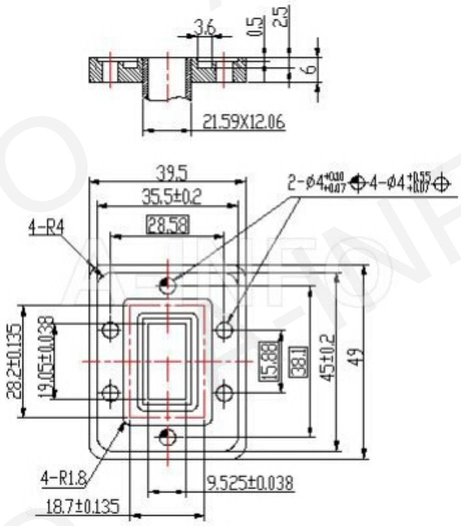

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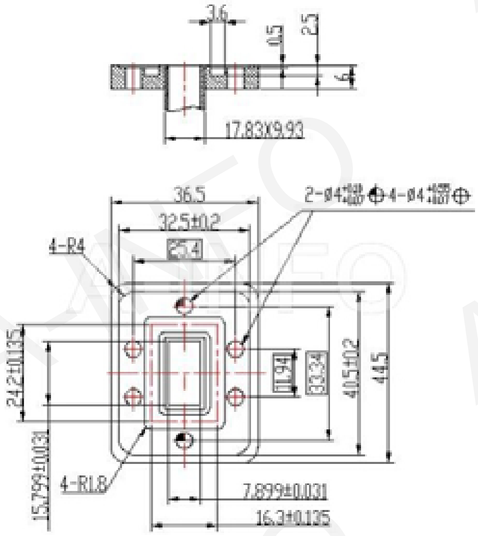

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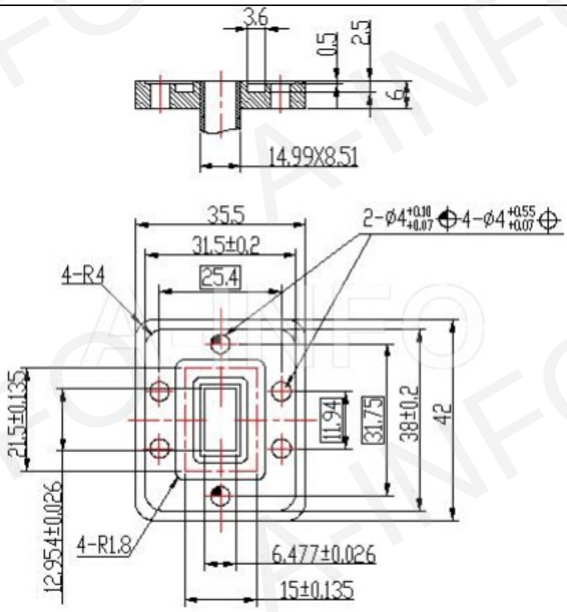

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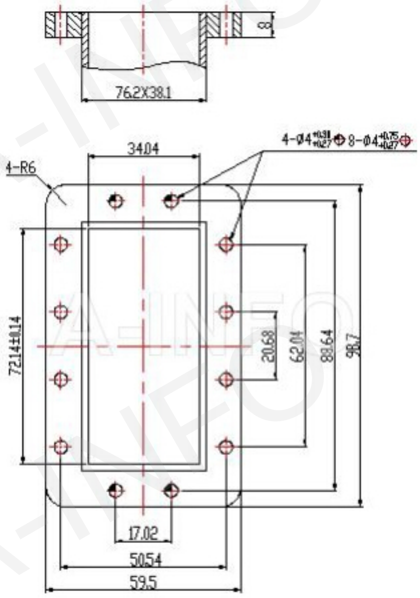
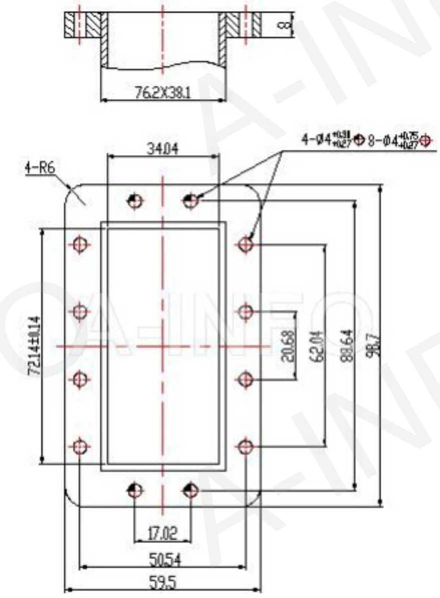


FEP32

3.5 E Type Flange (FEP)



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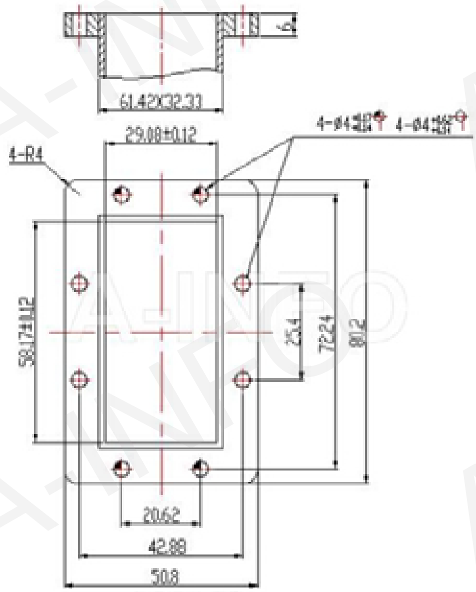

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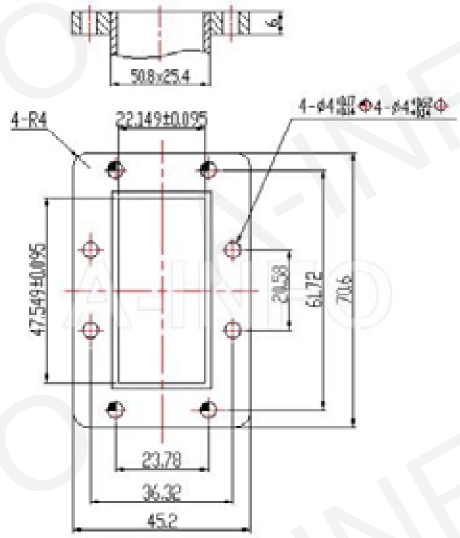

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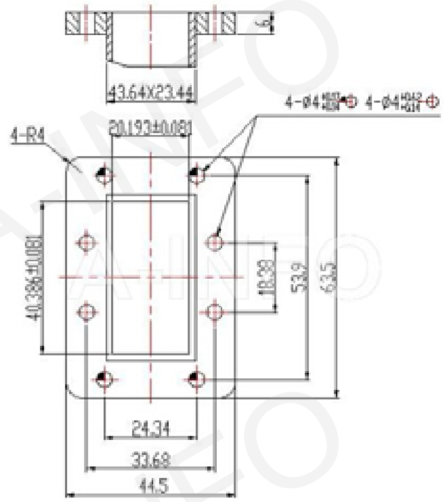

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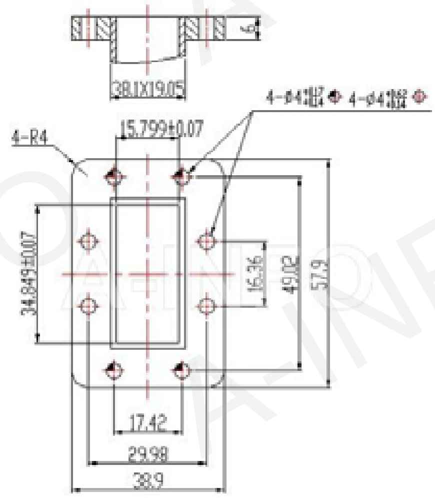

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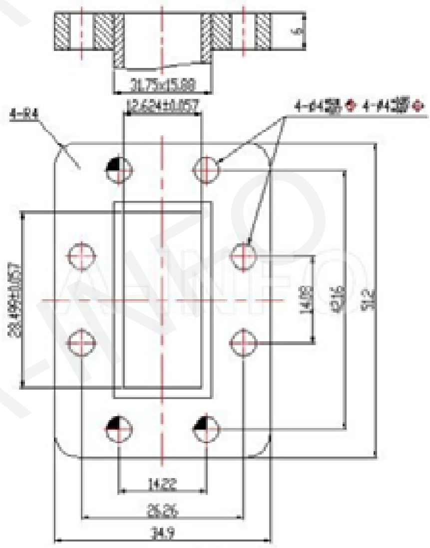

