

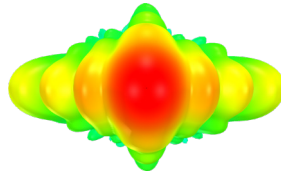


Standard Gain Horn Antennas

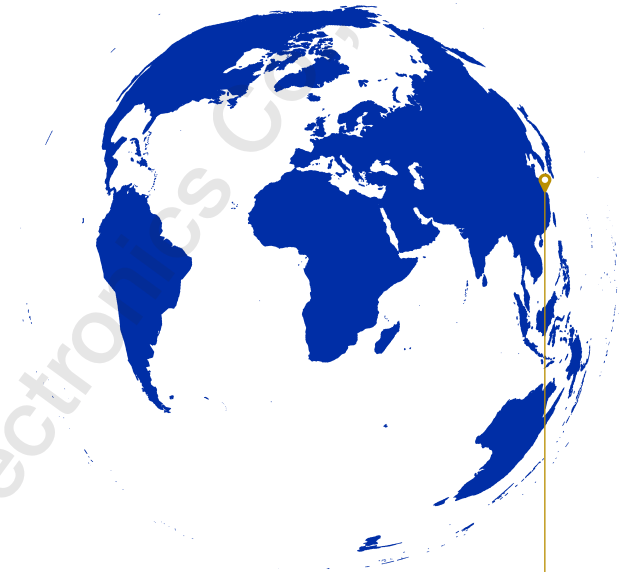
8.2 - 12.5 GHz, 20 dBi



Radiation pattern



QR code



Hangzhou Multipath Electronics Co., Ltd., Zhejiang, China

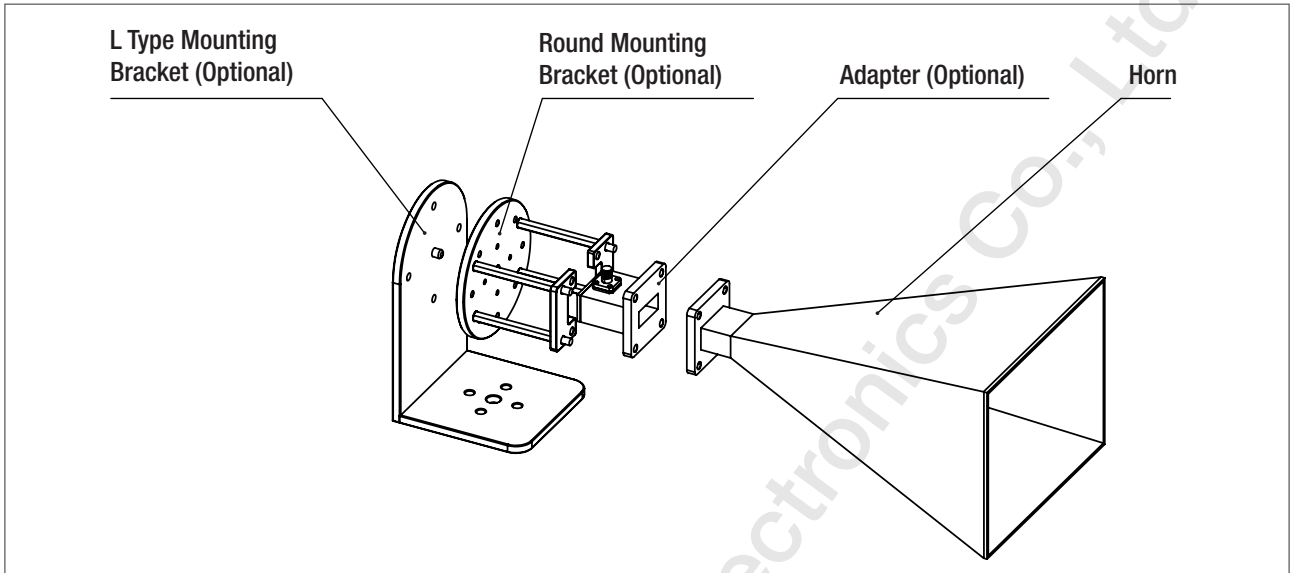
⚙️ Product specifications

Part number	HA-WR90-20	Polarization	Single linear
Antenna type	Pyamidal horn	Gain [dBi]	20 Typ.
Frequency range [GHz]	8.2 – 12.5	3dB beamwidth [deg]	E-plane: 15 Typ. H-plane: 15 Typ.
Waveguide band	WR90	Cross-polarization isolation [dB]	30 Typ.
Dimensions (H x W x L) [mm; inch]	108 x 140.3 x 251.23; 4.25 x 5.52 x 9.89	VSWR	1.20 Typ.
Weight (approx.) [kg; lb]	0.4; 0.881	Impedance [Ohms]	50
Material	Aluminum	RF connector	SMA-Female

