MODEL NUMBER:
QRHA40G4G

Broadband Dual Polarization Horn Antenna

DESCRIPTION:

Broadband Dual Polarization Horn Antenna **QRHA40G4G**, operating from 4 to 40 GHz with a nominal 12dB gain and low VSWR 1.5:1 with 2.92mm Female output connector. The model **QRHA40G4G** has uniform gain through its frequency span, providing efficient performance characteristics and directionality. It can handle 20W continuously and 40W peak power. Constructed of lightweight corrosion resistant aluminum, the antenna will provide years of trouble-free indoor and outdoor service. This horn antenna has dual linear polarization and ideally suited for EMI testing, direction finding, surveillance, antenna gain and pattern measurements and other applications.

TECHNICAL SPECIFICATION

Electrical Specification	
Frequency Range	4 GHz to 40 GHz
Gain, Typ	12 dBi
Polarization	Dual Linear
3dB Beamwidth, E-Plane, Min	28 (Deg.)
3dB Beamwidth, E-Plane, Max	85 (Deg.)
3dB Beamwidth, H-Plane, Min	18 (Deg.)
3dB Beamwidth, H-Plane, Max	94 (Deg.)
Cross Pol. Isolation, Min	20 dB
Cross Pol. Isolation, Typ	30 dB
Port to Port Isolation, Min	20 dB
Port to Port Isolation, Typ	30 dB
VSWR, Typ	1.5:1
Impedance, (Ohm)	50 Ω
Power Handling, CW, (W)	20 W
Power Handling, Peak, (W)	40 W

Interface	
Output Type	Coaxial
Connector	2.92mm (K)
Connector Gender	Female

Mechanical Specification	
Body Material	Aluminum
Finish	Chemical Conversion Coating
Size, W	54.5 mm
Size, H	54.5 mm
Size, L	90 mm
Weight	0.15 kg

ADDITIONAL INFORMATION

Application	General Purpose Indoor & Outdoor, Fixed
Solution for	• Antenna Measurement • Reflector Feed • Far-field Measurement • Planar Near-Field Measurement • Cylinderical Near-Field Measurement • Spherical Near-Field Measurement • CATR • System Intergration