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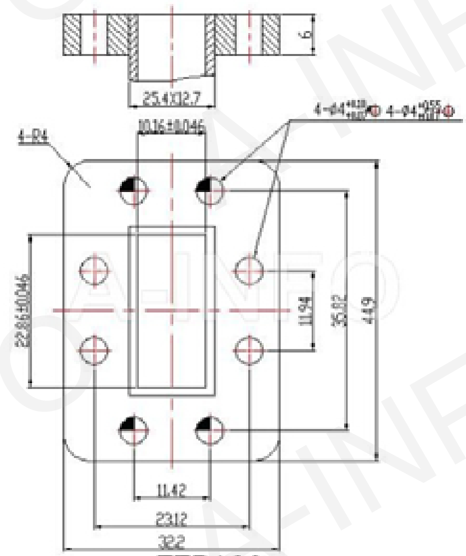
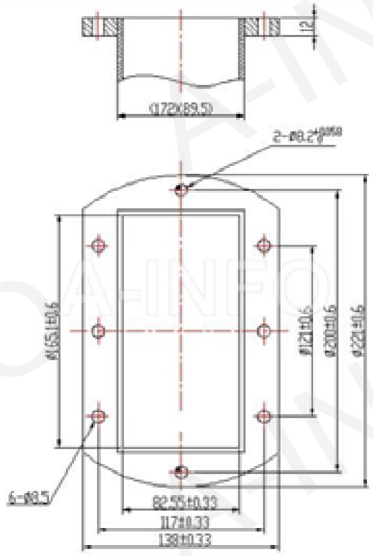
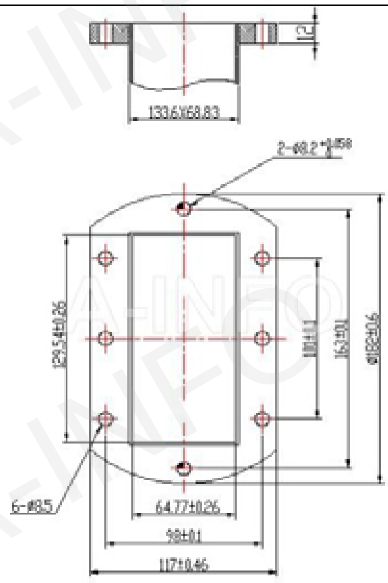


FEP100

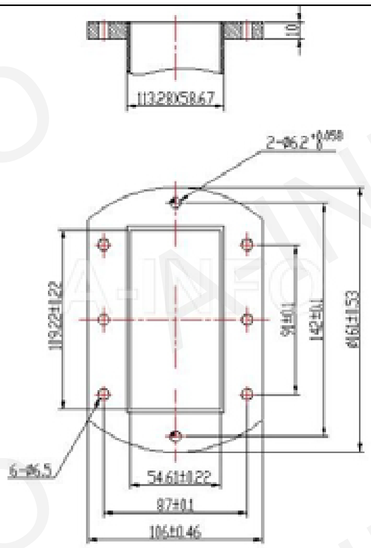
3.6 LD Type Flange (LFDP, LFDM)



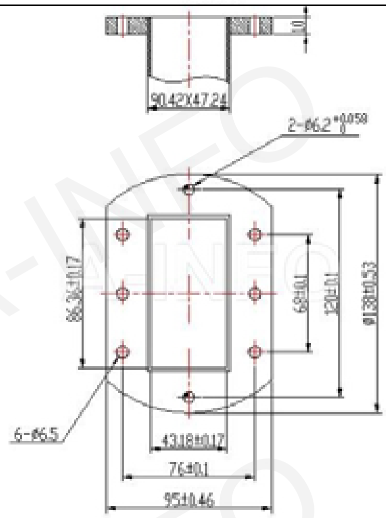
LFDP14



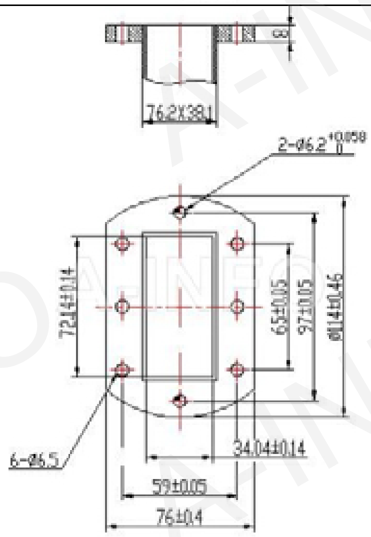
LFDP18



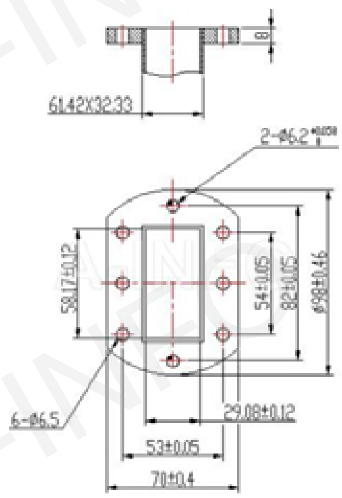
LFDP22



LFDP26



LFDP32



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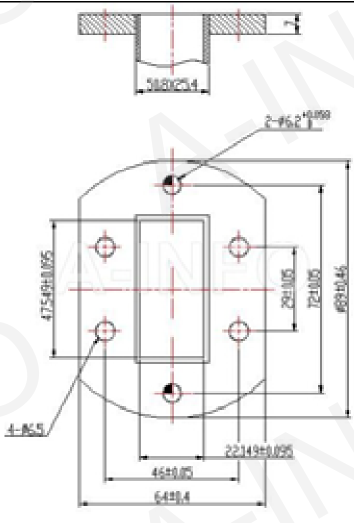

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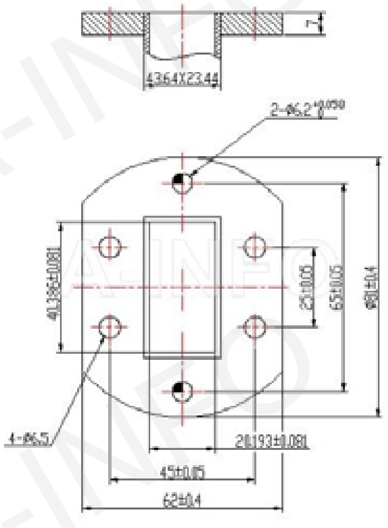
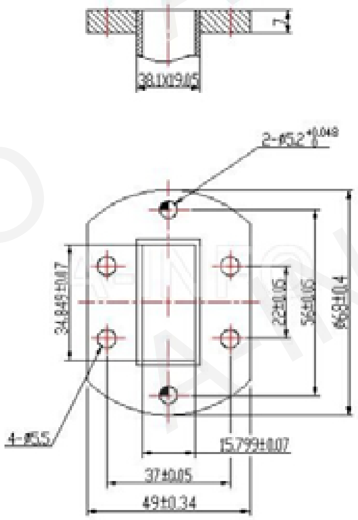
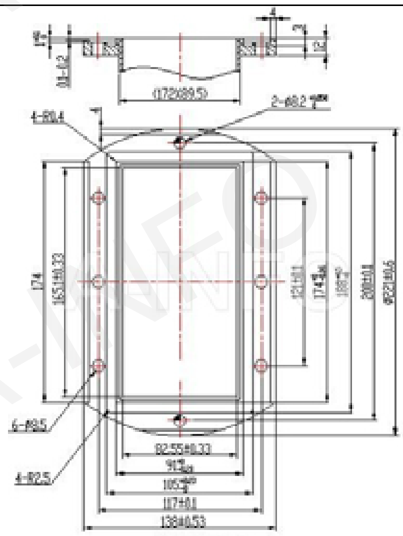


