

1~50GHZ Coaxial Broadband Coupler

YX-C13-1G-50G-2-2.4 (F)

Features:

- Frequency Range,1GHz~50GHz
- Low VSWR, 1.4:1@1GHz~50GHz Typ.
- Low Insertion loss, 1.5dB@1GHz~50GHz Typ.
- High Directivity,15dB@1GHz~50GHz Typ
- Compact design,68.45*15.0*12.0mm

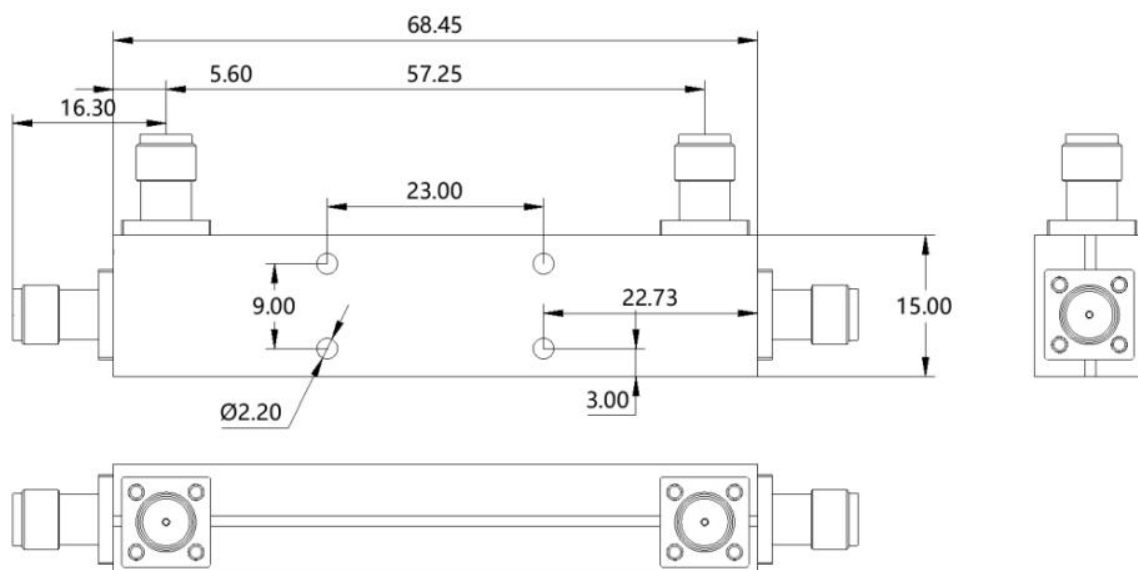


Electrical Specifications:

Item	Specification		
Operating frequency range	1-30GHz	30-40GHz	40-50GHz
VSWR Max.	≤1.5	≤1.5	≤1.6
Insertion loss(dB) Max.	≤1.6	≤2	≤2.2
Coupling(dB)	13±1		
Coupling Flatness(dB) Max.	≤±1.4		
Directivity(dB) Max.	≥15	≥10	≥10
Impedance	50Ω		
Average Power	20W cw		
Peak Power	200W (10% DutyCycle,5ms PulseWidth) If the VSWR of the backend equipment is better than 1.2, the peak power can reach 500W		
Connectors	OS2.4mm-Female		

Outline Drawing:

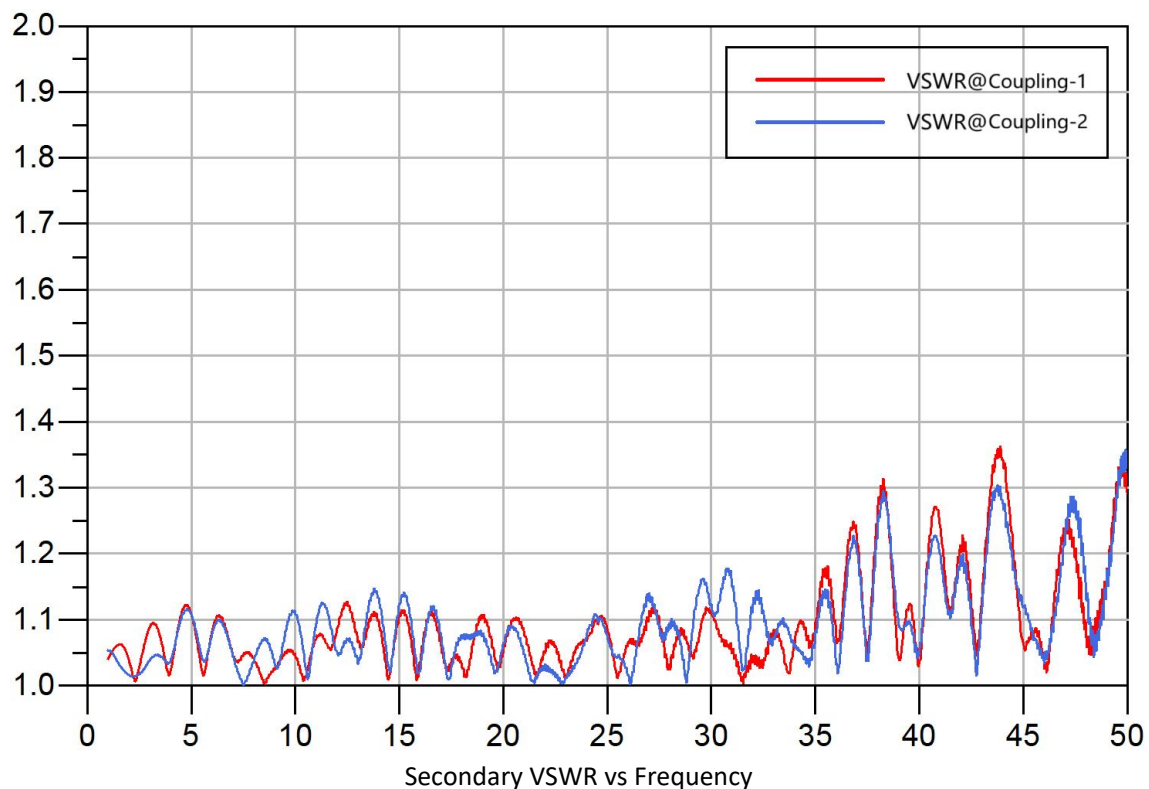
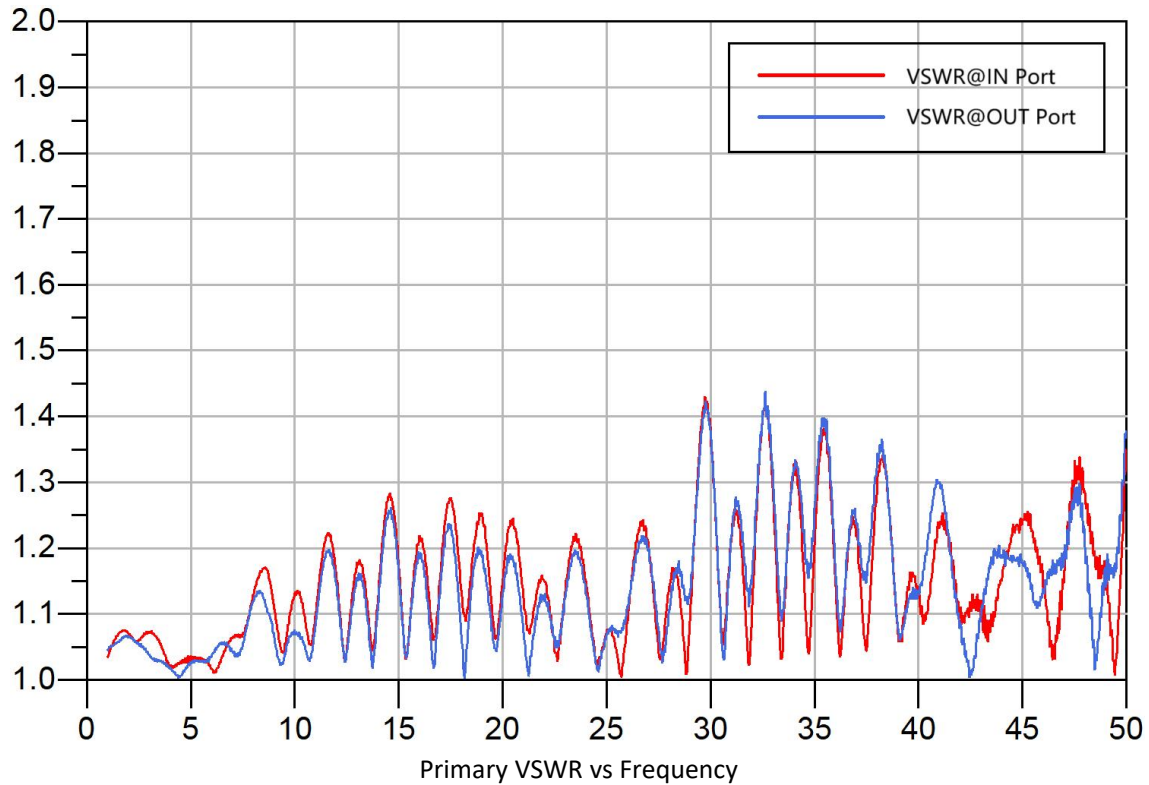
All Dimensions in mm:



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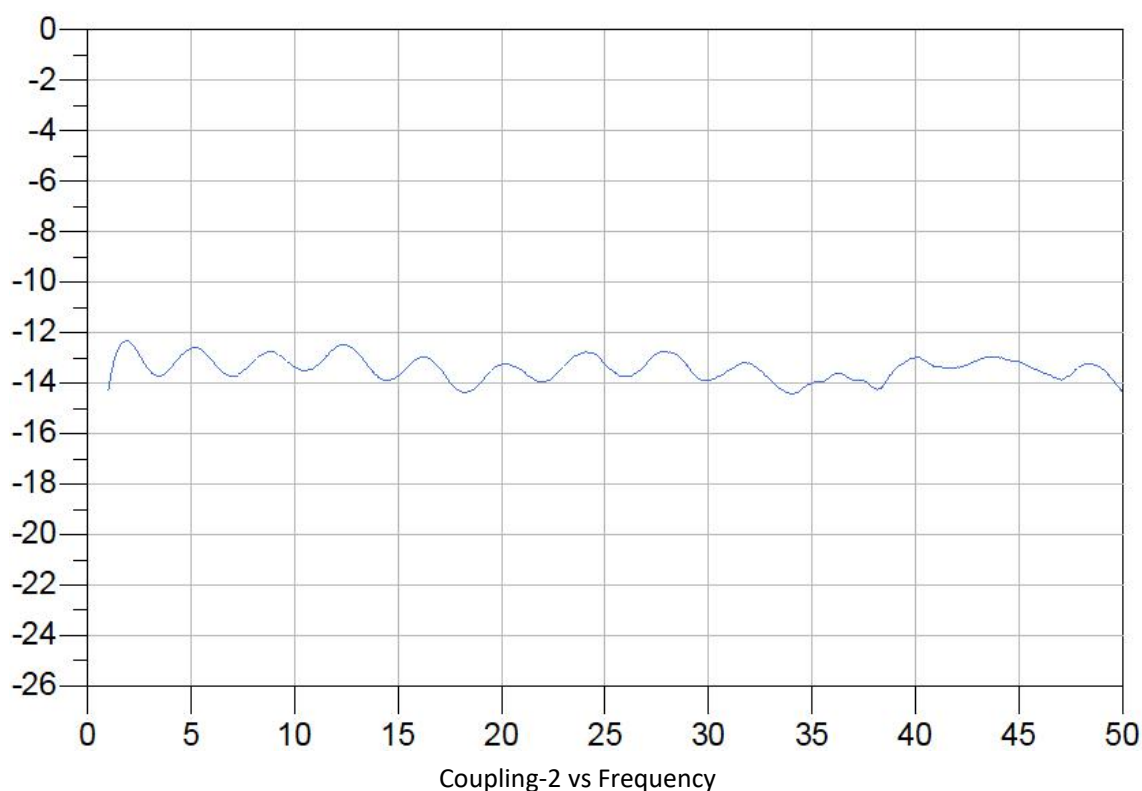
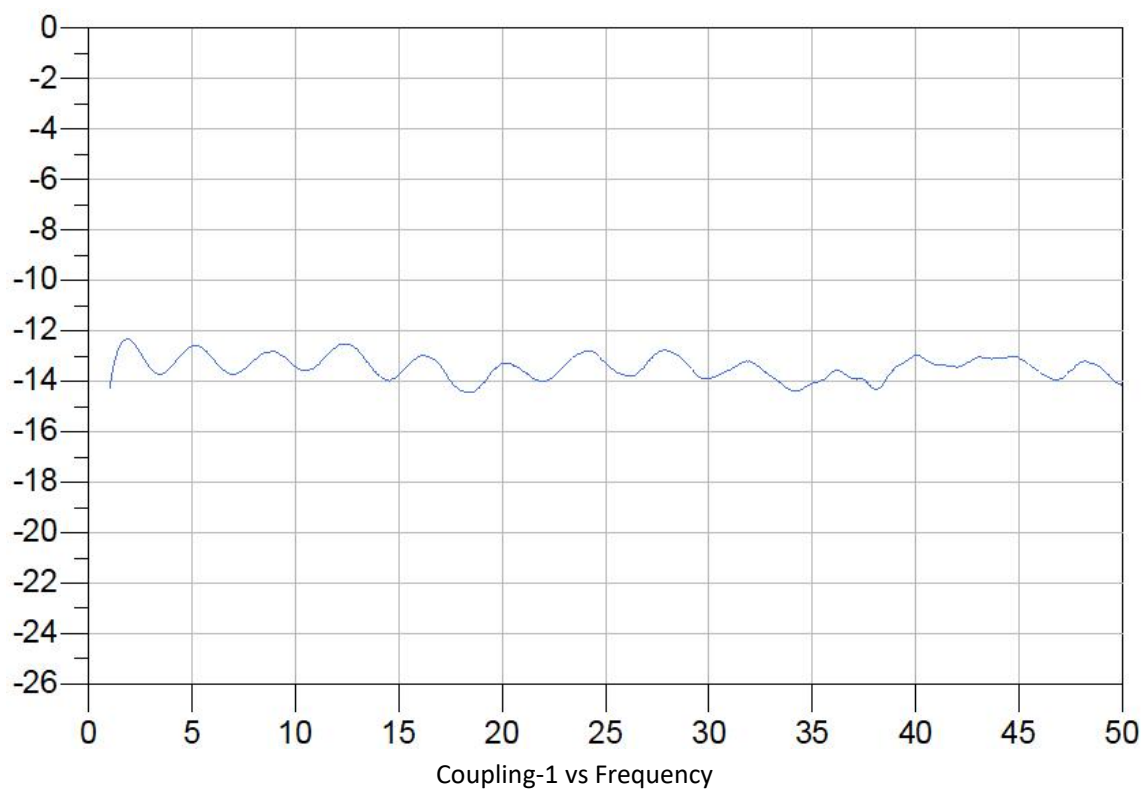
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Test Data:



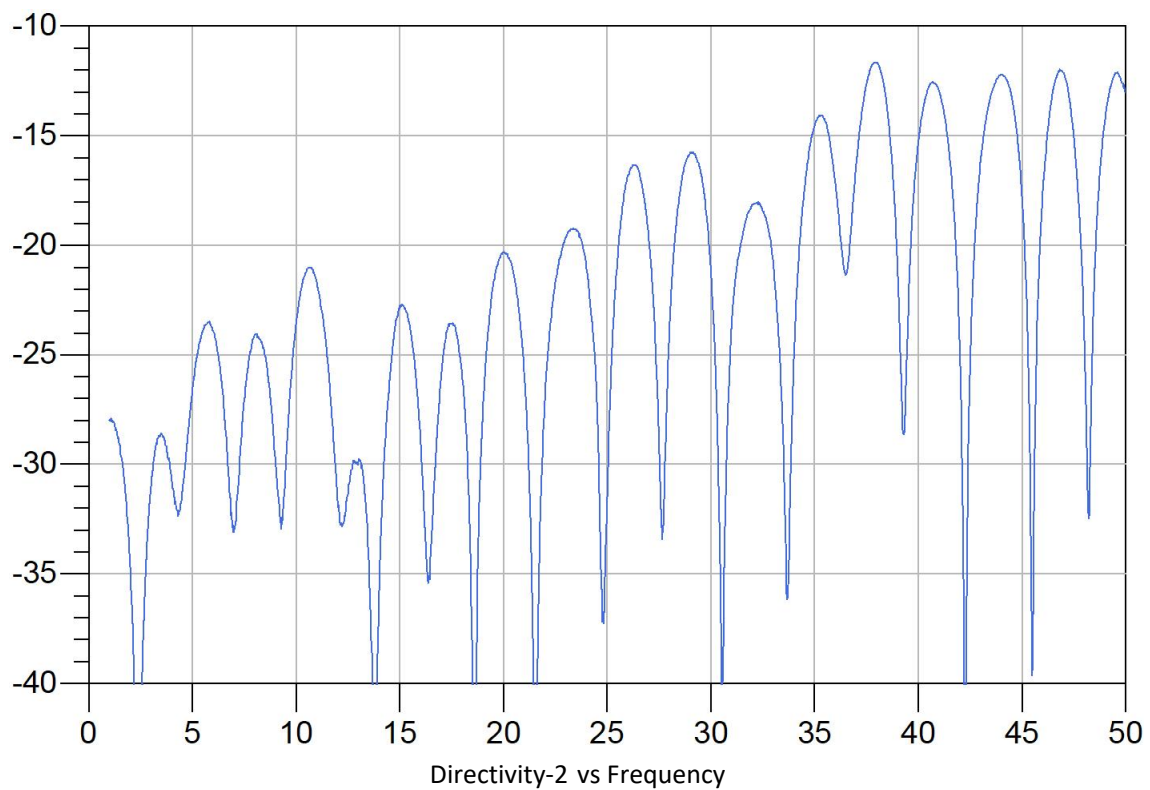
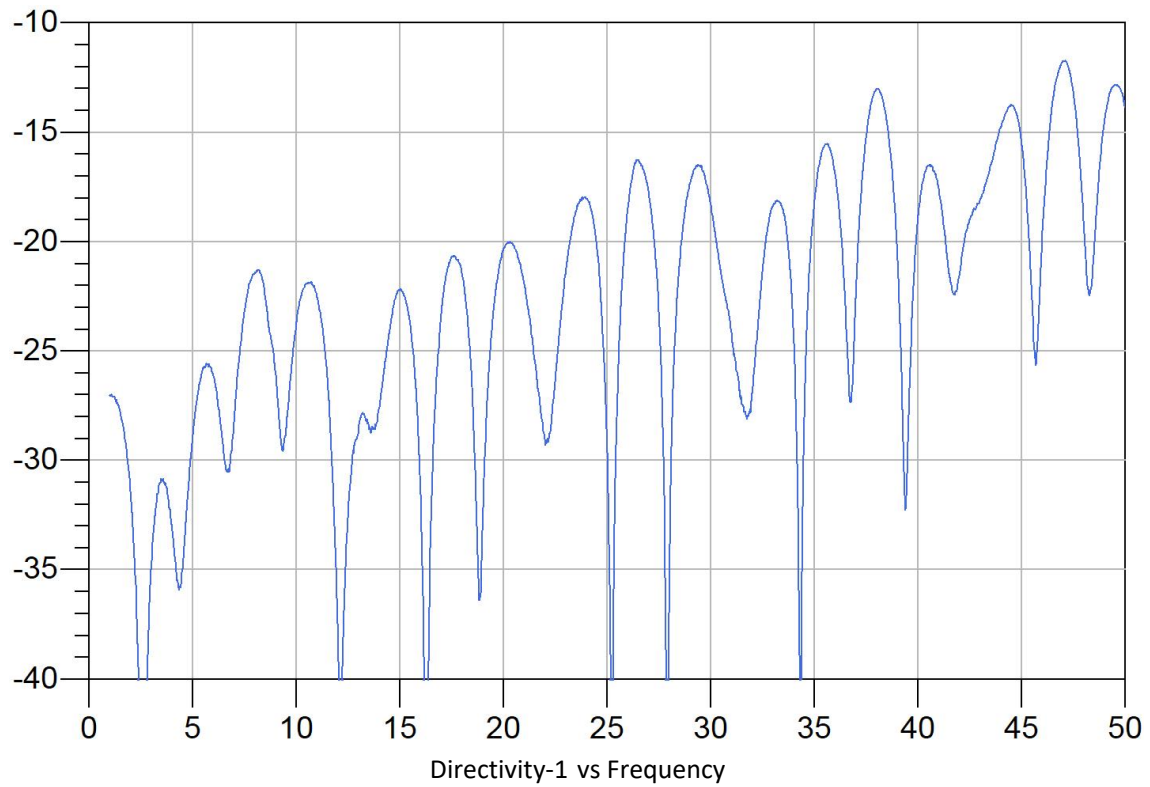
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