



Waveguide Probe Antenna

17.6 - 26.7 GHz



QR code



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

⚙️ Product specifications

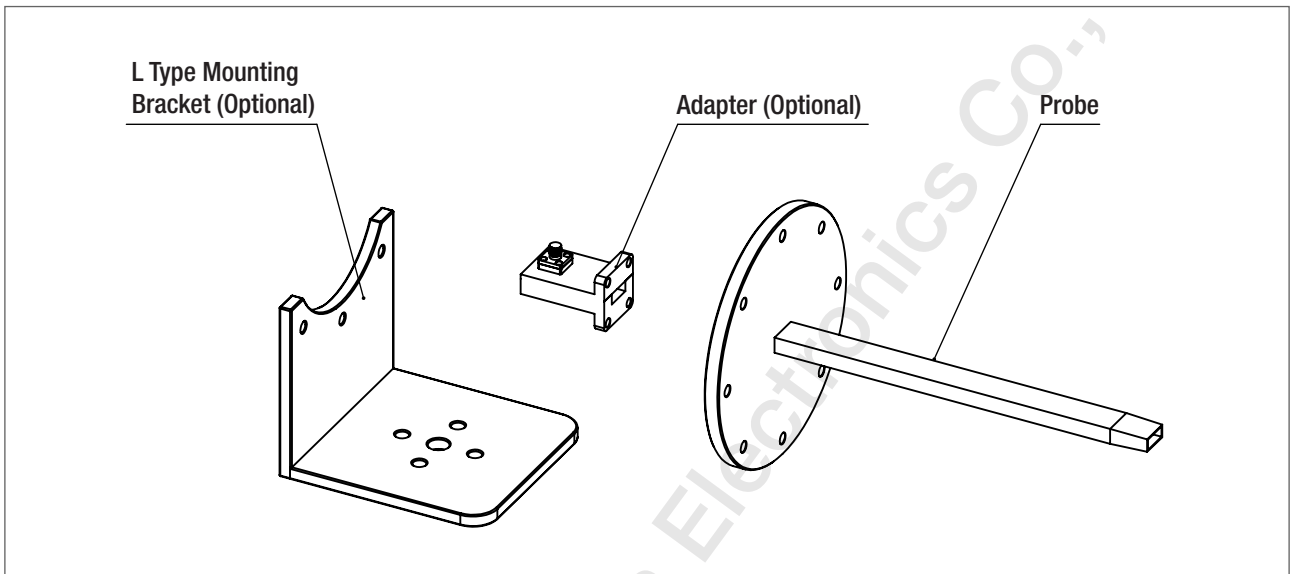
Part number	WP-WR42	Polarization	Single linear
Antenna type	Waveguide Probe Antenna	Gain [dBi]	5 Typ.
Frequency range [GHz]	17.6 – 26.7	3dB beamwidth [deg]	E-plane: 113 Typ. H-plane: 61 Typ.
Waveguide band	WR42	Cross-polarization isolation [dB]	35 Typ.
Dimensions (H x W x L) [mm; inch]	100 x 100 x 160.5; 3.94 x 3.94 x 6.32	VSWR	2.0 Typ.
Weight (approx.) [kg; lb]	0.17; 0.375	Impedance [Ohms]	50
Material	Aluminum	RF connector	2.4-Female