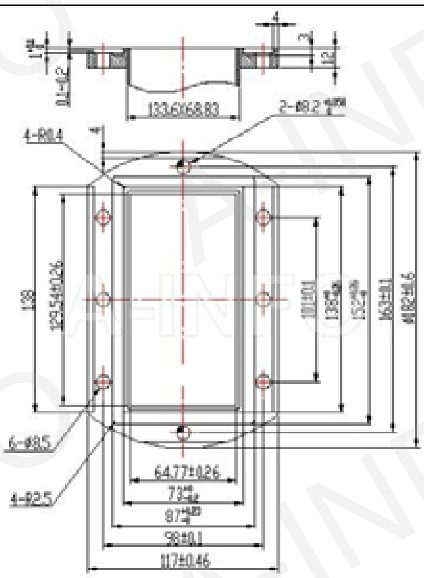
LFDP58



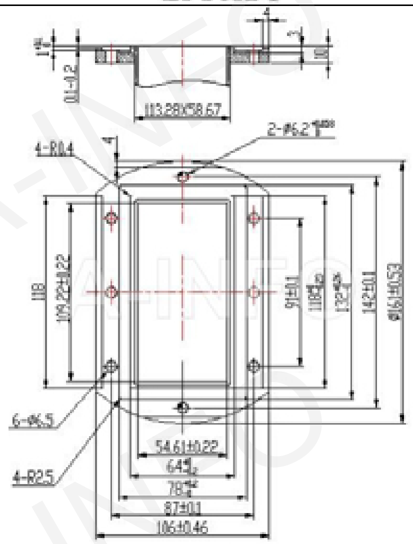
LFDP70



LFDM14

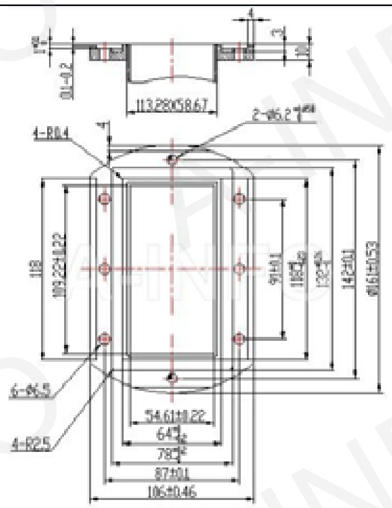


LFDM18

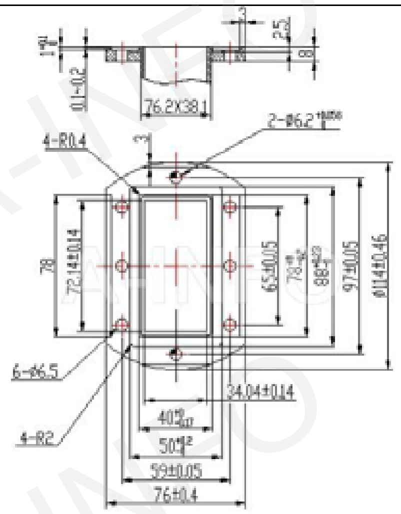


LFDM22

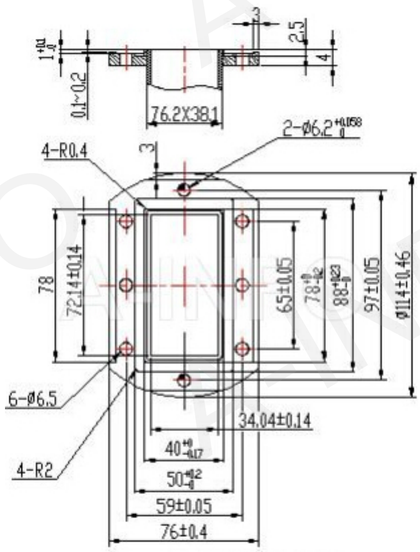
(ES) Equipements Scientifiques SA - Département RF & Hyperfréquence - 127 rue de Buzenval BP 26 - 92380 Garches
Tél. 01 47 95 99 60 - Fax. 01 47 01 16 22 - e-mail: hyper@es-france.com - Site Web: www.es-france.com



LFDM26



LFDM32



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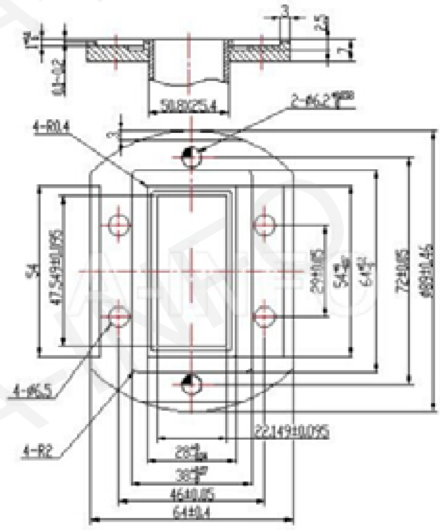

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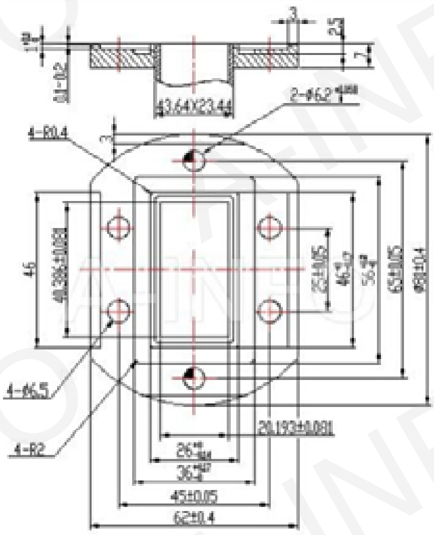

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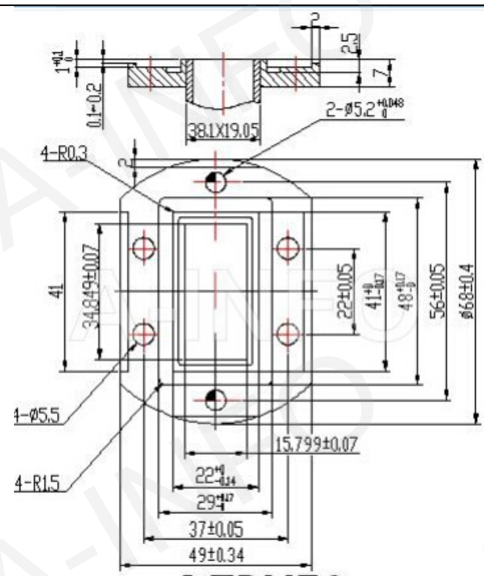
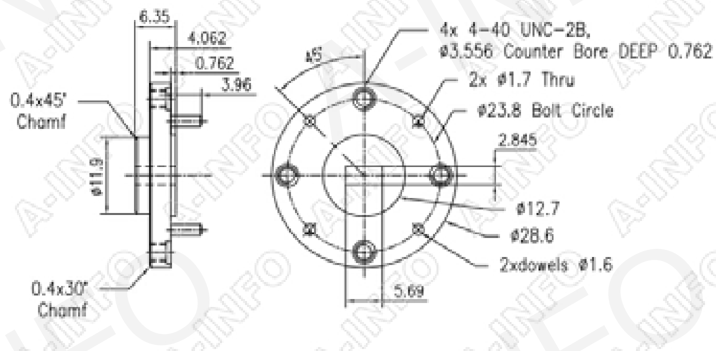
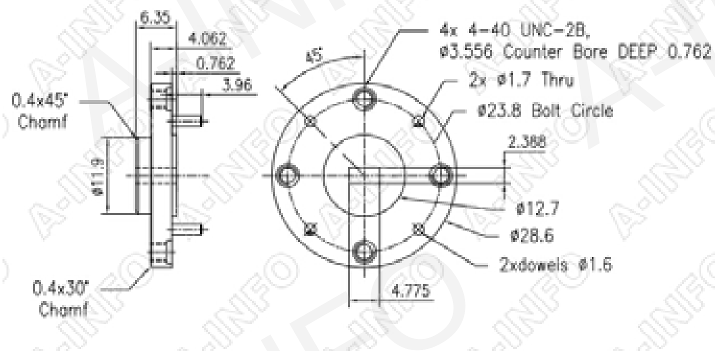


LFDM70

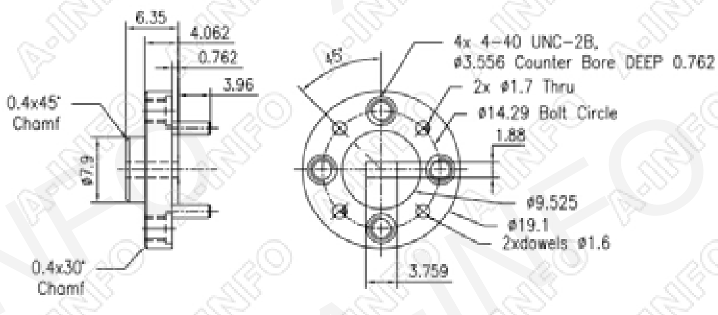
3.7 UG Type Flange (FUGP)



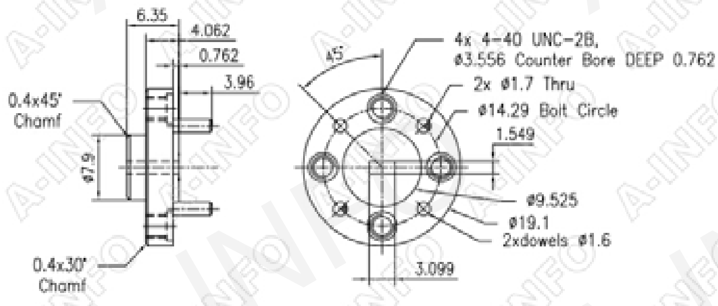
FUGP400
(equivalent to UG-383/U)



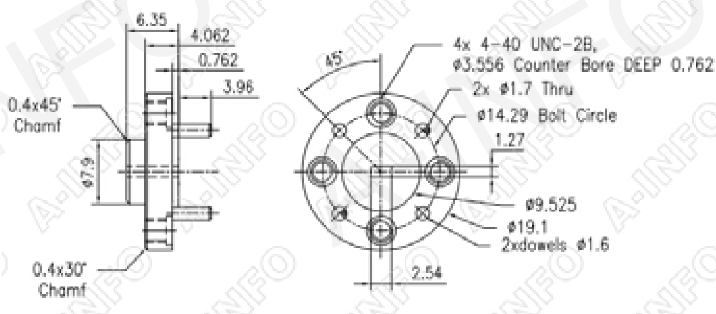
FUGP500
(equivalent to UG-383/U modified)



FUGP620
(equivalent to UG-385/U modified)



FUGP740
(equivalent to UG-387/U)



FUGP900
(equivalent to UG-387/U modified)