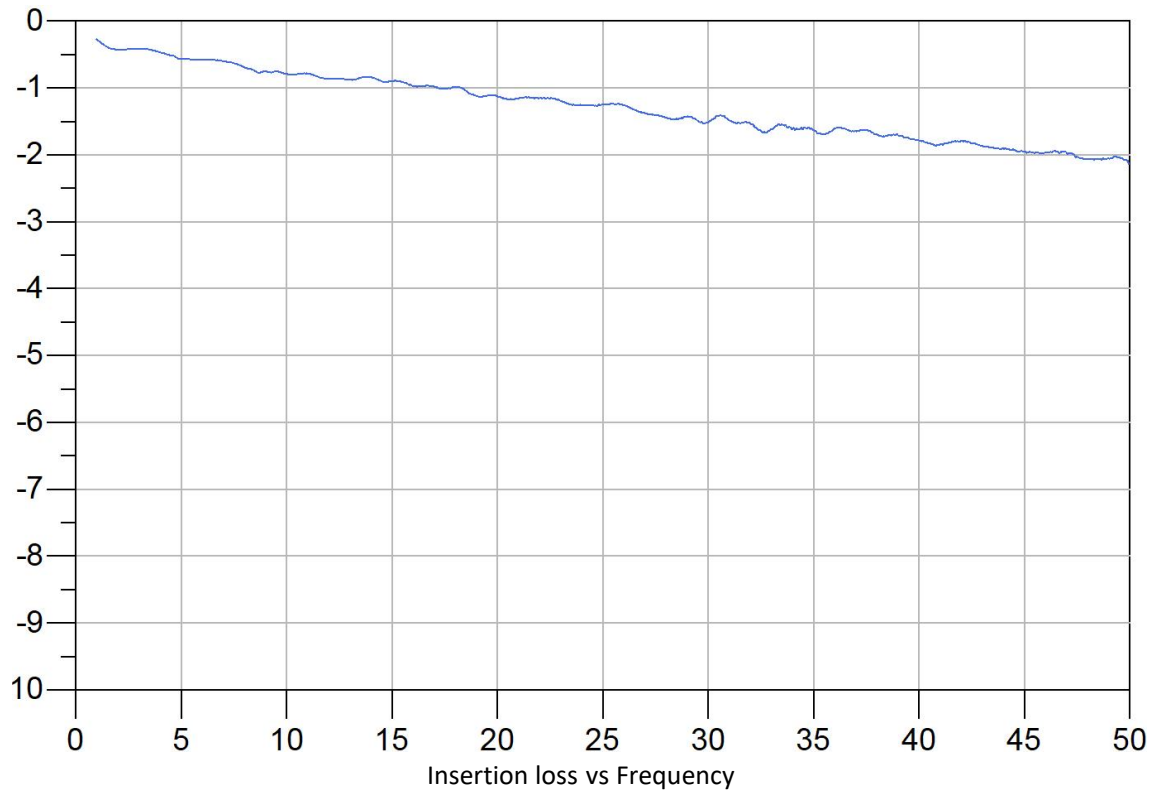
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Performance Data:

Freq.	VSWR (:1)				Coupling (dB)		Directivity (dB)		Insertion loss (dB)
	Primary IN	Primary OUT	Secondary-1	Secondary-2	IN-1	OUT-2	IN-2	OUT-1	IN-OUT
1 GHz	1.03	1.05	1.04	1.05	14.25	14.24	27.12	27.90	-0.28
2 GHz	1.07	1.07	1.04	1.02	12.36	12.36	31.52	34.56	-0.43
3 GHz	1.07	1.04	1.09	1.04	13.51	13.51	34.69	31.03	-0.42
4 GHz	1.02	1.02	1.02	1.04	13.39	13.39	33.00	30.66	-0.47
5 GHz	1.04	1.03	1.11	1.11	12.60	12.61	28.78	26.58	-0.56
6 GHz	1.02	1.04	1.08	1.08	13.10	13.10	26.16	23.85	-0.58
7 GHz	1.06	1.04	1.05	1.04	13.71	13.72	28.03	33.24	-0.60
8 GHz	1.13	1.12	1.04	1.04	13.15	13.14	21.43	24.10	-0.70
9 GHz	1.11	1.07	1.03	1.04	12.81	12.77	26.02	29.84	-0.76
10 GHz	1.13	1.07	1.05	1.11	13.43	13.36	23.78	23.63	-0.79
11 GHz	1.10	1.09	1.07	1.09	13.39	13.33	22.54	21.67	-0.79
12 GHz	1.16	1.15	1.09	1.05	12.59	12.57	37.96	31.42	-0.86
13 GHz	1.18	1.15	1.07	1.03	12.75	12.80	28.68	30.05	-0.88
14 GHz	1.12	1.11	1.10	1.13	13.74	13.73	27.46	36.04	-0.84
15 GHz	1.17	1.16	1.11	1.12	13.72	13.71	22.16	22.84	-0.90
16 GHz	1.22	1.18	1.04	1.02	13.00	13.00	31.60	28.86	-0.97
17 GHz	1.16	1.14	1.07	1.08	13.37	13.40	23.27	25.93	-0.99
18 GHz	1.14	1.07	1.03	1.08	14.36	14.32	21.48	25.80	-0.99
19 GHz	1.25	1.19	1.10	1.08	14.12	13.95	32.62	27.54	-1.13
20 GHz	1.15	1.13	1.05	1.06	13.30	13.25	20.37	20.35	-1.13
21 GHz	1.13	1.07	1.08	1.05	13.58	13.52	21.97	25.86	-1.16