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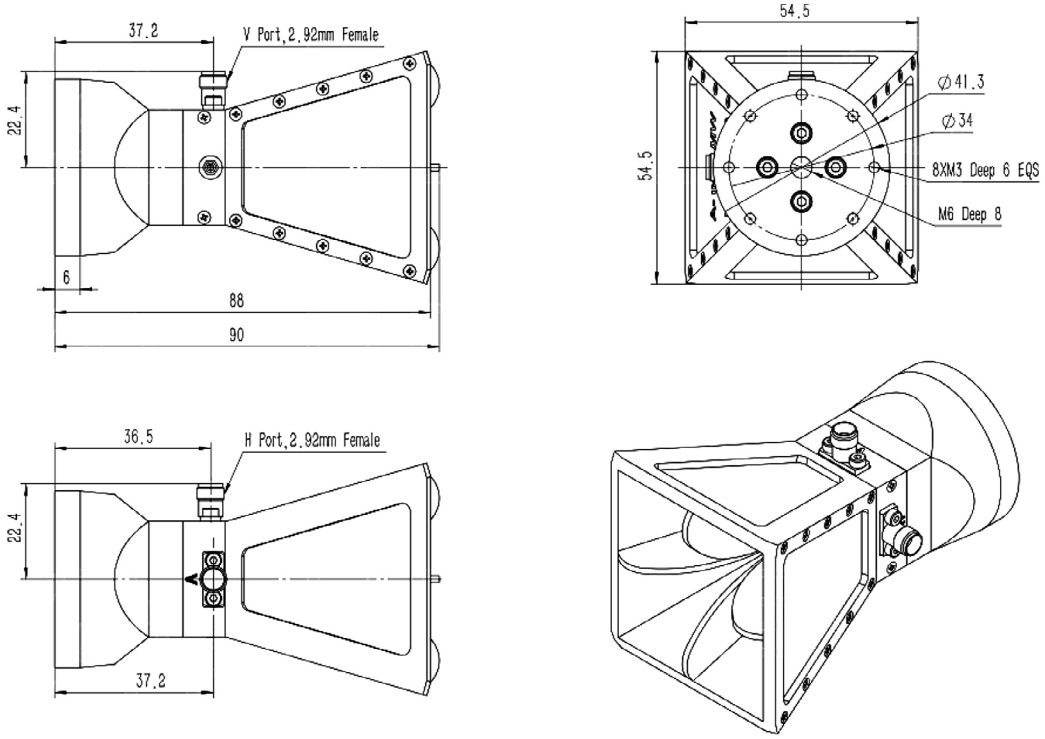
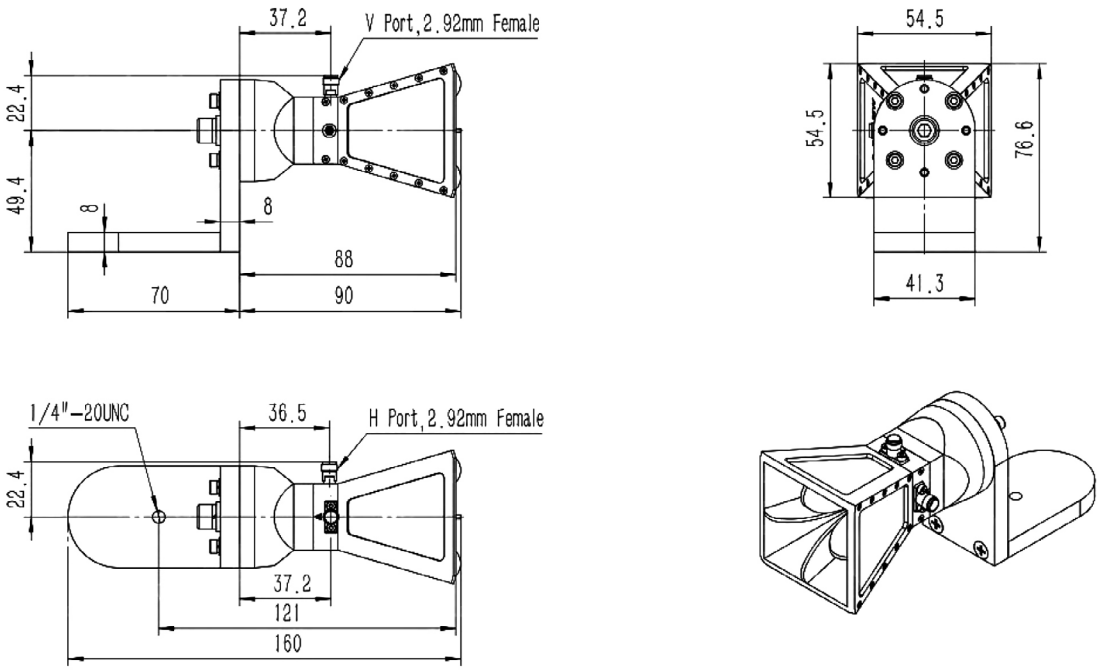
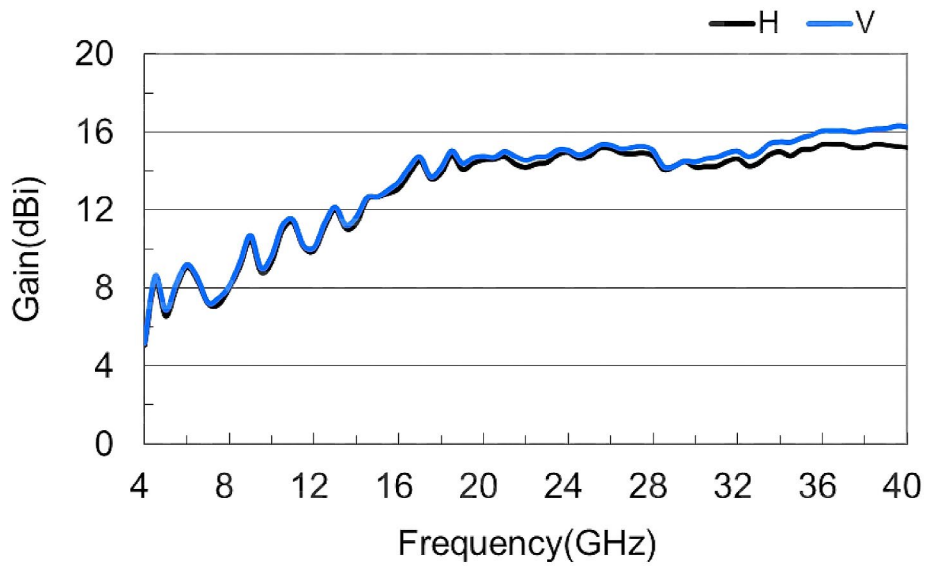
2.92mm-Female Output



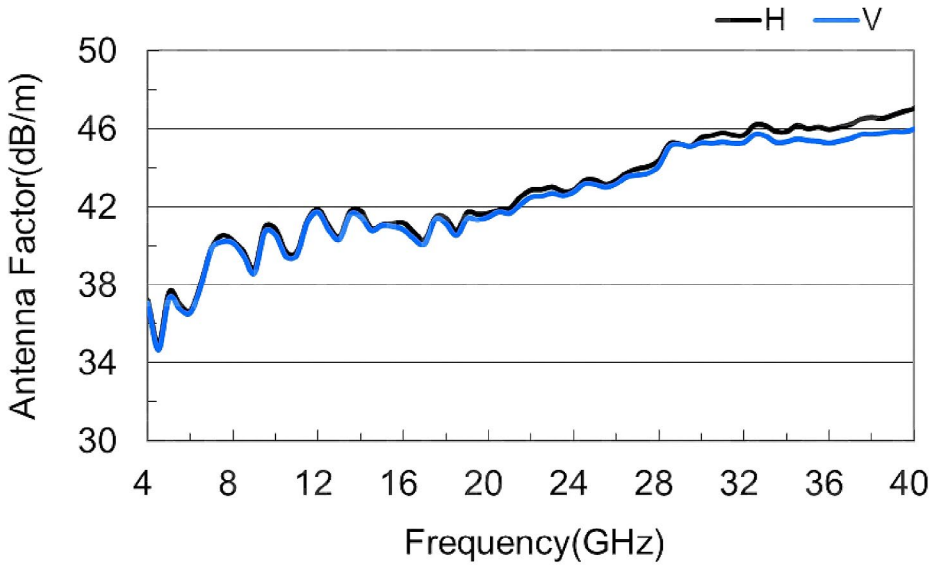
2.92mm-Female Output with L Type Mounting Bracket