Precision Flange Information

1. Precision Flange Information

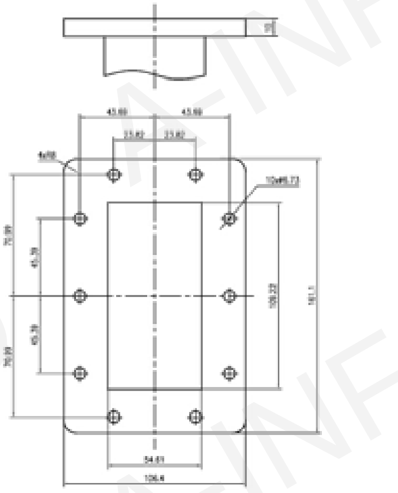
EIA WR	A-INFO Precision Flange	Maury MPF Equivalent	Mates with						
			UG	EIA CPR	CMR	A-INFO Flange (IEC Standard)			
						FAP(UAR)	FDP(UDR)	FBP(UBR)	FEP(UER)
WR430	APF430	MPF430	UG435/U				FDP22		
WR340	APF340	MPF340	UG553/U	CPR340F			FDP26		
WR284	APF284	MPF284	UG53/U, UG54A/U	CPR284F/G		FAP32	FDP32		
WR284	APF284B	MPF284B	UG53/U, UG54A/U	CPR284F/G	CMR284	FAP32	FDP32		FEP32
WR284	APF284C	MPF284C	UG53/U, UG54A/U			FAP32			
WR229	APF229	MPF229		CPR229F/G	CMR229		FDP40		FEP40
WR229	APF229B	MPF229B		CPR229F/G			FDP40		
WR187	APF187	MPF187	UG149A/U, UG148B/U	CPR187F/G		FAP48	FDP48		
WR187	APF187C	MPF187C	UG149A/U, UG148B/U			FAP48			
WR159	APF159	MPF159		CPR159F/G	CMR159		FDP58		FEP58
WR159	APF159B	MPF159B		CPR159F/G			FDP58		
WR137	APF137	MPF137	UG344/U,UG343A/U	CPR137F/G		FAP70	FDP70		
WR137	APF137C	MPF137C	UG344/U,UG343A/U			FAP70			
WR112	APF112	MPF112	UG51/U	CPR112F/G			FDP84	FBP84	
WR112	APF112B	MPF112B	UG51/U, UG52A/U					FBP84	
WR90	APF90	MPF90	UG39/U,UG40A/U	CPR90F/G			FDP100	FBP100	
WR90	APF90A	MPF90A	UG39/U,UG40A/U		CMR90			FBP100	FEP100
WR90	APF90B	MPF90B	UG39/U,UG40A/U					FBP100	
WR75	APF75A	MPF75A	M3922/70-004 and -005					FBP120	
WR75	APF75B	MPF75B	M3922/70-004 and -005					FBP120	
WR62	APF62	MPF62	UG-419/U or UG541A/U					FBP140	
WR51	APF51A	MPF51A	M3922/70-010,-011,-012, -022,-023 and -024						
WR51	APF51B	MPF51B	M3922/70-010,-011,-012, -022,-023 and -024						
WR51	APF51C	MPF51C						FBP180	
WR42	APF42	MPF42	UG595/U or UG596/U					FBP220	
WR34	APF34	MPF34	UG-1530/U,UG595/U or UG596/U						
WR28	APF28	MPF28	UG599/U or UG600/U					FBP320	
WR22	APF22	MPF22	UG383/U (FUGP400)						
WR22	APF22A	MPF22A	Mates with precision APF(MPF) flange and do not include the four hole indexing pattern.						
WR19	APF19	MPF19	UG383/U-M (FUGP500)						
WR19	APF19A	MPF19A	Mates with precision APF(MPF) flange and do not include the four hole indexing pattern.						
WR15	APF15	MPF15	UG385/U (FUGP620)						
WR15	APF15A	MPF15A	Mates with precision APF(MPF) flange and do not include the four hole indexing pattern.						
WR12	APF12	MPF12	UG387/U (FUGP740)						
WR12	APF12A	MPF12A	Mates with precision APF(MPF) flange and do not include the four hole indexing pattern.						
WR10	APF10	MPF10	UG387/U-M (FUGP900)						
WR10	APF10A	MPF10A	Mates with precision APF(MPF) flange and do not include the four hole indexing pattern.						

EIA WR	A-INFO Precision Flange	Maury MPF Equivalent	Mates with						
			UG	EIA CPR	CMR	A-INFO Flange (IEC Standard)			
						FAP(UAR)	FDP(UDR)	FBP(UBR)	FEP(UER)
WR8	APF8	-	UG387/U-M						
WR6	APF6	-	UG387/U-M						
WR5	APF5	-	UG387/U-M						
WR4	APF4	-	UG387/U-M						
WR3	APF3	-	UG387/U-M						

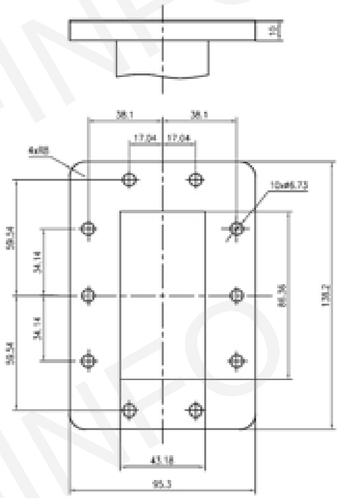
2. Precision Flange Indexing Pins

Used On WR	P/N	L(mm)	D (inch)	D (mm)
430, 340, 284, 229, 187	APFP-6-1	40.6	0.2489	6.32
	APFP-6-2	25.4		
159, 137	APFP-4-1	38.1	0.1864	4.73
	APFP-4-2	19.1		
112, 90, 75, 62, 51	APFP-3-1	34.8	0.1239	3.15
	APFP-3-2	15.7		
42, 28, 22, 19	APFP-2-1	25.4	0.0931	2.36
	APFP-2-2	9.4		
15, 12, 10	APFP-1-1	8.9	0.062	1.57
	APFP-1-2	10.5		
8, 6, 5, 4, 3	APFP-1-1	8.9	0.062	1.57

3. Precision Flange Drawing



APF430



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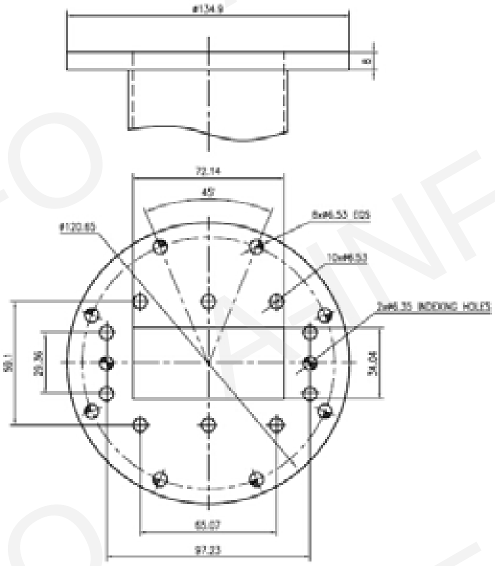

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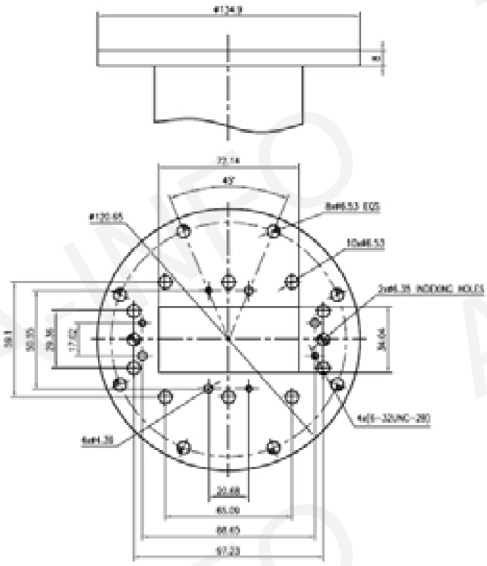

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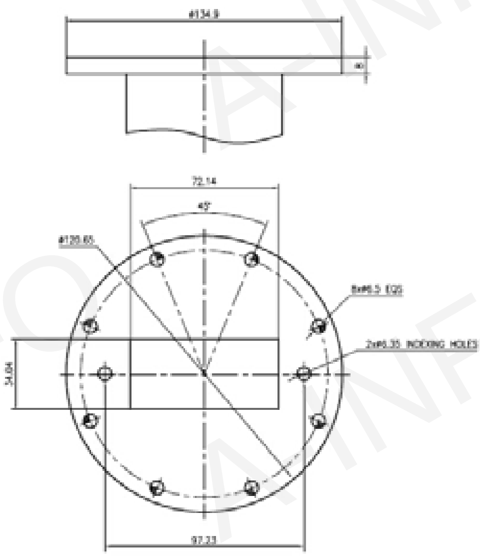