Outline dimensions

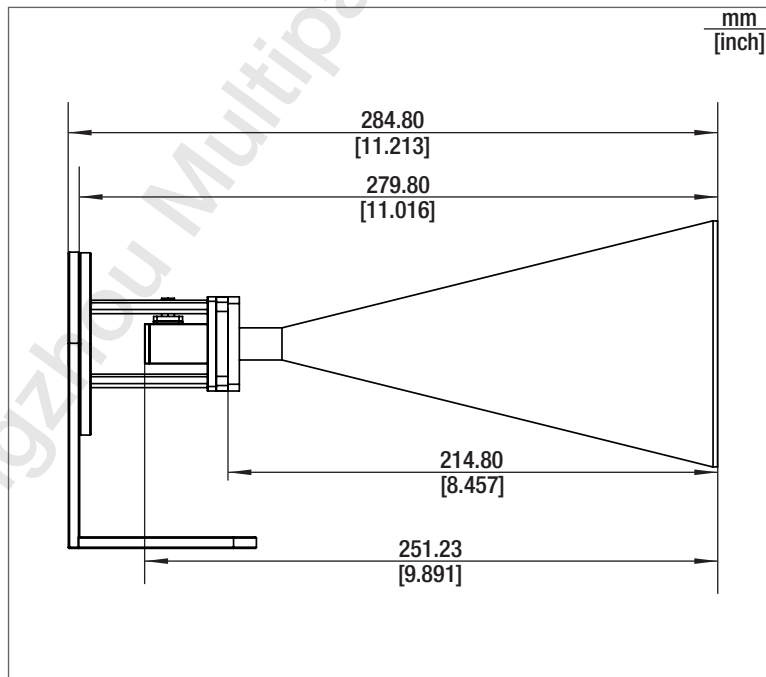
• Assembly dimensional drawing

Multipath Electronics provides complete standard gain horn antennas, forming mounting systems, integreted with (optional) waveguide to coaxial adapters, L type and round mounting brackets. The following figure shows the disassembly diagram of such a system.