Gain



Antenna Factor



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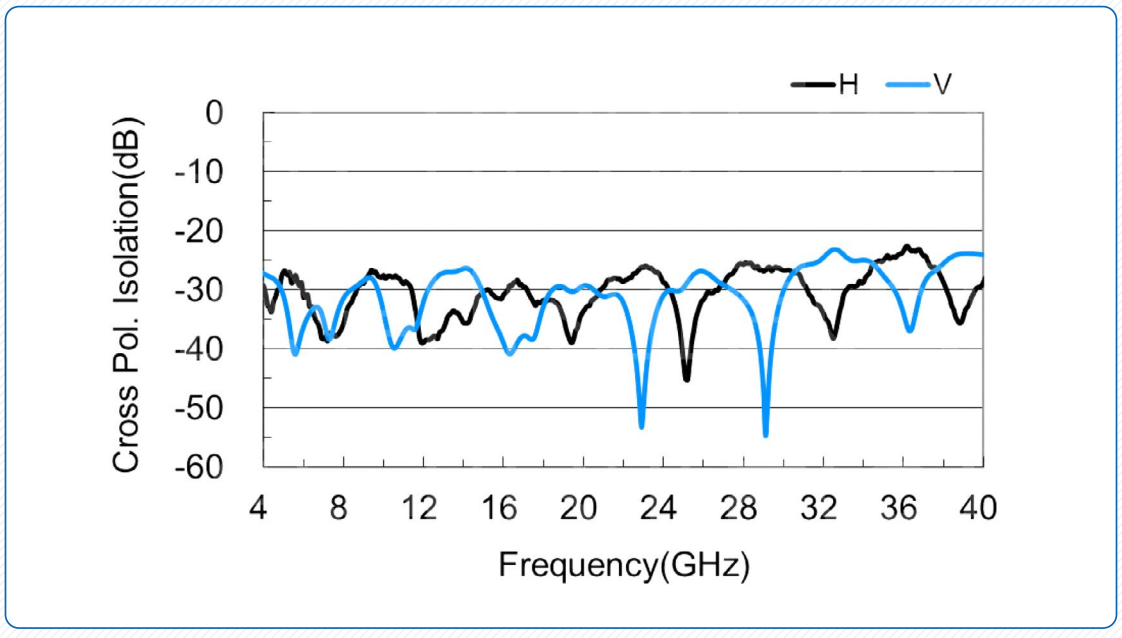
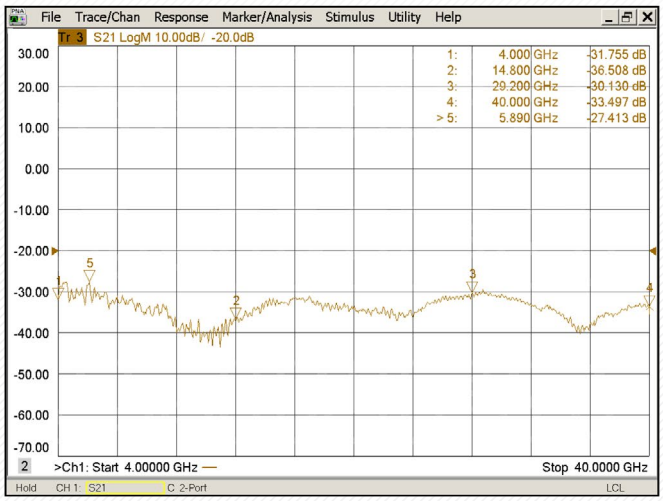
ANTENNA FACTOR (TABLE)