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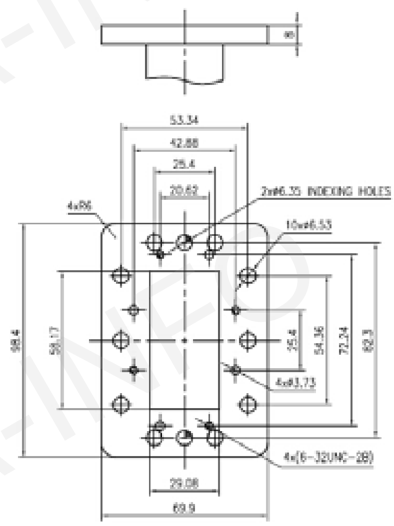
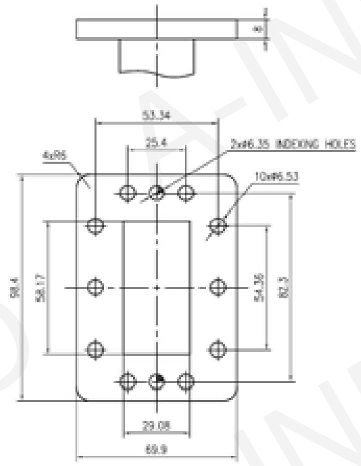


APF229

Flange Information



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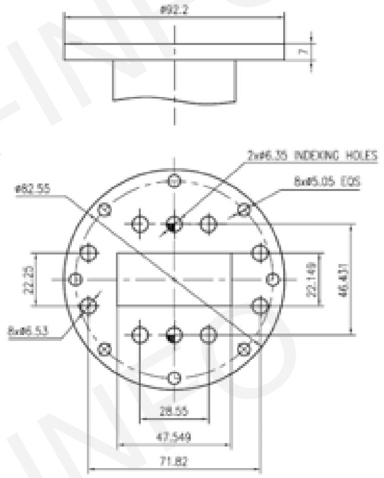

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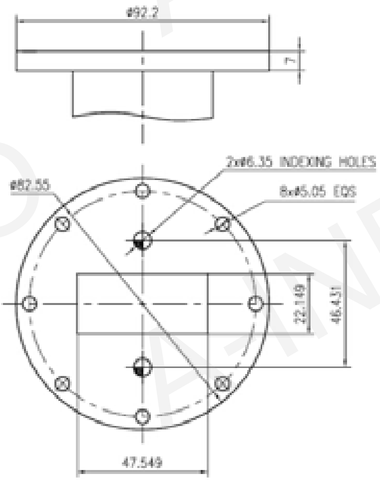
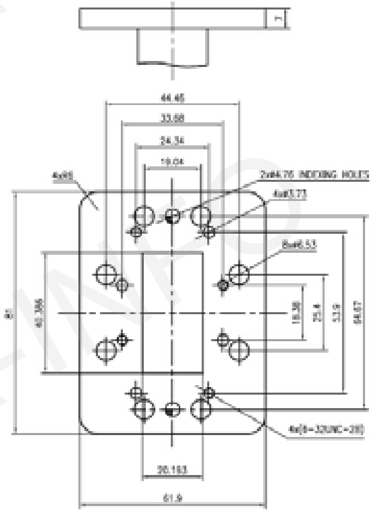


APF187C



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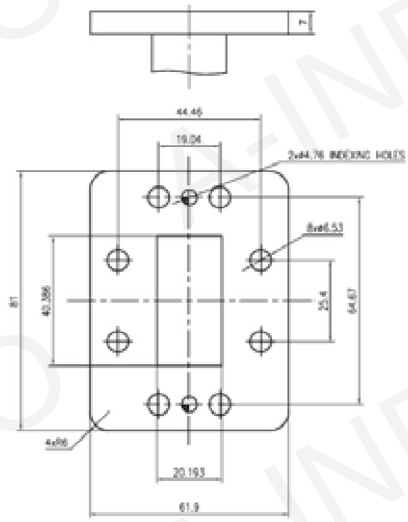

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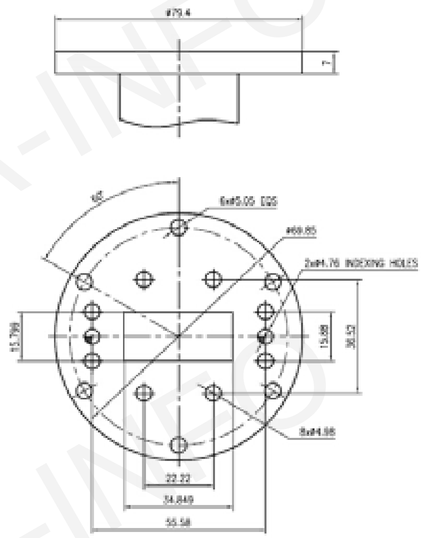

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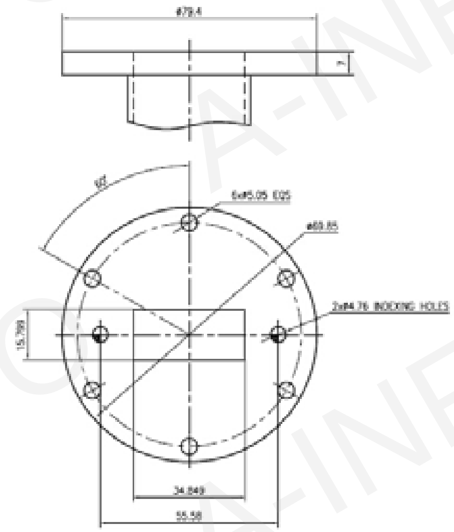

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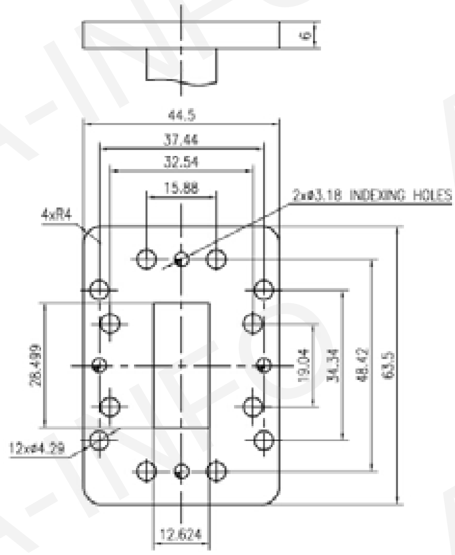

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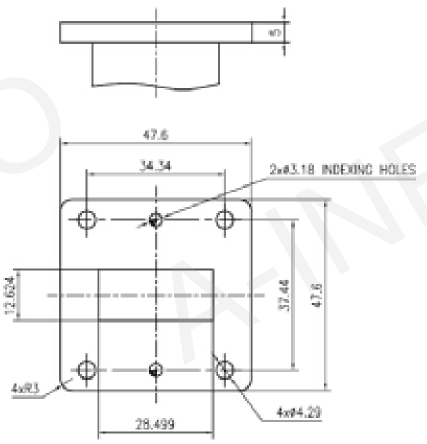

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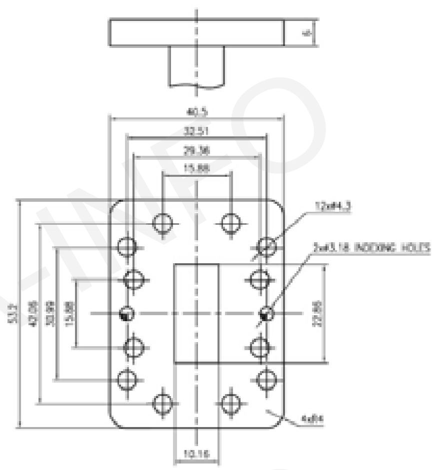
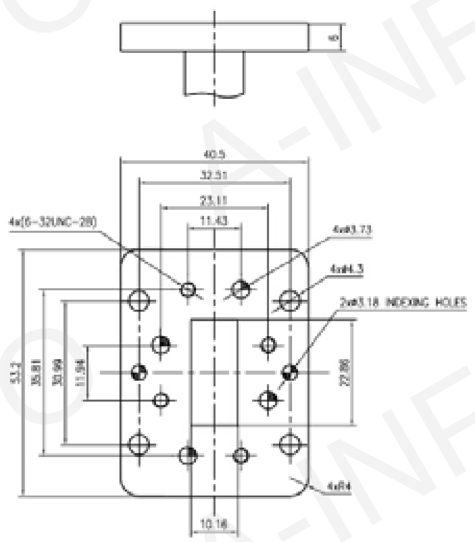