Outline dimensions

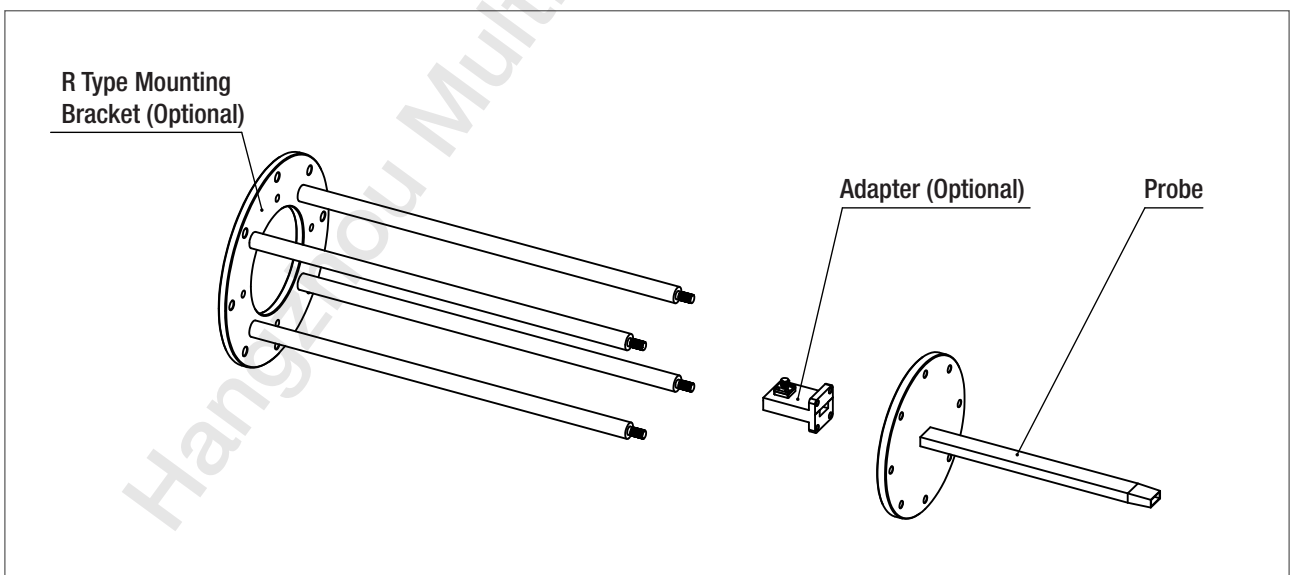
• Assembly dimensional drawing

Multipath Electronics provides complete Waveguide Probe Antennas, forming mounting systems, integrated with (optional) waveguide to coaxial adapters, L type and round mounting brackets. The following figure shows the disassembly diagram of such a system.