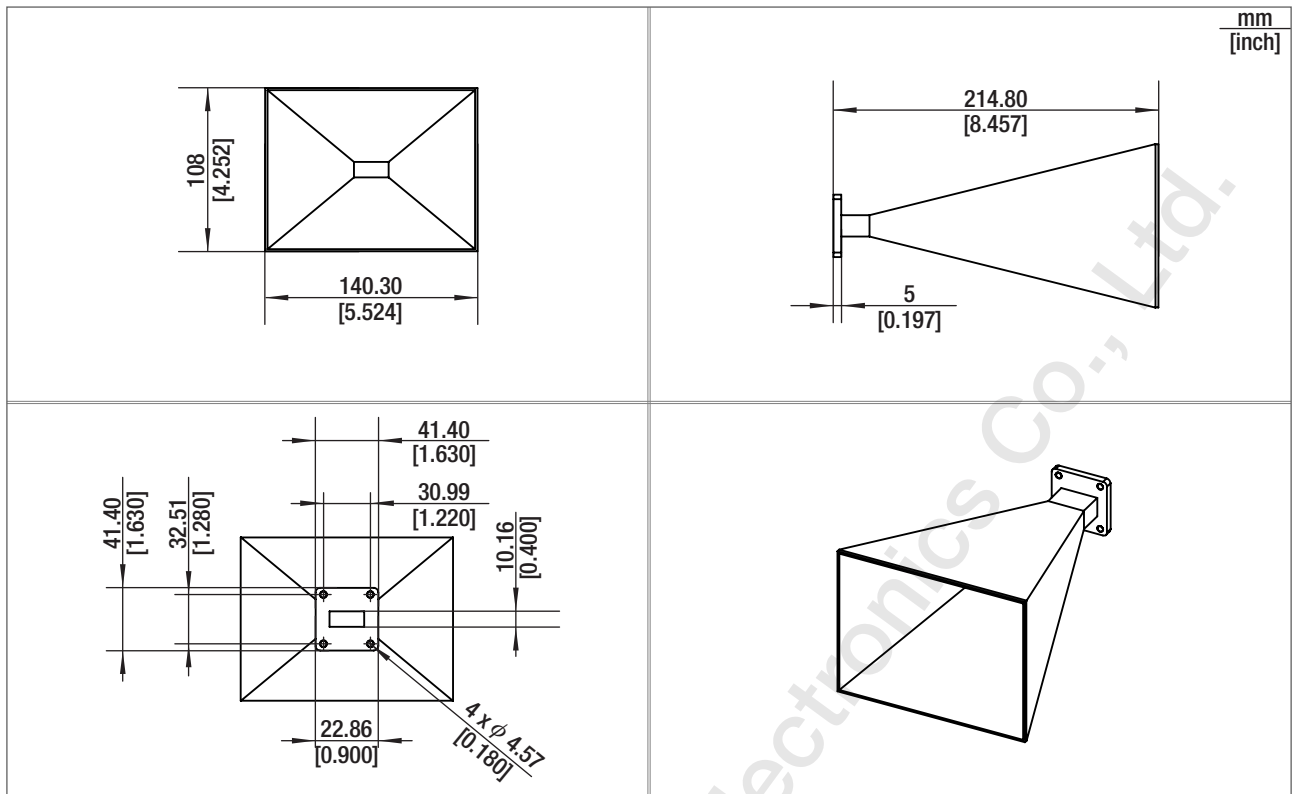


Side view of the mounting system.

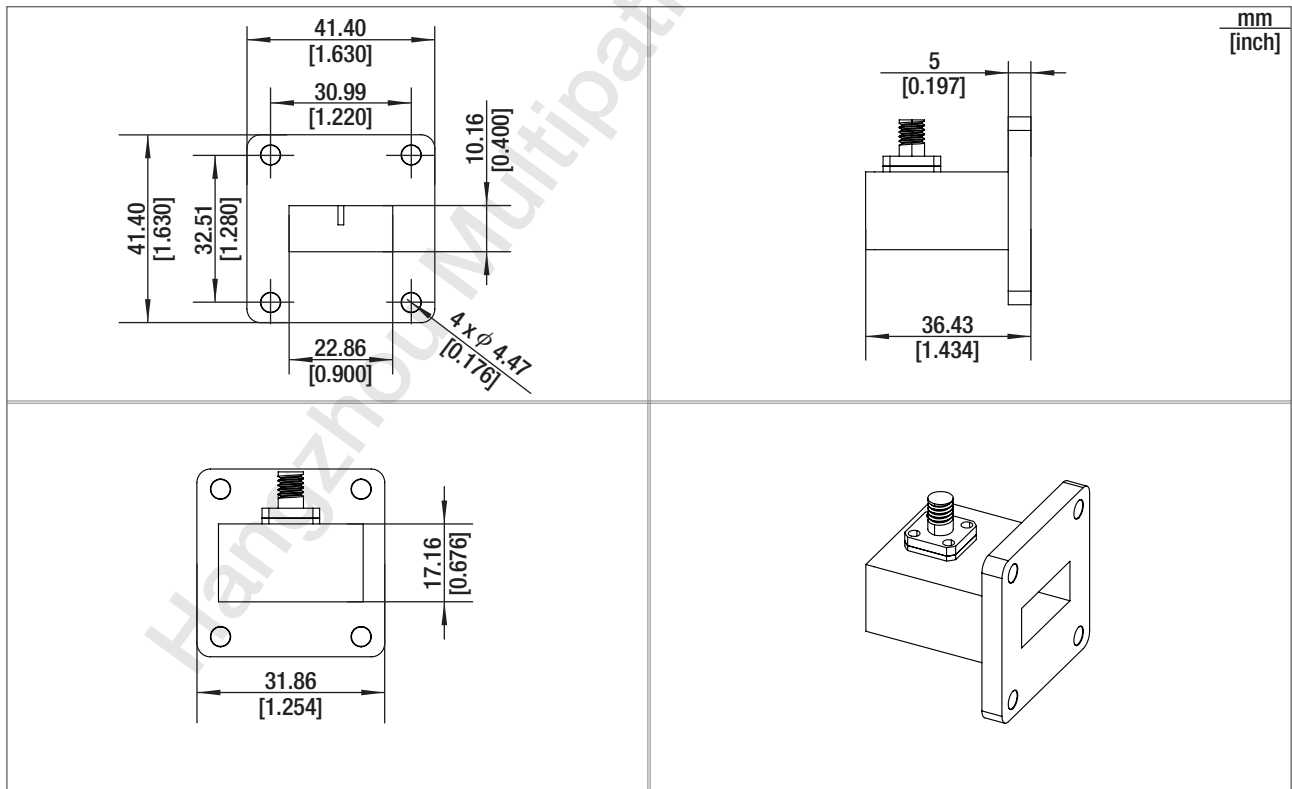
Detailed dimensions of the components will be given in subsequent diagrams.