APF90



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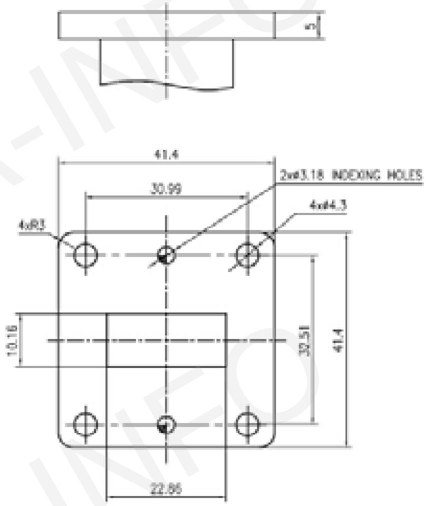
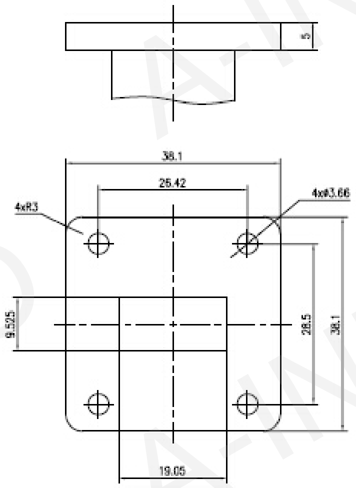
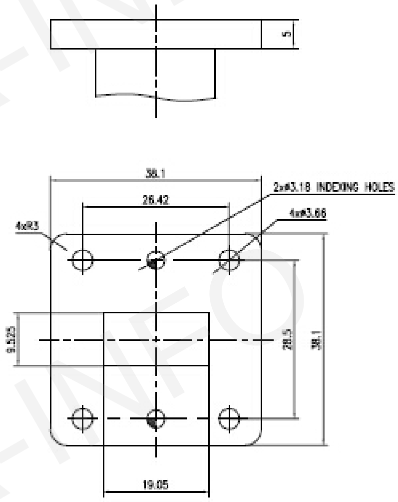


APF90B

Flange Information



APF75A



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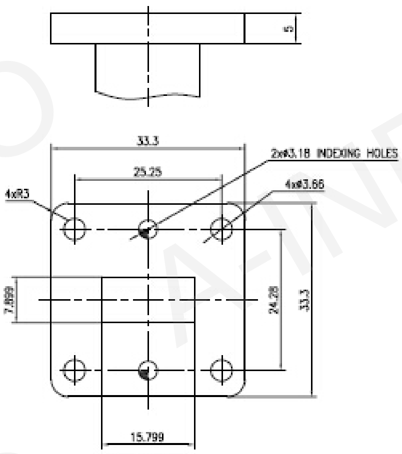
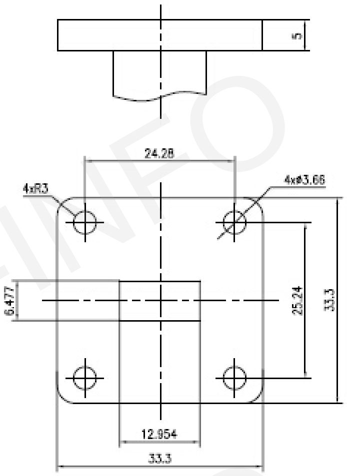
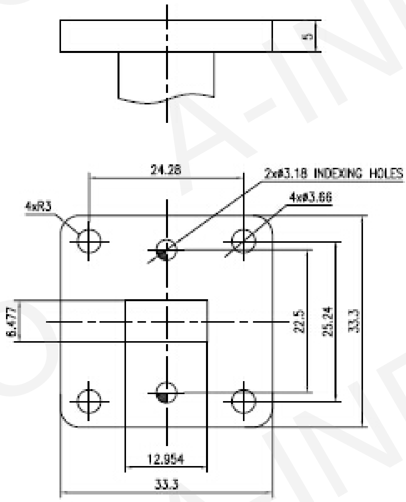


APF62



APF51A



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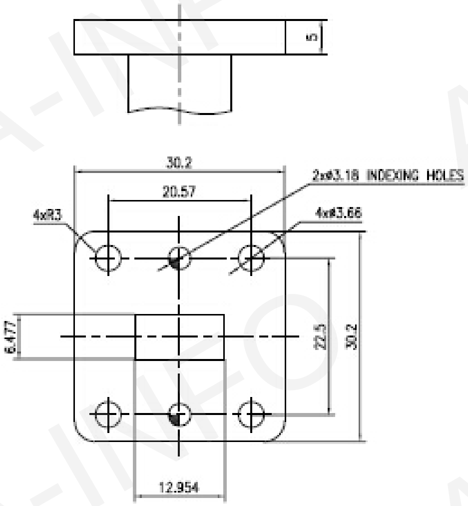

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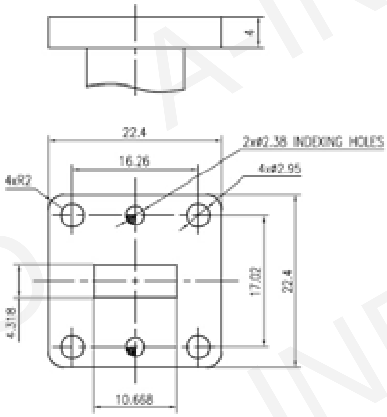

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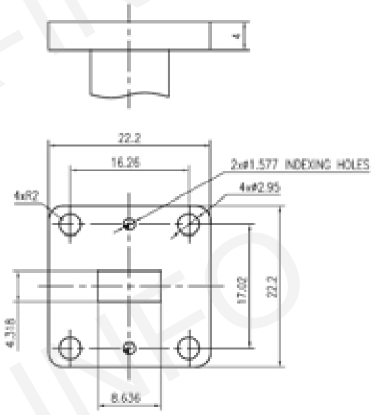
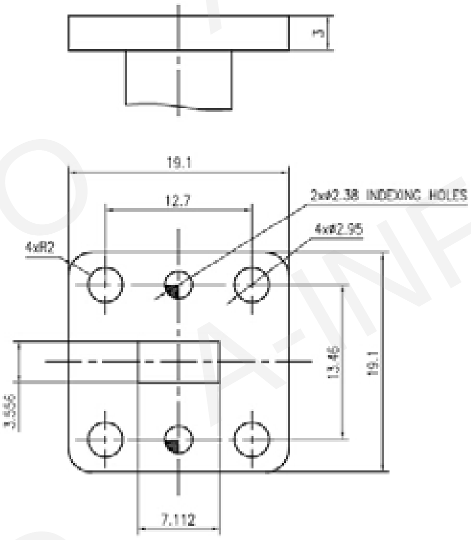
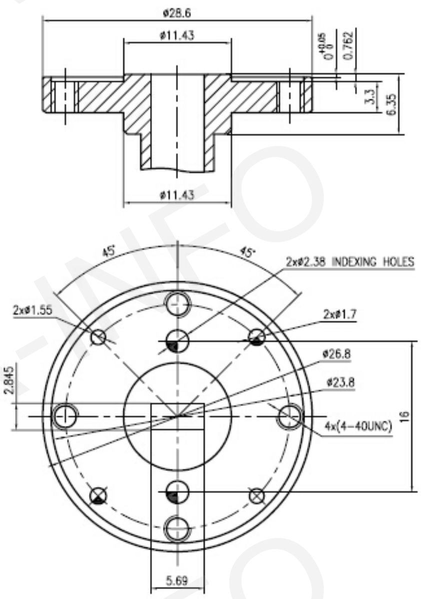