Frequency (GHz)	Horizontal		Vertical	
	Gain(dBi)	AF(dB/m)	Gain(dBi)	AF(dB/m)
4.0	5.05	37.20	5.19	37.06
5.0	6.55	37.64	6.86	37.33
6.0	9.07	36.70	9.20	36.58
7.0	7.20	39.91	7.24	39.87
8.0	8.01	40.26	8.11	40.16
9.0	10.48	38.81	10.71	38.59
10.0	9.34	40.87	9.66	40.55
12.0	9.91	41.88	10.07	41.72
14.0	11.32	41.81	11.65	41.49
16.0	13.10	41.19	13.45	40.84
18.0	13.89	41.43	14.18	41.14
20.0	14.56	41.67	14.75	41.48
22.0	14.19	42.87	14.55	42.51
24.0	14.95	42.87	15.05	42.77
26.0	15.15	43.36	15.32	43.18
28.0	14.77	44.38	15.04	44.11
30.0	14.19	45.56	14.46	45.30
32.0	14.62	45.69	15.00	45.31
34.0	14.98	45.86	15.49	45.35
36.0	15.36	45.98	16.06	45.28
38.0	15.21	46.59	16.08	45.73
40.0	15.20	47.06	16.25	46.00

CROSS POLARIZATION ISOLATION

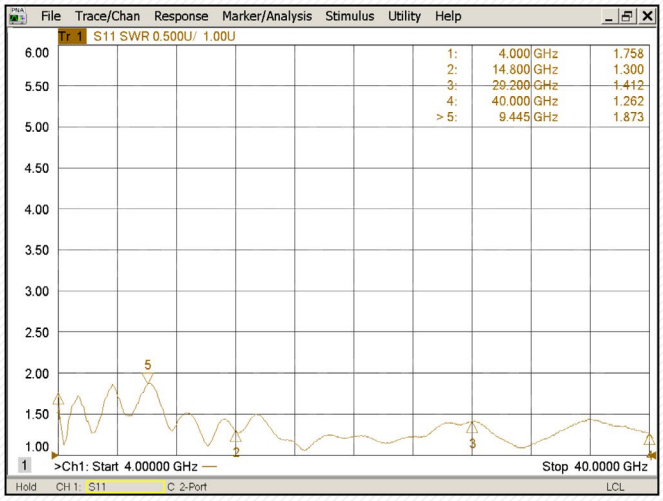


PORT TO PORT ISOLATION