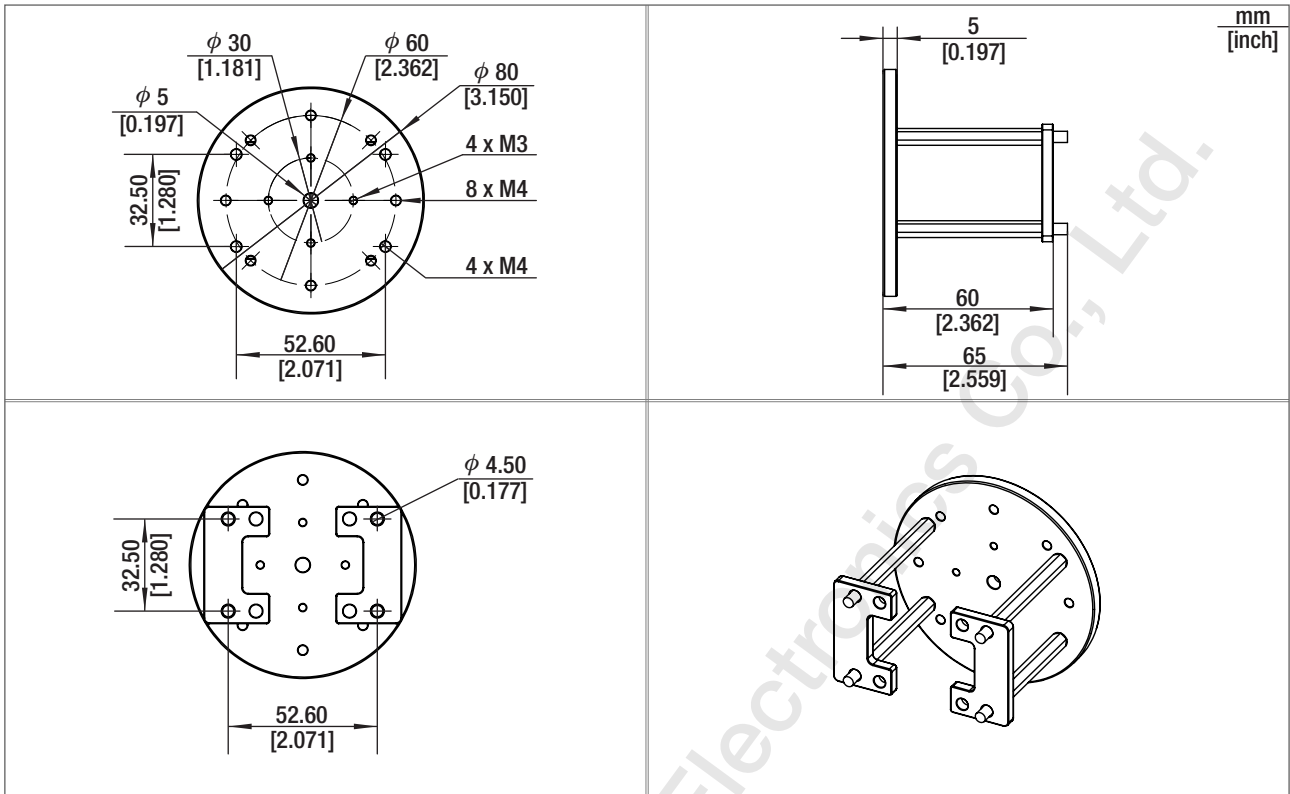
• Dimensional drawing: horn, HA-WR90-20



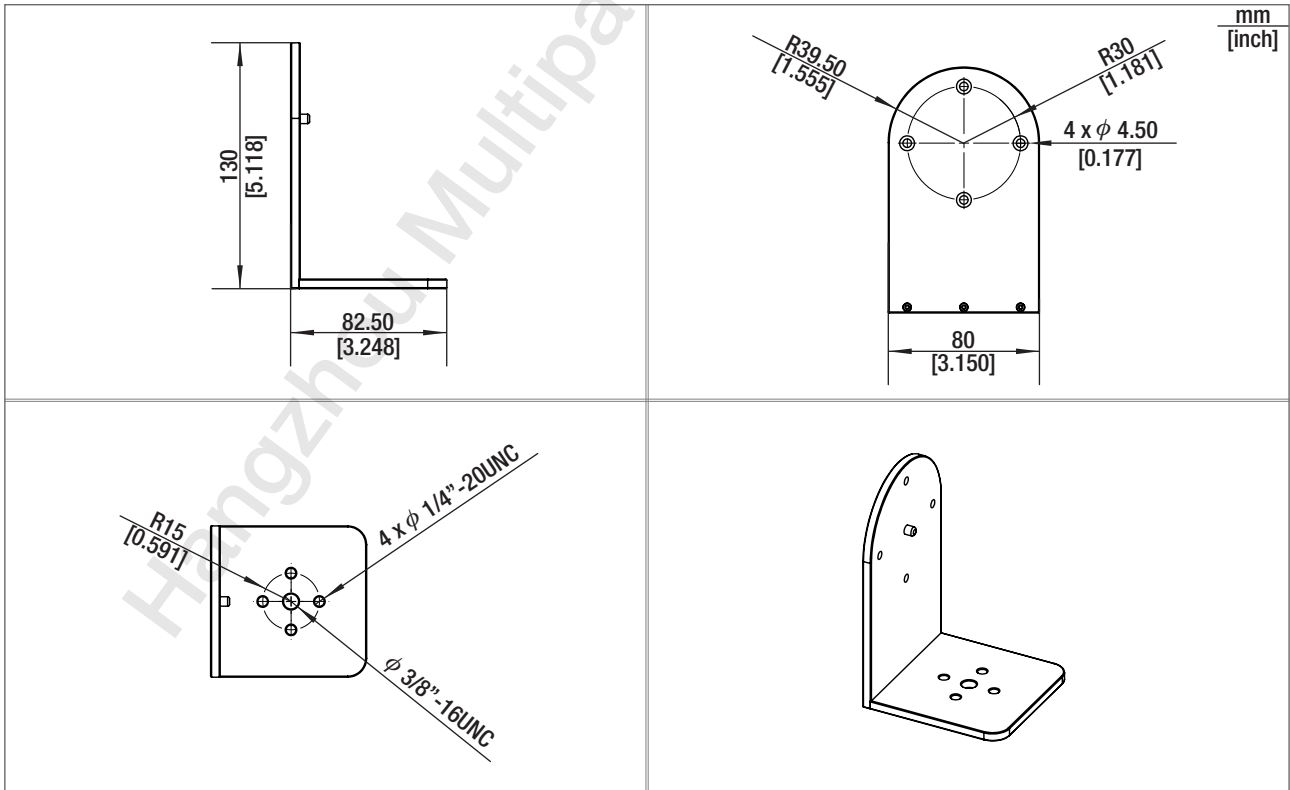
• Dimensional drawing: adapter, WR90-SMA-F (Optional)



• Dimensional drawing: round mounting bracket (Optional)