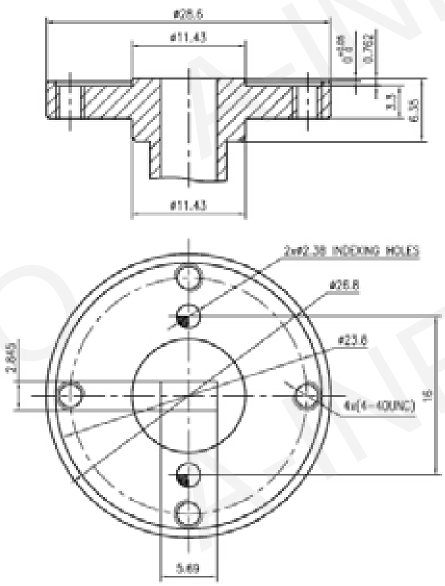
APF34



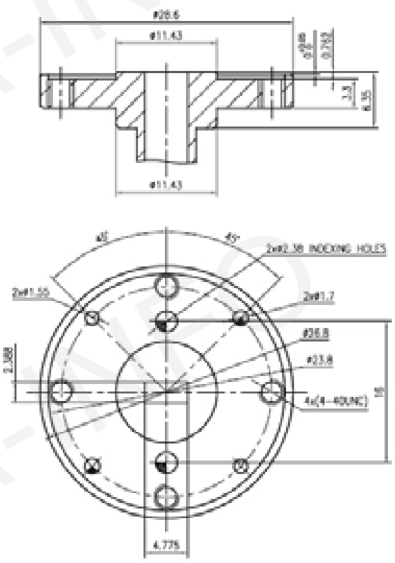
APF28



APF22



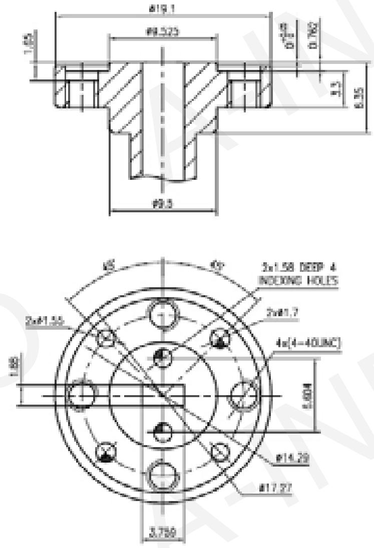
APF22A



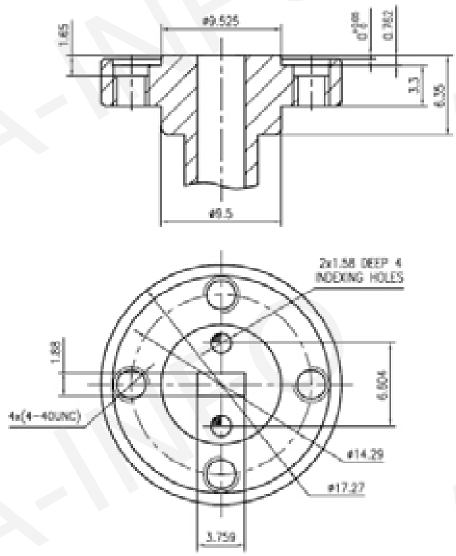
APF19

A-INFO

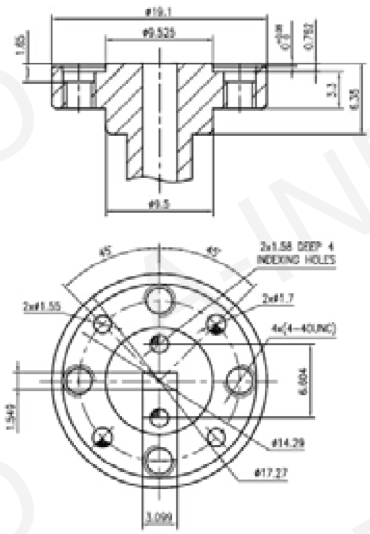
Flange Information



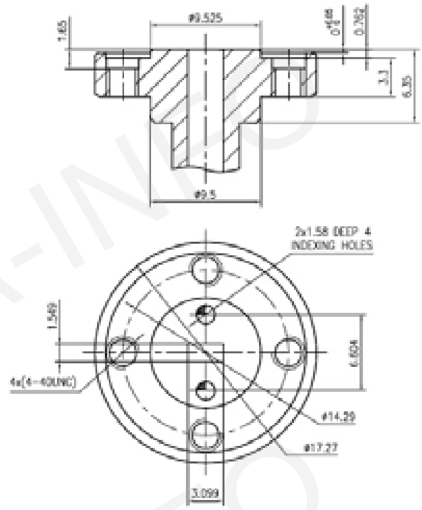
APF15



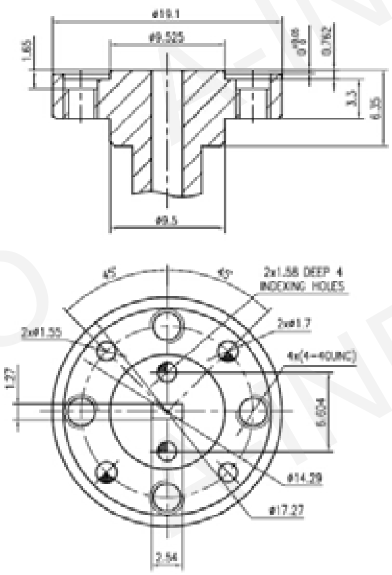
APF15A



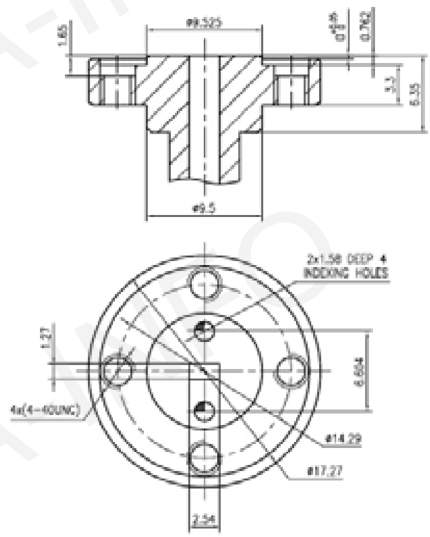
APF12



APF12A



APF10



APF10A

Double Ridge Flange Information

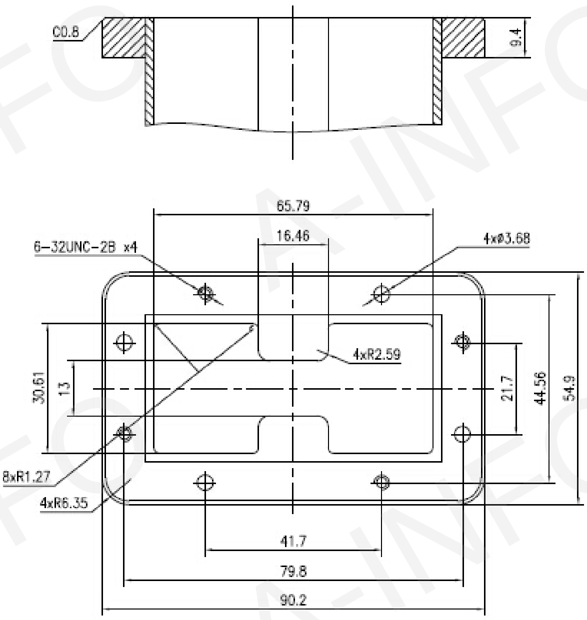
1. Double Ridge Flange Information

EIA WRD	Cover Flange	Cover Flange
WRD84	FPWRD84D24	-
WRD200	FPWRD200D24	-
WRD250	FPWRD250D30	-
WRD350	FPWRD350D24	-
WRD475	FPWRD475D24	FMWRD475D24
WRD580	FPWRD580D28	FMWRD580D28
WRD650	FPWRD650D28	FMWRD650D28
WRD750	FPWRD750D24	FMWRD750D24
WRD110	FPWRD110C24	FMWRD110C24
WRD180	FPWRD180C24	FMWRD180C24

2. Double Ridge Flange Drawing

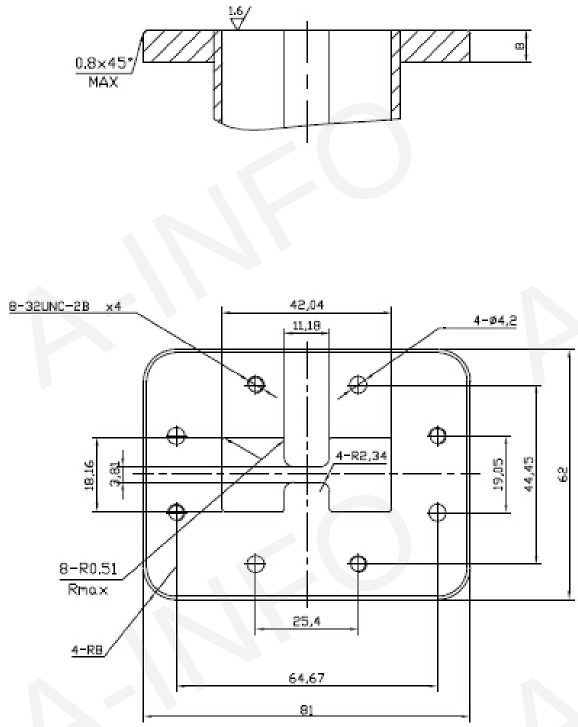
FPWRD200D24

(With four through mounting holes and four screws holes)



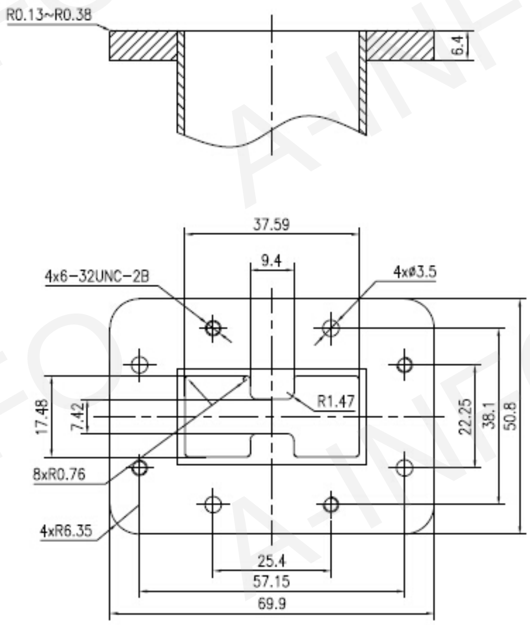
FPWRD250D30

(With four through mounting holes and four screws holes)



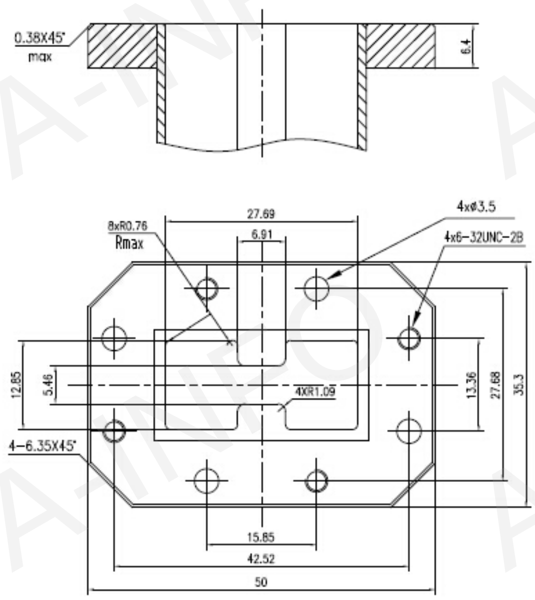
FPWRD350D24

(With four through mounting holes and four screws holes)