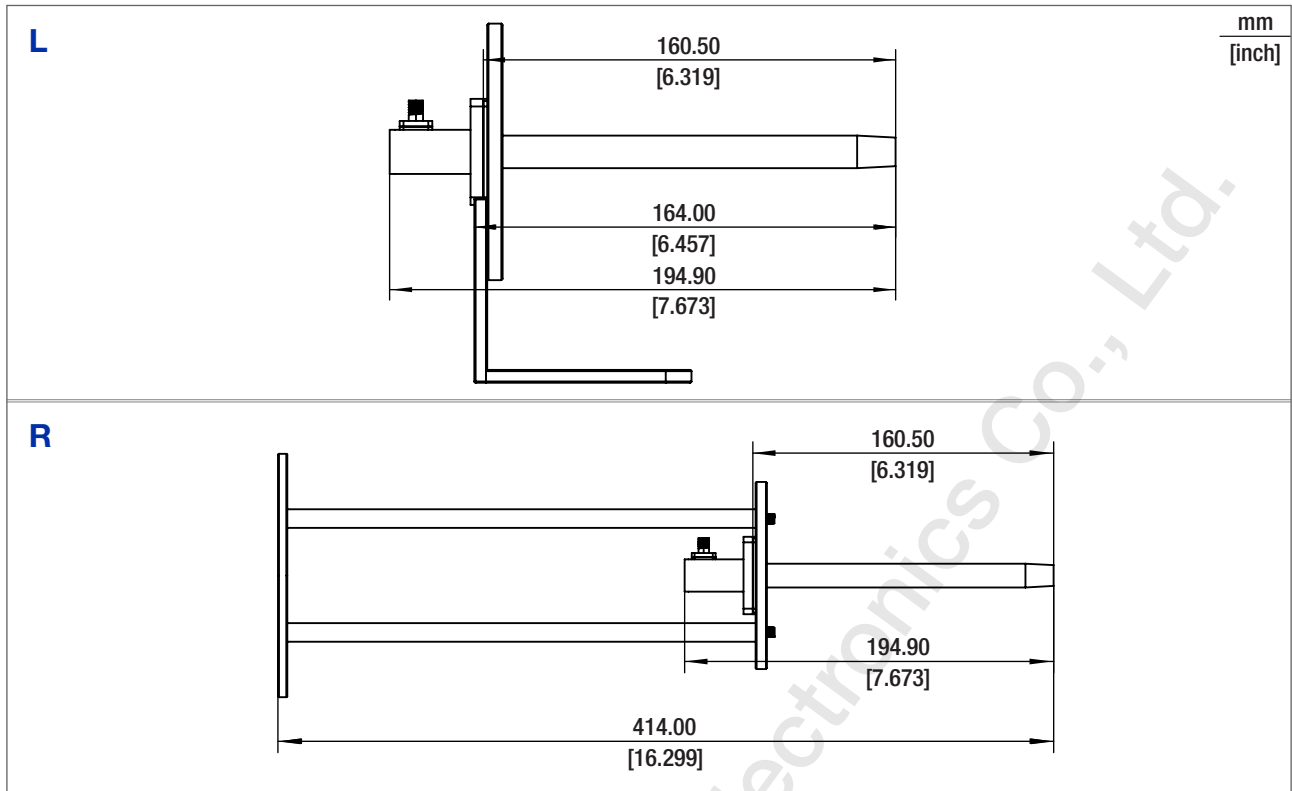
L_detector explosive body



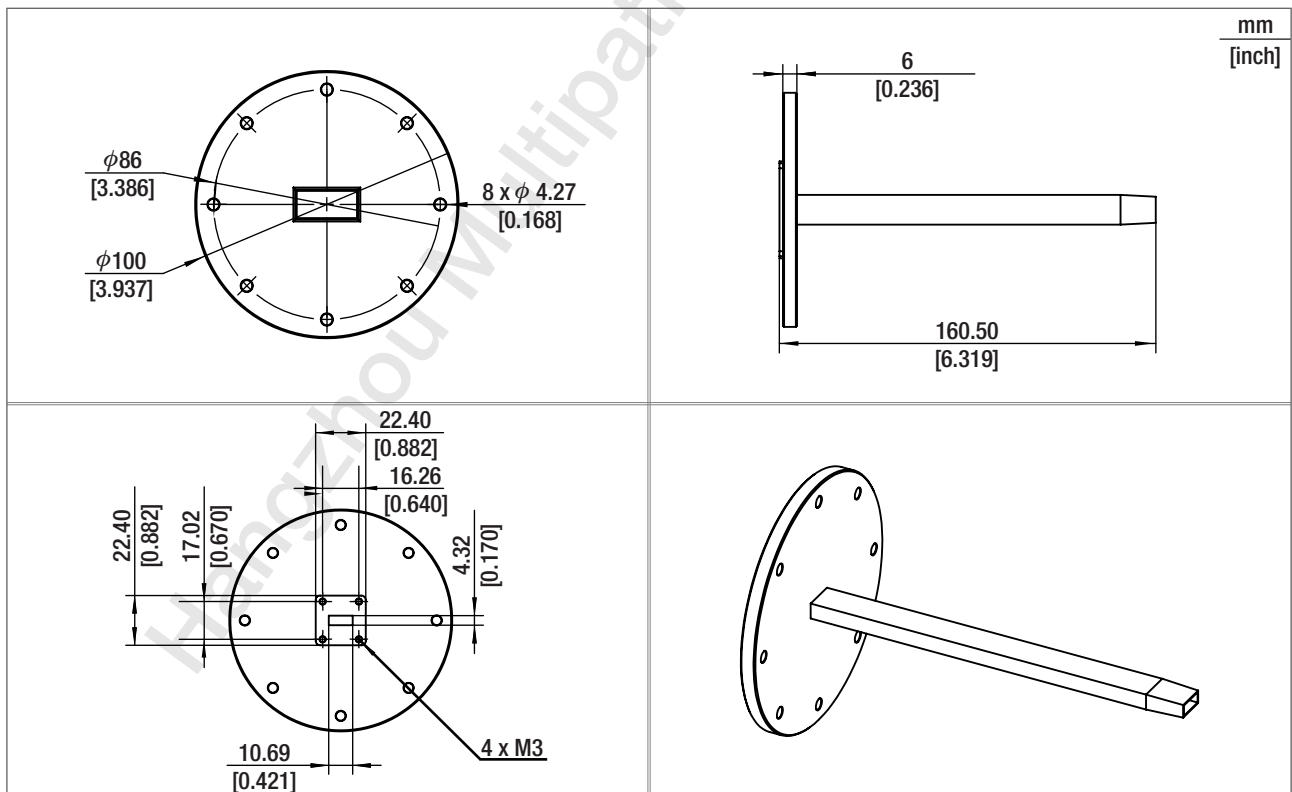