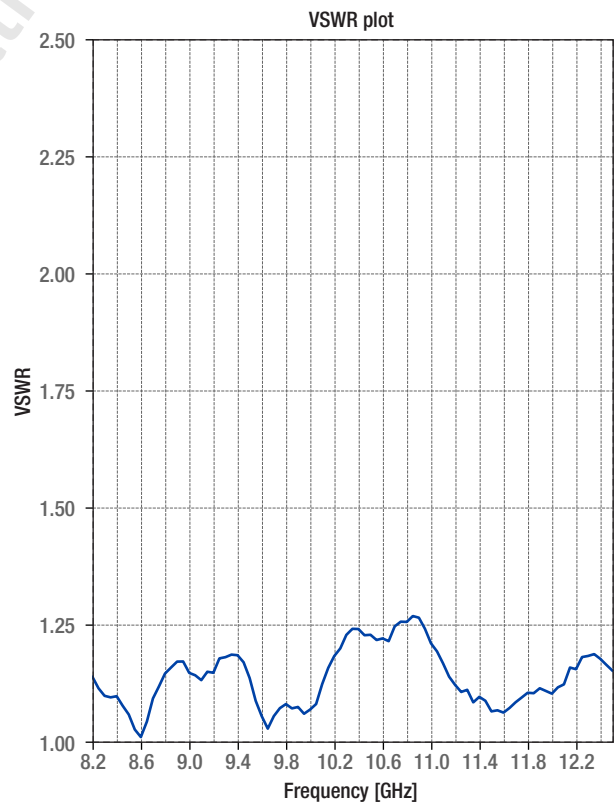
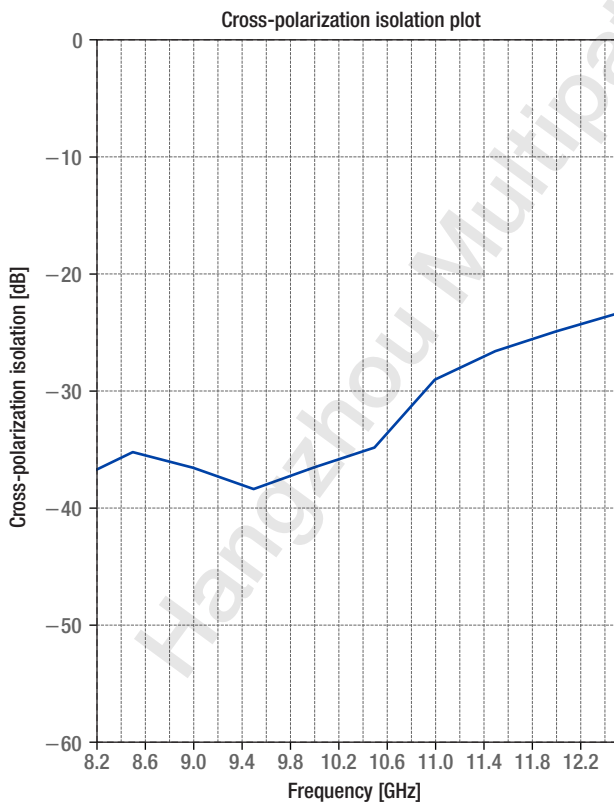
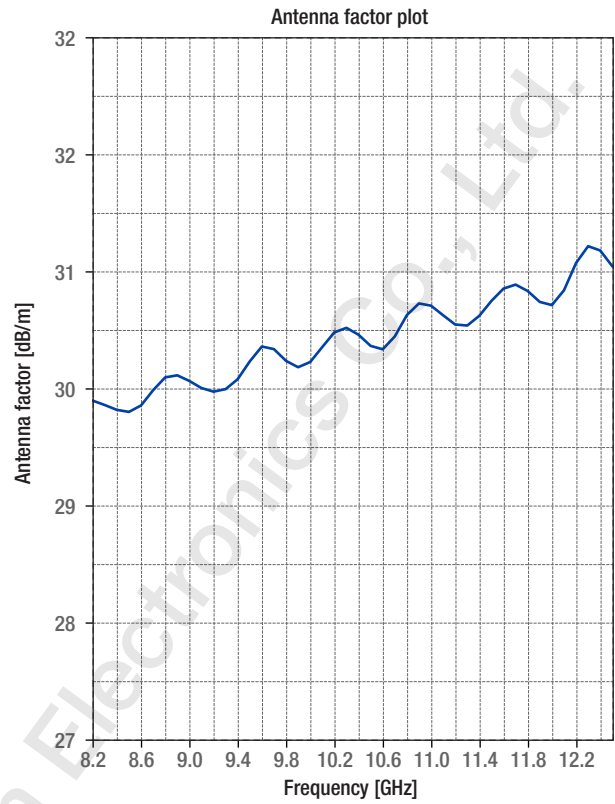
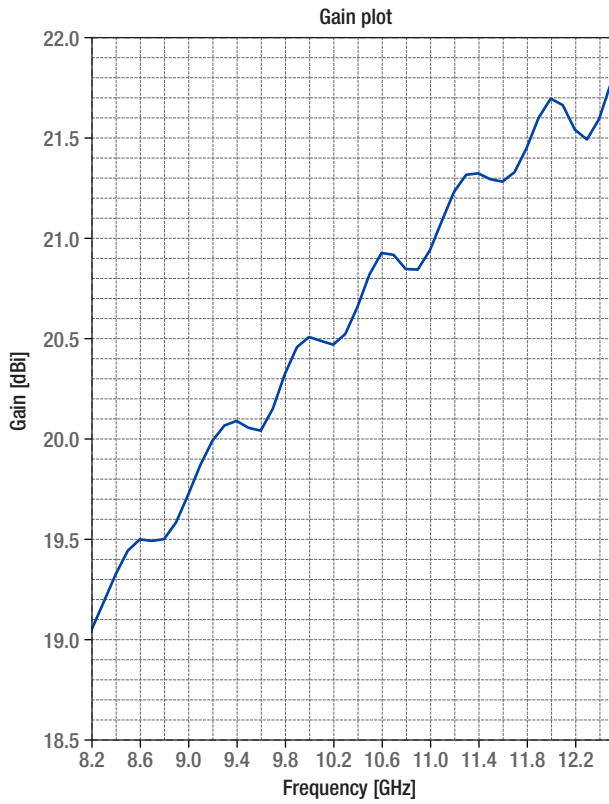