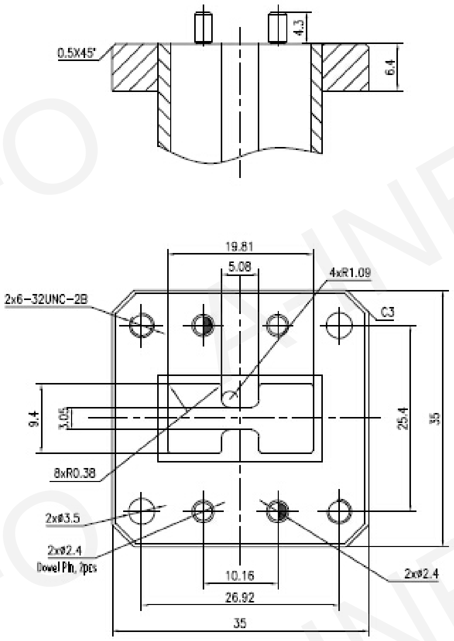
FPWRD475D24

(With four through mounting holes and four screws holes)



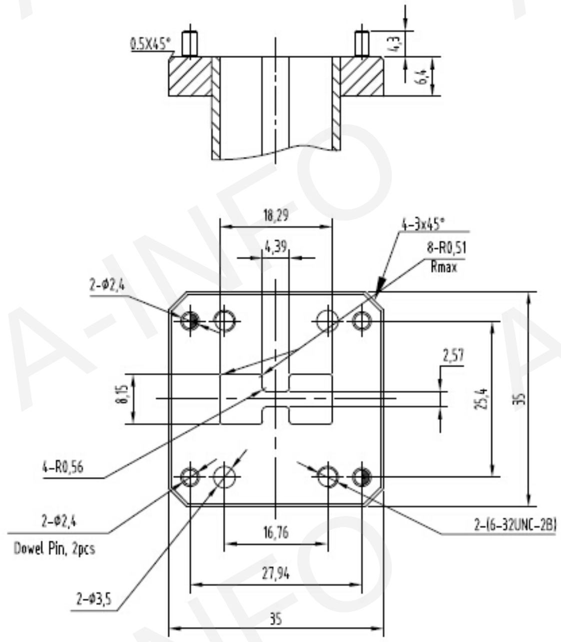
FPWRD580D28

(With two through mounting holes and two screws holes)



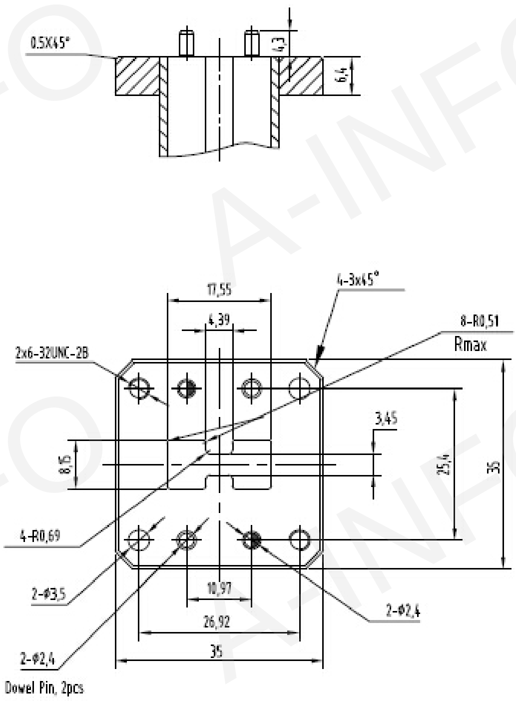
FPWRD650D28

(With two through mounting holes and two screws holes)



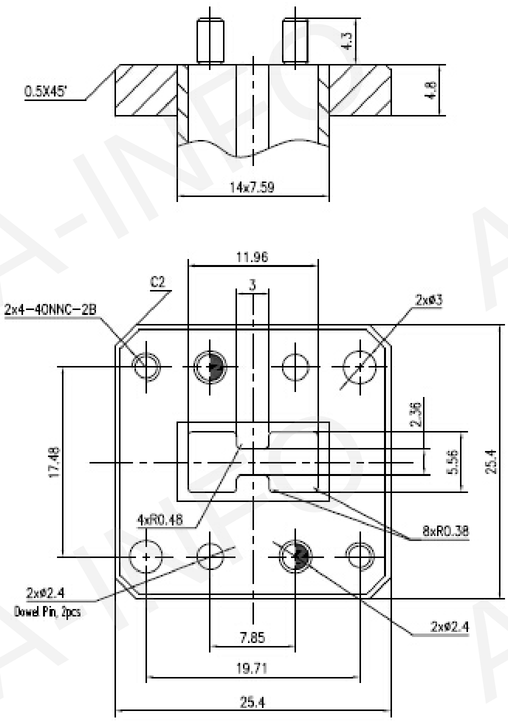
FPWRD750D24

(With two through mounting holes and two screws holes)



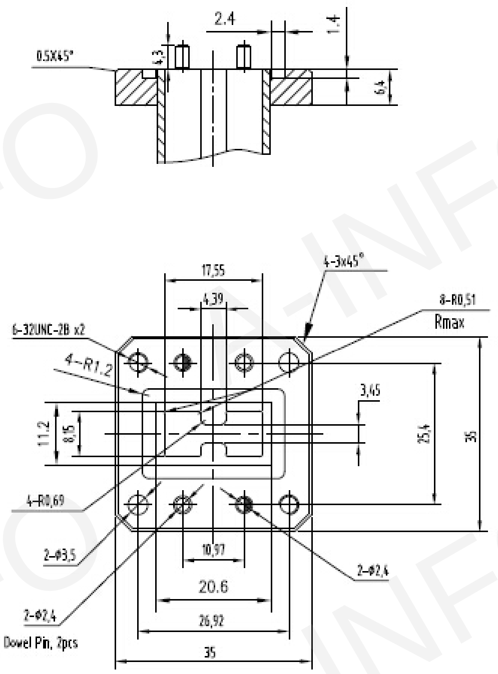
FPWRD110C24

(With two through mounting holes and two screws holes)



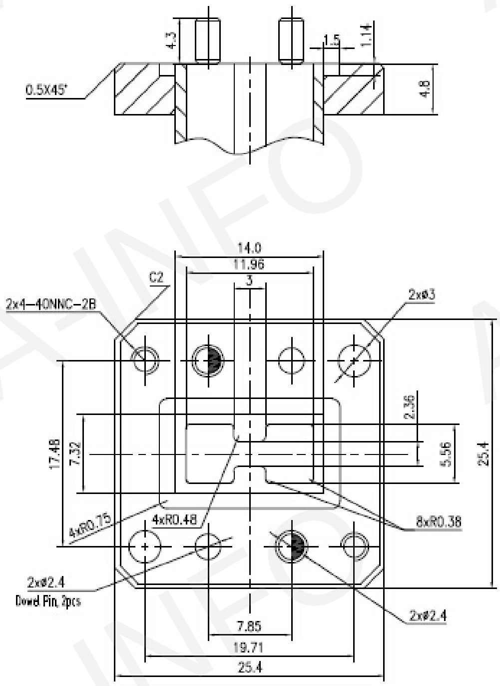
FMWRD750D24

(With two through mounting holes
and two screws holes)



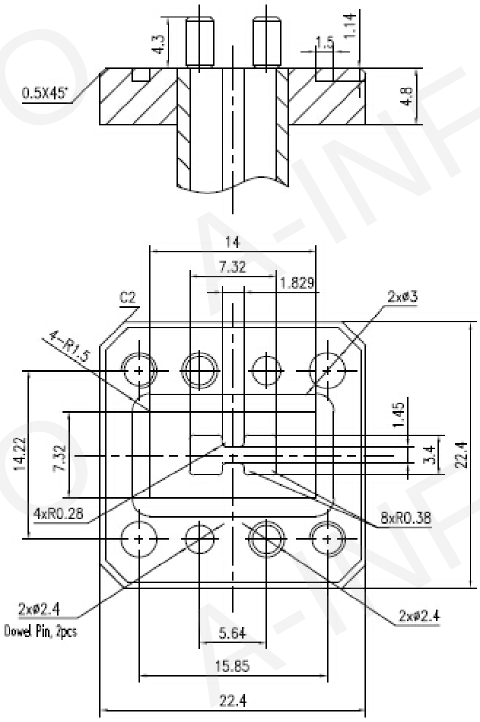
FMWRD110C24

(With two through mounting holes
and two screws holes)



FMWRD180C24

(With two through mounting holes
and two screws holes)



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