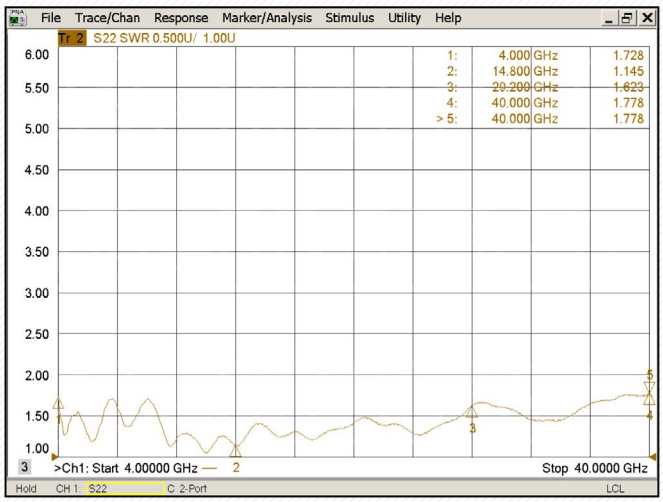


VSWR

Port-H

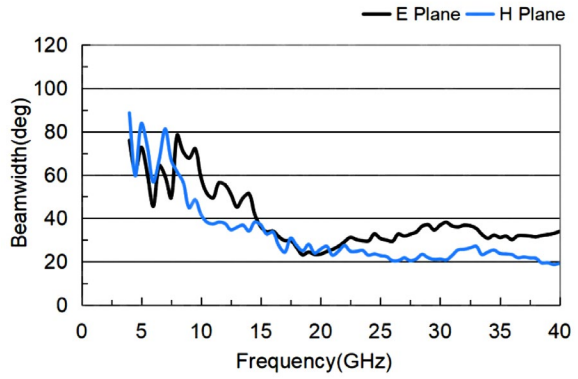


Port-V

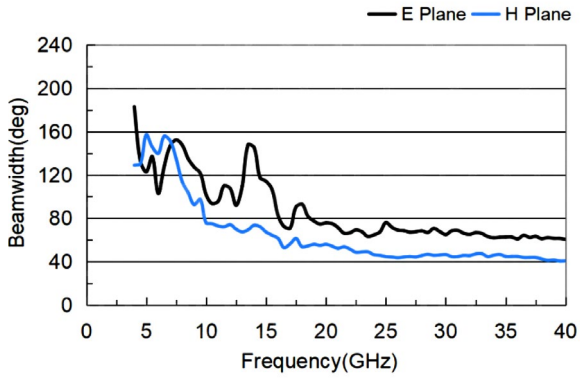


BEAMWIDTH

3dB Beamwidth

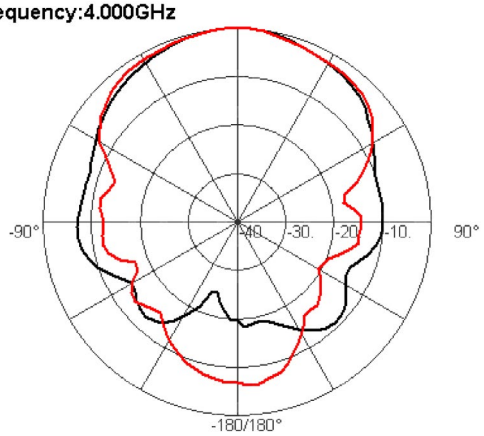


10dB Beamwidth



PATTERN 1

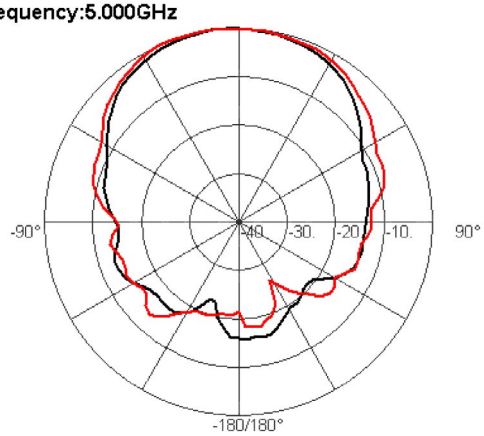
Frequency:4.000GHz



H-Plane
3dB Beamwidth(deg):88.68

E-Plane
3dB Beamwidth(deg):75.88

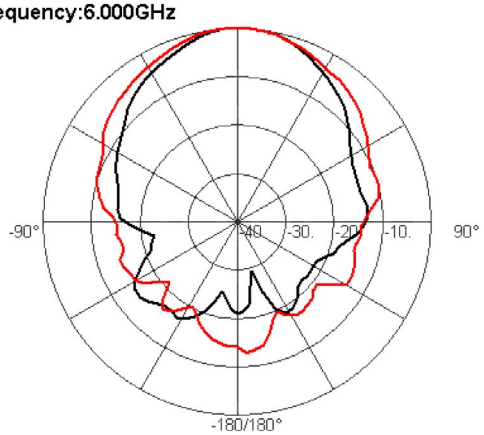
Frequency:5.000GHz



H-Plane
3dB Beamwidth(deg):83.69

E-Plane
3dB Beamwidth(deg):72.73

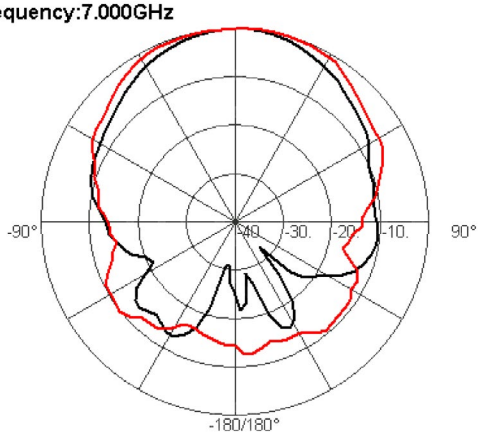
Frequency:6.000GHz



H-Plane
3dB Beamwidth(deg):56.71

E-Plane
3dB Beamwidth(deg):45.58

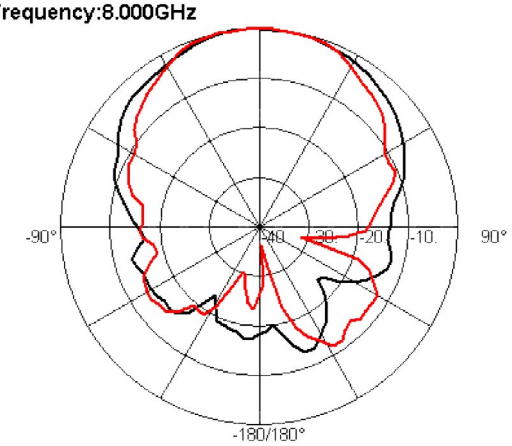
Frequency:7.000GHz



H-Plane
3dB Beamwidth(deg):81.20

E-Plane
3dB Beamwidth(deg):59.29

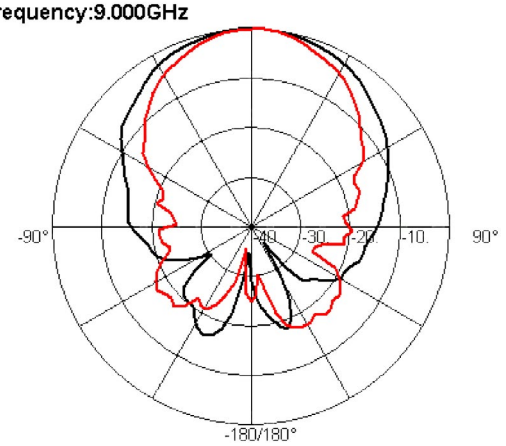