• Dimensional drawing: L type mounting bracket (Optional)



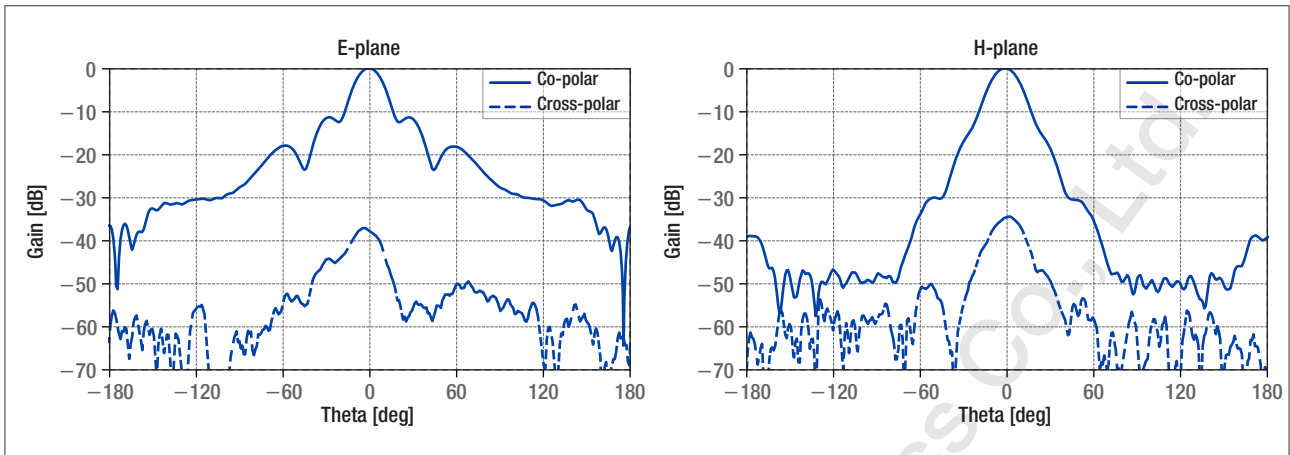
Electrical characteristics

Gain & Antenna factor & Cross-polarization isolation & VSWR

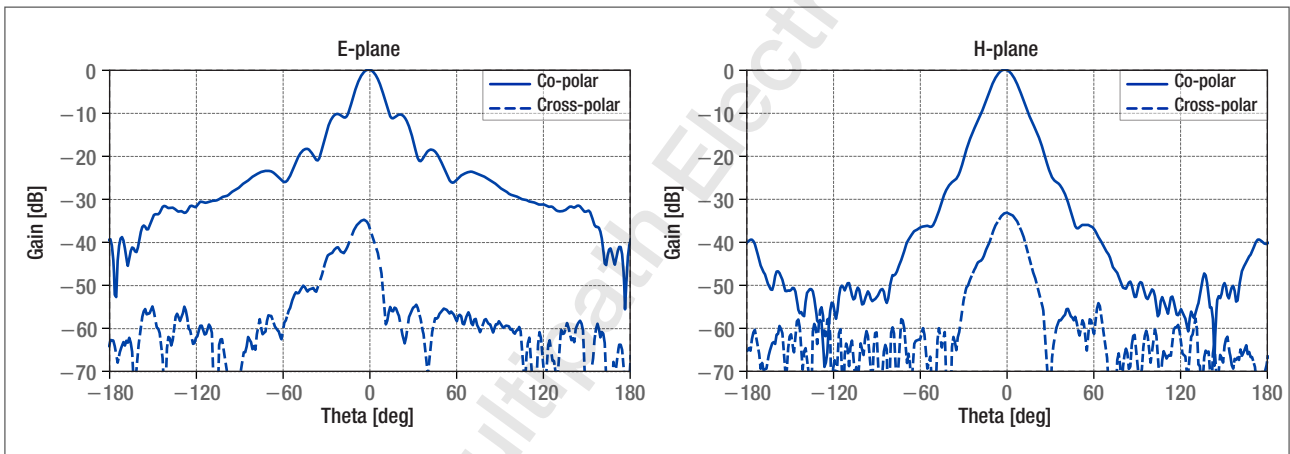


• Radiation patterns

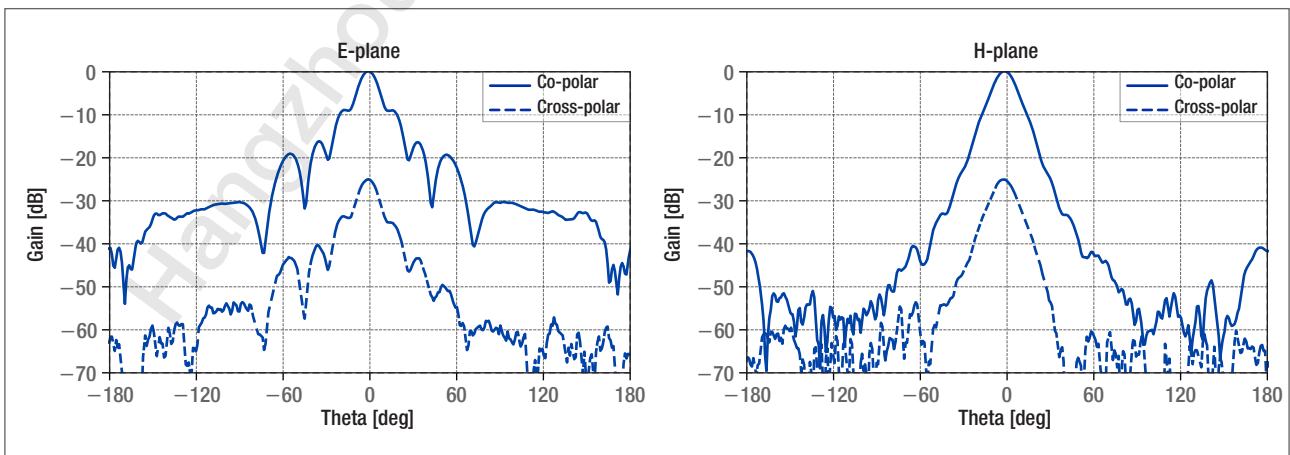
Patterns @ 8 GHz



Patterns @ 10 GHz



Patterns @ 12 GHz



• Data table

Frequency [GHz]	Gain [dBi]	Antenna factor [dB/m]	Cross-polarization isolation [dB]	VSWR
8.2	19.06	29.41	-36.76	1.14
8.4	19.34	29.35	-35.77	1.09
8.6	19.51	29.38	-35.54	1.01
8.8	19.51	29.58	-36.07	1.14
9.0	19.73	29.55	-36.60	1.14
9.2	20.00	29.48	-37.33	1.14
9.4	20.10	29.57	-38.05	1.18
9.6	20.05	29.80	-38.04	1.05
9.8	20.33	29.70	-37.31	1.08
10.0	20.51	29.69	-36.57	1.07
10.2	20.47	29.90	-35.90	1.18
10.4	20.66	29.88	-35.23	1.24
10.6	20.93	29.78	-33.73	1.22
10.8	20.85	30.02	-31.43	1.25
11.0	20.94	30.09	-29.12	1.21
11.2	21.23	29.95	-28.15	1.12
11.4	21.32	30.02	-27.18	1.10
11.6	21.28	30.21	-26.37	1.06
11.8	21.45	30.19	-25.70	1.10
12.0	21.69	30.09	-25.03	1.10
12.2	21.54	30.39	-24.43	1.15
12.4	21.59	30.48	-23.83	1.17

Frequency [GHz]	E-plane, 3dB beamwidth	H-plane, 3dB beamwidth
8	18.45°	19.43°
10	14.99°	16.40°
12	12.71°	14.61°



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Technical specifications in this datasheet are subject to change without notice. Actual products may differ from the shown images.