R_detector explosive body



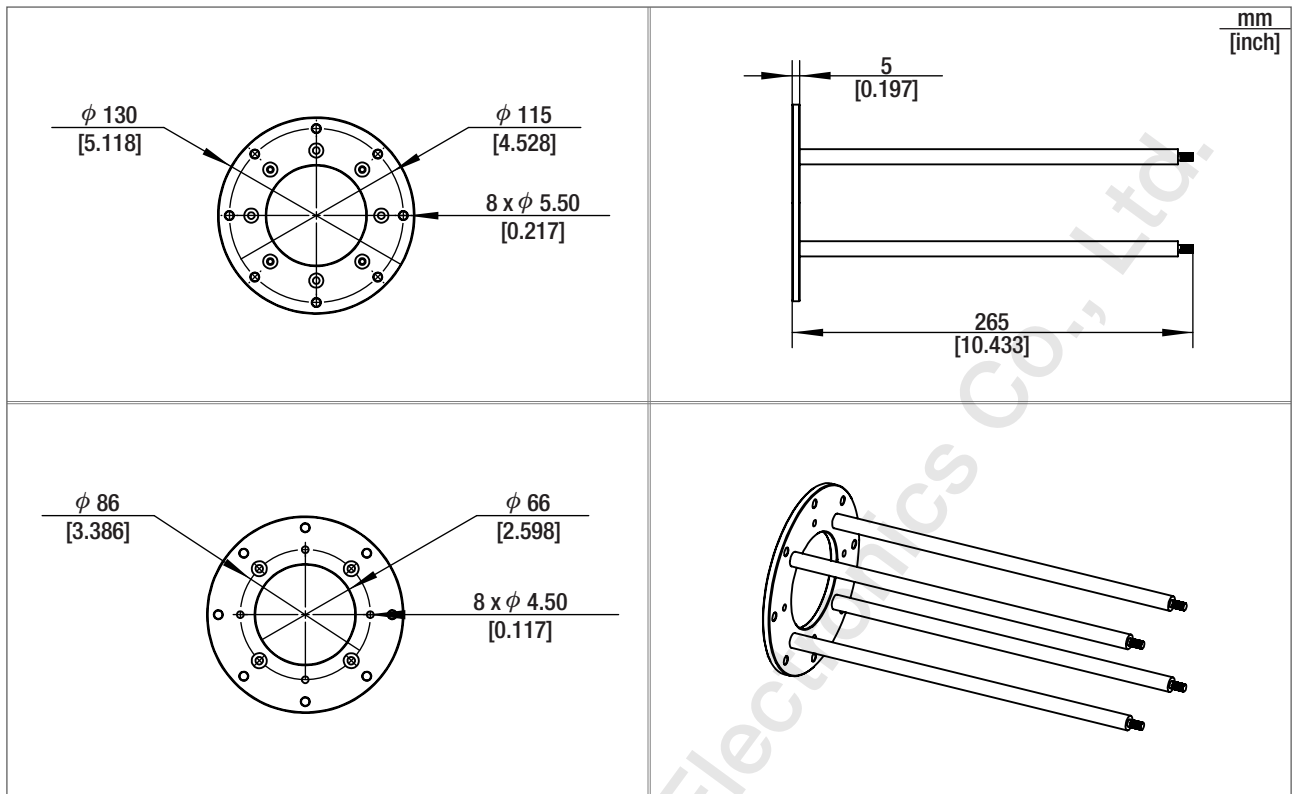
• Side view of the mounting system



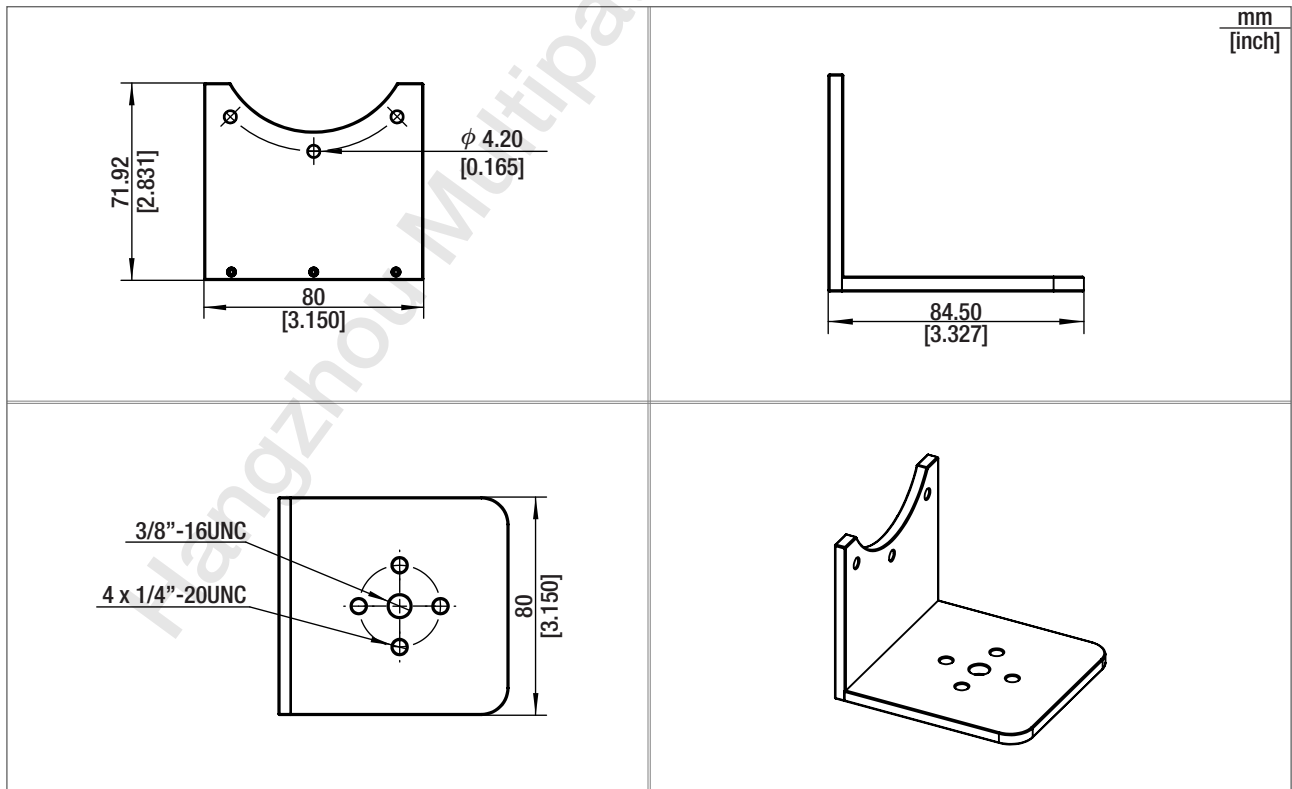
• Dimensional drawing: detectors, WP-WR42



• Dimensional drawing: round mounting bracket (Optional)