Frequency:8.000GHz



H-Plane ——— E-Plane ———

3dB Beamwidth(deg):61.37 3dB Beamwidth(deg):78.28

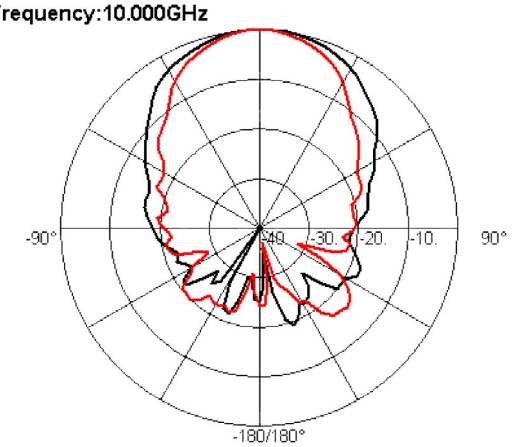
Frequency:9.000GHz



H-Plane ——— E-Plane ———

3dB Beamwidth(deg):44.78 3dB Beamwidth(deg):67.75

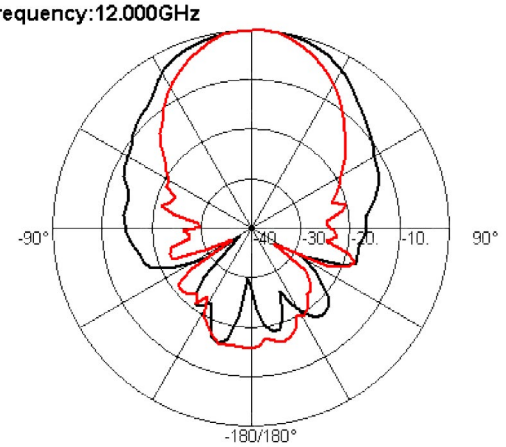
Frequency:10.000GHz



H-Plane ——— E-Plane ———

3dB Beamwidth(deg):41.72 3dB Beamwidth(deg):58.72

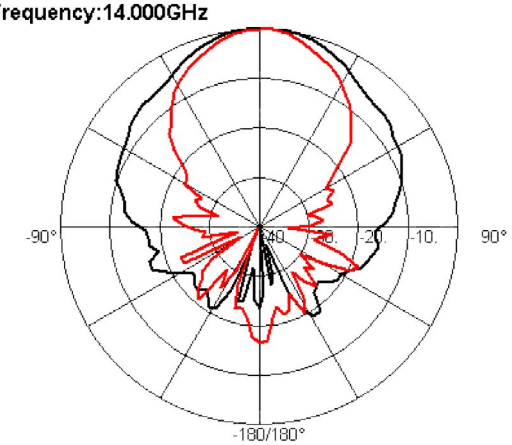
Frequency:12.000GHz



H-Plane ——— E-Plane ———

3dB Beamwidth(deg):37.60 3dB Beamwidth(deg):55.44

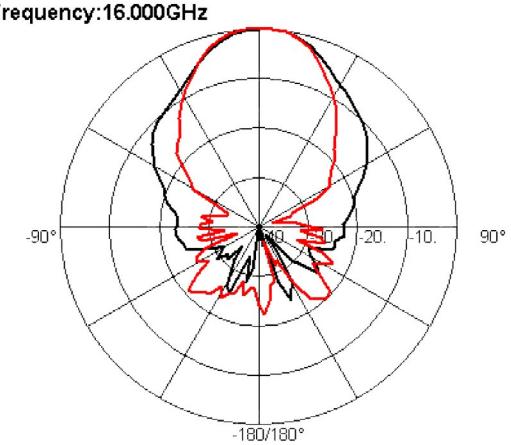
Frequency:14.000GHz



H-Plane ——— E-Plane ———

3dB Beamwidth(deg):34.08 3dB Beamwidth(deg):51.40

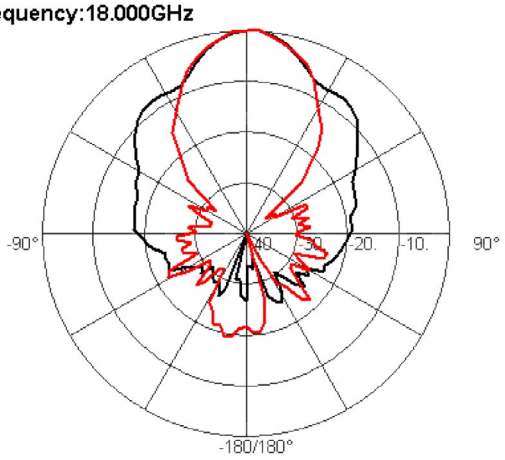
Frequency:16.000GHz



H-Plane ——— E-Plane ———

3dB Beamwidth(deg):33.79 3dB Beamwidth(deg):34.13