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Freq.	VSWR(:1)				Coupling(dB)		Directivity(dB)		Insertion loss(dB)
	Primary IN	Primary OUT	Secondary-1	Secondary-2	IN-1	OUT-2	IN-2	OUT-1	IN-OUT
22 GHz	1.15	1.12	1.05	1.03	14.00	13.94	28.91	26.92	-1.16
23 GHz	1.13	1.12	1.02	1.01	13.35	13.31	21.30	19.69	-1.20
24 GHz	1.15	1.13	1.07	1.08	12.83	12.78	17.99	21.06	-1.26
25 GHz	1.07	1.07	1.08	1.07	13.27	13.25	29.61	31.47	-1.25
26 GHz	1.09	1.11	1.07	1.02	13.79	13.74	18.50	16.89	-1.26
27 GHz	1.21	1.20	1.11	1.14	13.26	13.21	17.66	19.63	-1.38
28 GHz	1.14	1.11	1.03	1.09	12.78	12.76	35.54	23.80	-1.44
29 GHz	1.08	1.13	1.05	1.06	13.37	13.34	17.24	15.76	-1.43
30 GHz	1.38	1.37	1.11	1.12	13.89	13.90	18.32	21.17	-1.51
31 GHz	1.21	1.22	1.05	1.15	13.54	13.48	24.16	23.65	-1.49
32 GHz	1.11	1.15	1.04	1.12	13.22	13.22	26.85	18.15	-1.53
33 GHz	1.29	1.31	1.09	1.07	13.79	13.88	18.22	20.80	-1.62
34 GHz	1.33	1.32	1.06	1.06	14.36	14.43	24.31	25.18	-1.62
35 GHz	1.20	1.26	1.09	1.08	14.07	14.00	18.20	14.51	-1.63
36 GHz	1.15	1.17	1.08	1.03	13.61	13.66	16.94	17.16	-1.61
37 GHz	1.22	1.24	1.22	1.20	13.89	13.88	22.44	16.44	-1.65
38 GHz	1.29	1.33	1.26	1.23	14.30	14.18	13.01	11.67	-1.70
39 GHz	1.08	1.09	1.04	1.10	13.47	13.45	20.58	20.96	-1.71
40 GHz	1.13	1.14	1.04	1.05	12.96	12.97	18.94	15.32	-1.79
41 GHz	1.23	1.30	1.24	1.20	13.34	13.33	17.61	12.92	-1.85
42 GHz	1.11	1.08	1.21	1.19	13.44	13.38	21.39	24.66	-1.80
43 GHz	1.09	1.09	1.12	1.11	13.05	13.09	18.07	16.16	-1.87
44 GHz	1.15	1.19	1.34	1.28	13.08	12.98	14.72	12.17	-1.91
45 GHz	1.24	1.18	1.06	1.12	13.07	13.14	15.48	17.81	-1.96
46 GHz	1.14	1.14	1.03	1.03	13.64	13.51	19.72	17.72	-1.96
47 GHz	1.15	1.18	1.23	1.22	13.90	13.84	11.74	12.08	-1.97
48 GHz	1.29	1.21	1.10	1.15	13.22	13.30	19.07	23.98	-2.06
49 GHz	1.14	1.15	1.16	1.16	13.47	13.41	14.39	14.24	-2.06
50 GHz	1.35	1.38	1.29	1.33	14.15	14.28	13.85	12.94	-2.14



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