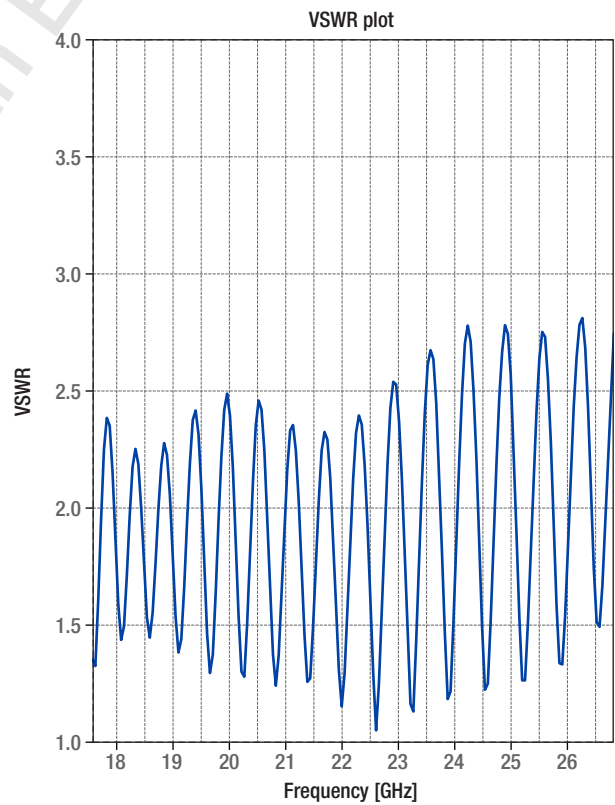
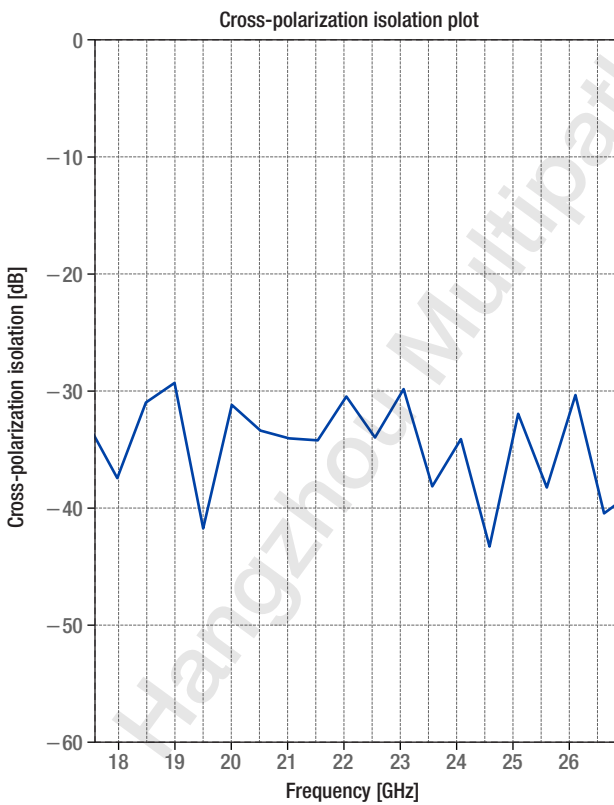
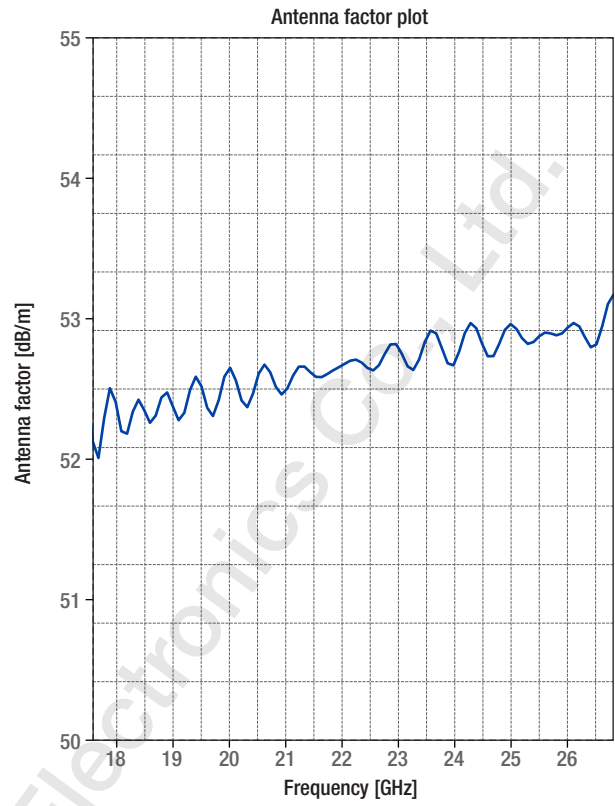
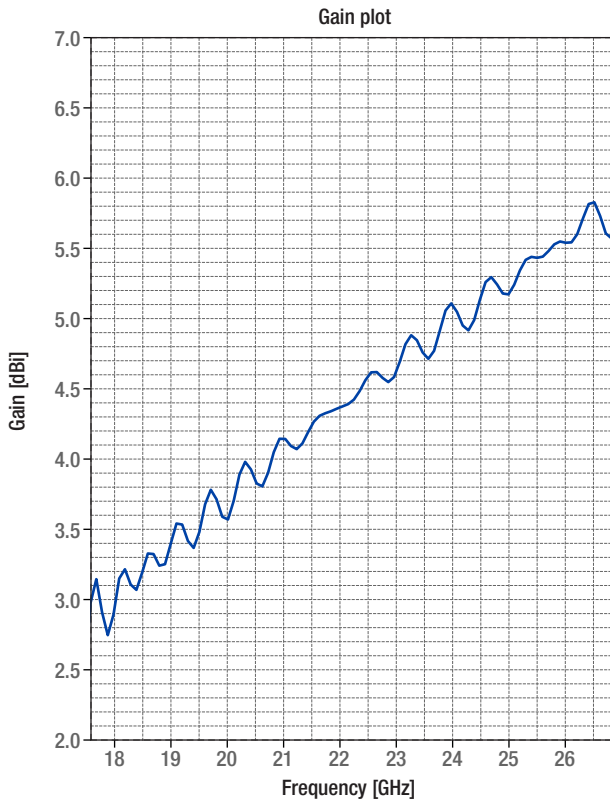