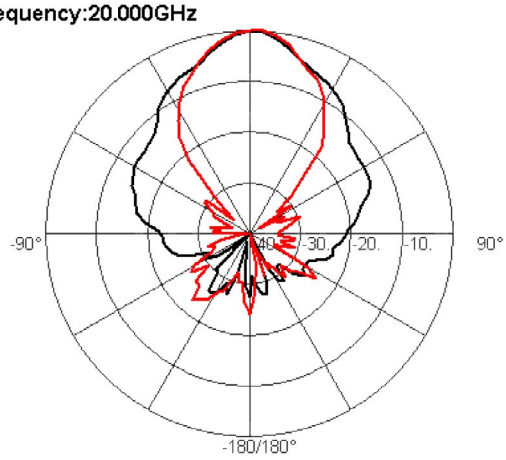
Frequency:18.000GHz



H-Plane
3dB Beamwidth(deg):27.41

E-Plane
3dB Beamwidth(deg):26.47

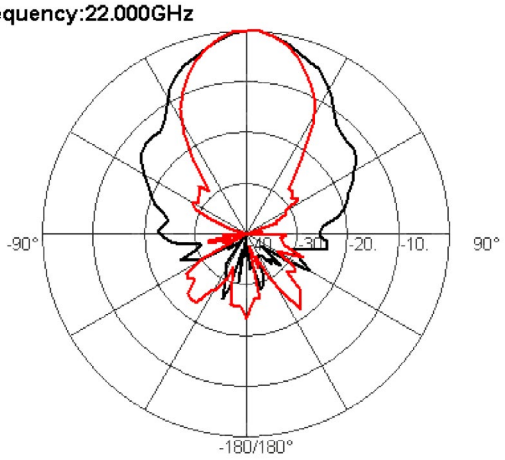
Frequency:20.000GHz



H-Plane
3dB Beamwidth(deg):25.77

E-Plane
3dB Beamwidth(deg):23.45

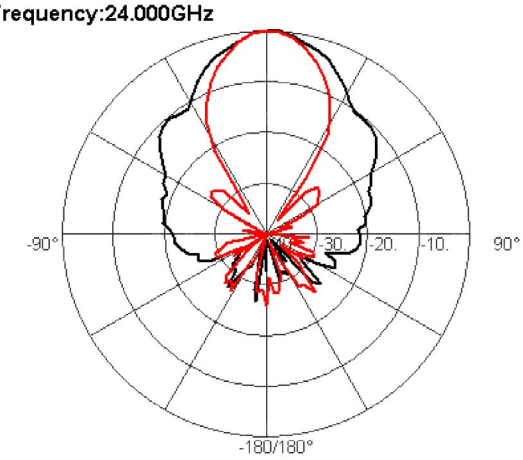
Frequency:22.000GHz



H-Plane
3dB Beamwidth(deg):27.47

E-Plane
3dB Beamwidth(deg):29.20

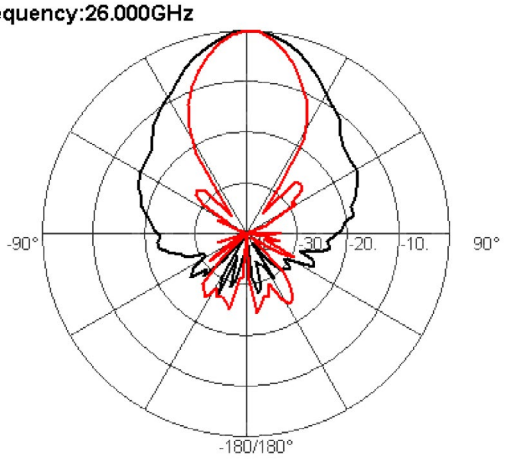
Frequency:24.000GHz



H-Plane
3dB Beamwidth(deg):22.94

E-Plane
3dB Beamwidth(deg):29.53

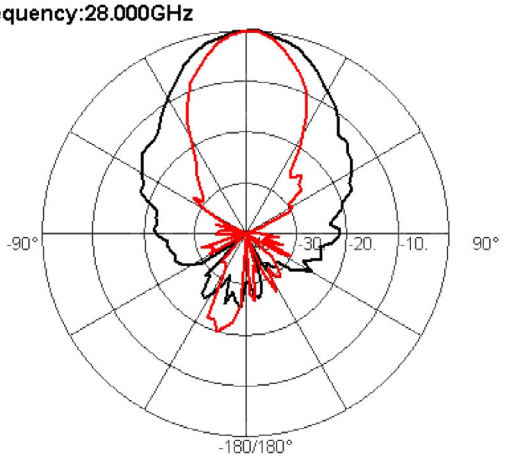
Frequency:26.000GHz



H-Plane
3dB Beamwidth(deg):20.46

E-Plane
3dB Beamwidth(deg):29.34

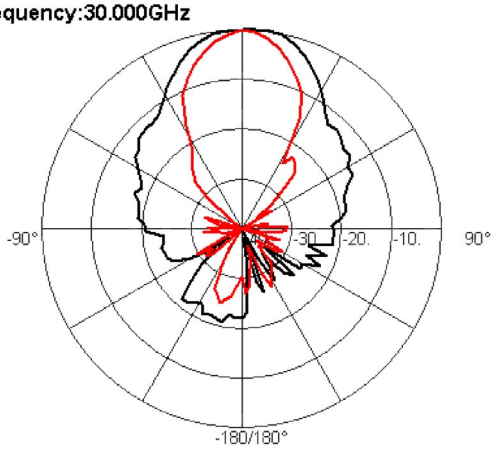
Frequency:28.000GHz



H-Plane
3dB Beamwidth(deg):21.24

E-Plane
3dB Beamwidth(deg):33.67

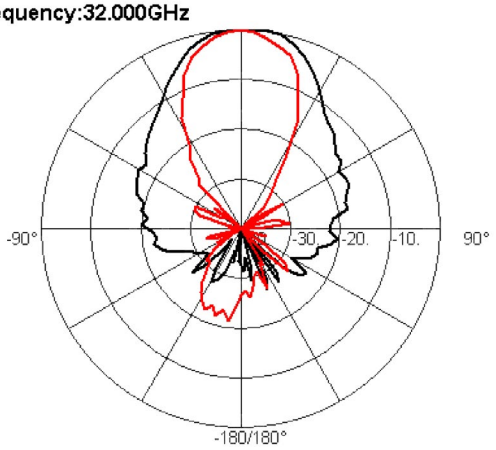
Frequency:30.000GHz



H-Plane ——— E-Plane ———

3dB Beamwidth(deg):21.22 3dB Beamwidth(deg):36.82

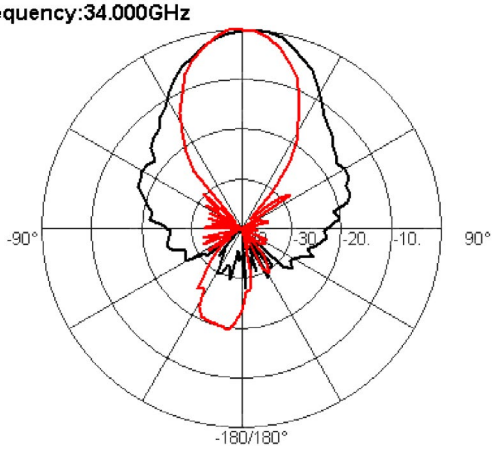
Frequency:32.000GHz



H-Plane ——— E-Plane ———

3dB Beamwidth(deg):25.72 3dB Beamwidth(deg):36.79

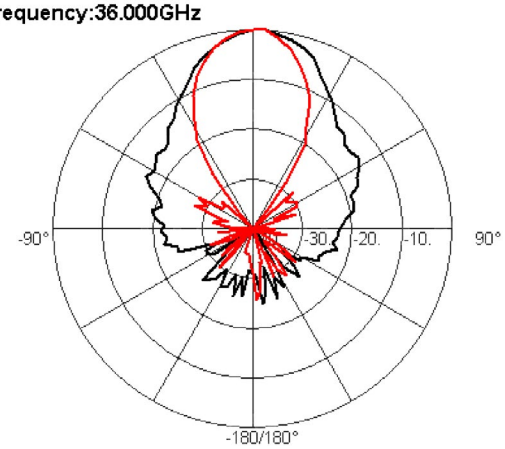
Frequency:34.000GHz



H-Plane ——— E-Plane ———

3dB Beamwidth(deg):24.44 3dB Beamwidth(deg):30.79

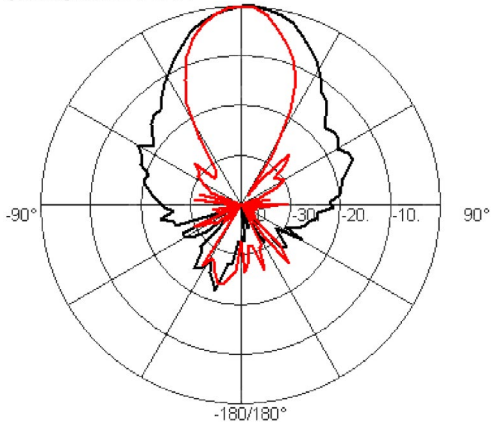
Frequency:36.000GHz



H-Plane ——— E-Plane ———

3dB Beamwidth(deg):23.26 3dB Beamwidth(deg):30.18

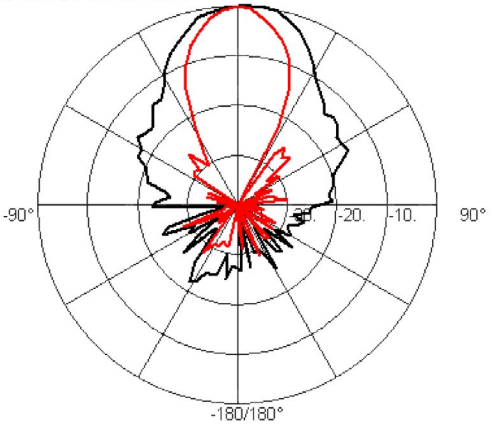
Frequency:38.000GHz



H-Plane ——— E-Plane ———

3dB Beamwidth(deg):21.55 3dB Beamwidth(deg):31.44

Frequency:40.000GHz



H-Plane ——— E-Plane ———

3dB Beamwidth(deg):19.25 3dB Beamwidth(deg):33.99