• Dimensional drawing: L type mounting bracket (Optional)



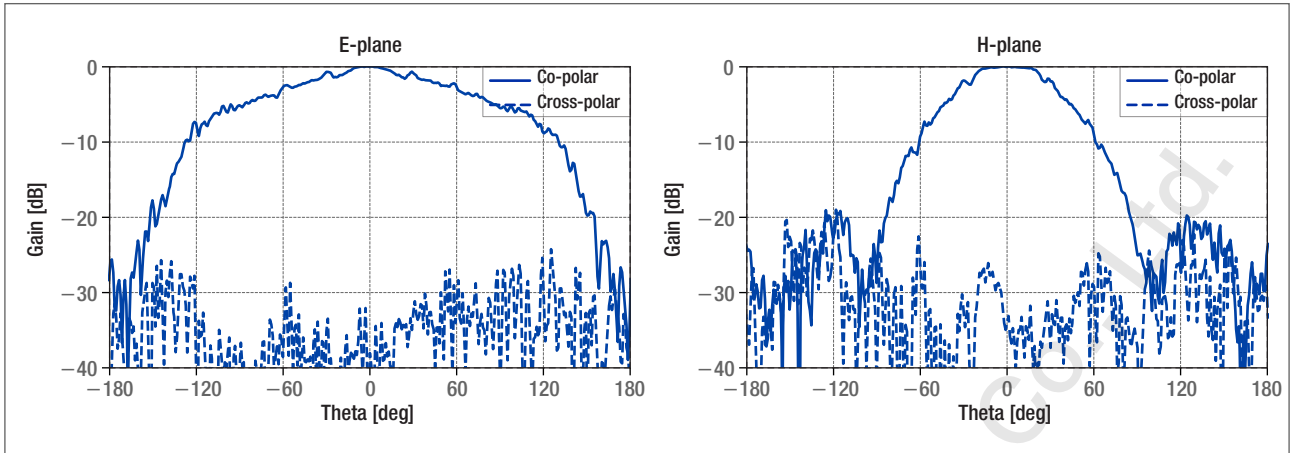
Electrical characteristics

Gain & Antenna factor & Cross-polarization isolation & VSWR

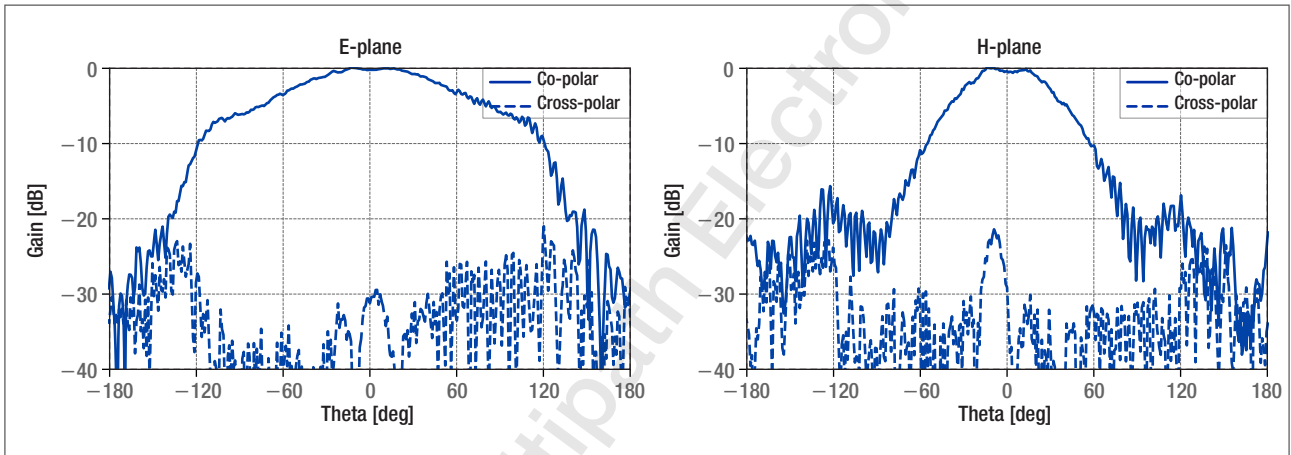


• Radiation patterns

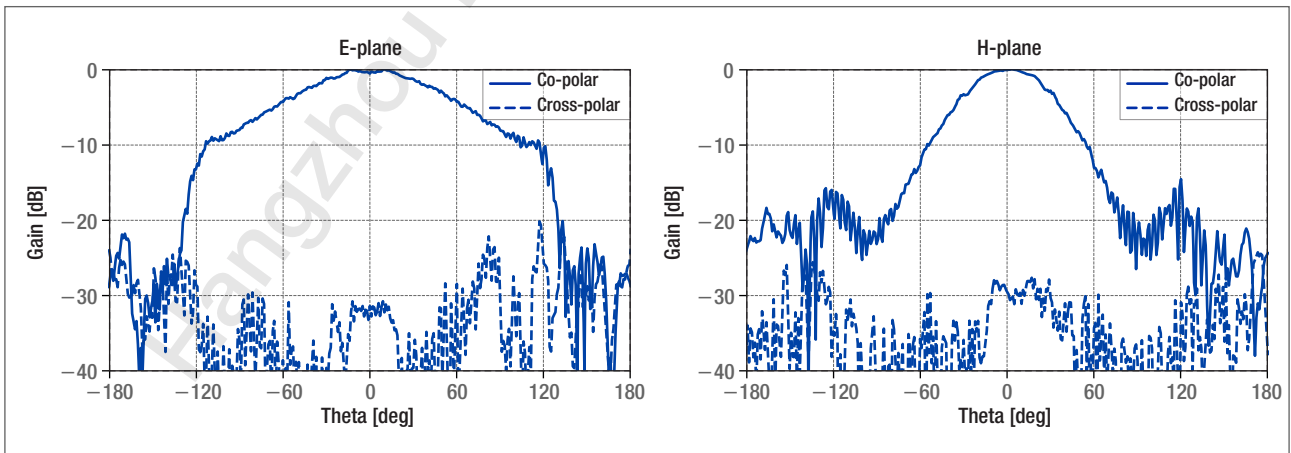
Patterns @ 18.0 GHz



Patterns @ 22.0 GHz



Patterns @ 26.0 GHz



• Data table

Frequency [GHz]	Gain [dBi]	Antenna factor [dB/m]	Cross-polarization isolation [dB]	VSWR
17.6	2.98	52.12	-33.95	1.35
18.1	3.15	52.19	-36.24	1.44
18.6	3.33	52.25	-30.78	1.45
19.1	3.54	52.27	-31.92	1.38
19.6	3.68	52.36	-39.70	1.46
20.1	3.70	52.55	-31.75	1.87
20.6	3.81	52.66	-33.63	2.25
21.1	4.09	52.58	-34.19	2.36
21.6	4.31	52.57	-33.58	2.25
22.1	4.39	52.69	-31.30	1.87
22.6	4.61	52.66	-33.26	1.25
23.1	4.81	52.65	-31.62	1.47
23.6	4.77	52.88	-37.43	2.45
24.1	4.95	52.89	-36.04	2.71
24.6	5.29	52.72	-41.09	1.85
25.1	5.34	52.85	-33.32	1.26
25.6	5.47	52.88	-36.75	2.28
26.1	5.59	52.93	-32.48	2.79
26.6	5.60	53.09	-40.16	2.22

Frequency [GHz]	E-plane, 3dB beamwidth	H-plane, 3dB beamwidth
18.0	108.64°	68.20°
22.0	113.14°	60.50°
26.0	110.00°	60.00°



Multipath Electronics

Contact

+86-571-56201039

sales@multipath.cn

<https://www.multipath-electron.com>

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