



Waveguide Probe Antenna

21.0 - 34.0 GHz



QR code



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

⚙️ Product specifications

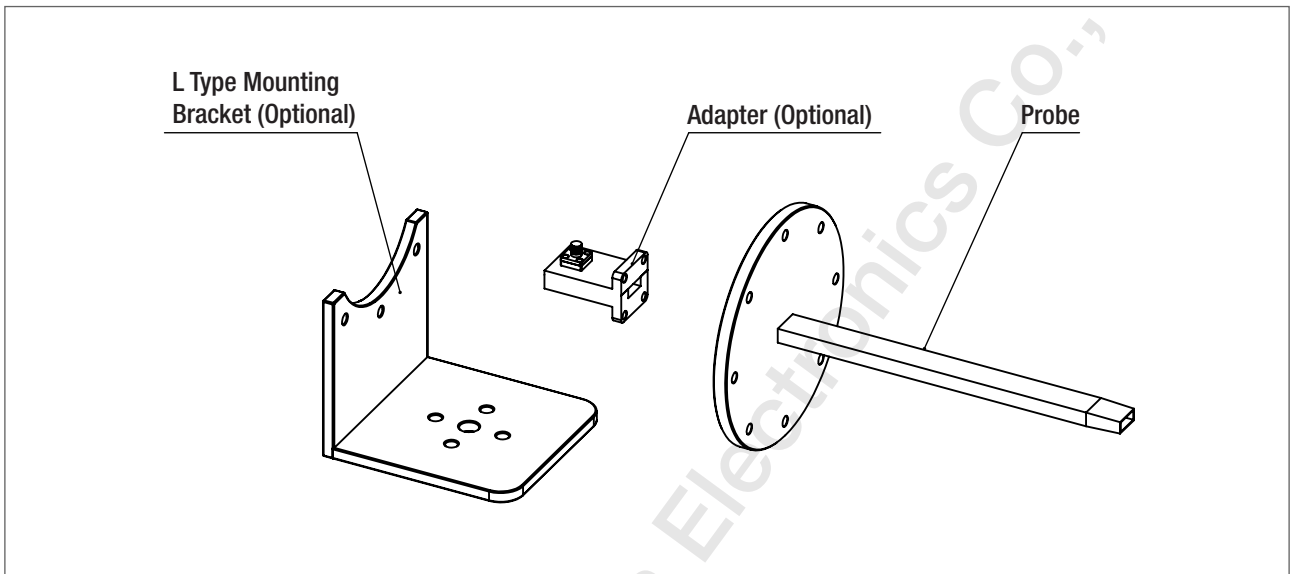
| | | | |
|-----------------------------------|------------------------------------------|-----------------------------------|--------------------------------------|
| Part number | WP-WR34 | Polarization | Single linear |
| Antenna type | Waveguide Probe Antenna | Gain [dBi] | 5.5 Typ. |
| Frequency range [GHz] | 21.0 – 34.0 | 3dB beamwidth [deg] | E-plane: 96 Typ. H-plane: 66 Typ. |
| Waveguide band | WR34 | Cross-polarization isolation [dB] | 30 Typ. |
| Dimensions (H x W x L) [mm; inch] | 100 x 100 x 160.5; 3.94 x 3.94 x 6.32 | VSWR | 1.8 Typ. |
| Weight (approx.) [kg; lb] | 0.17; 0.375 | Impedance [Ohms] | 50 |
| Material | Aluminum | RF connector | 2.4-Female |

Outline dimensions

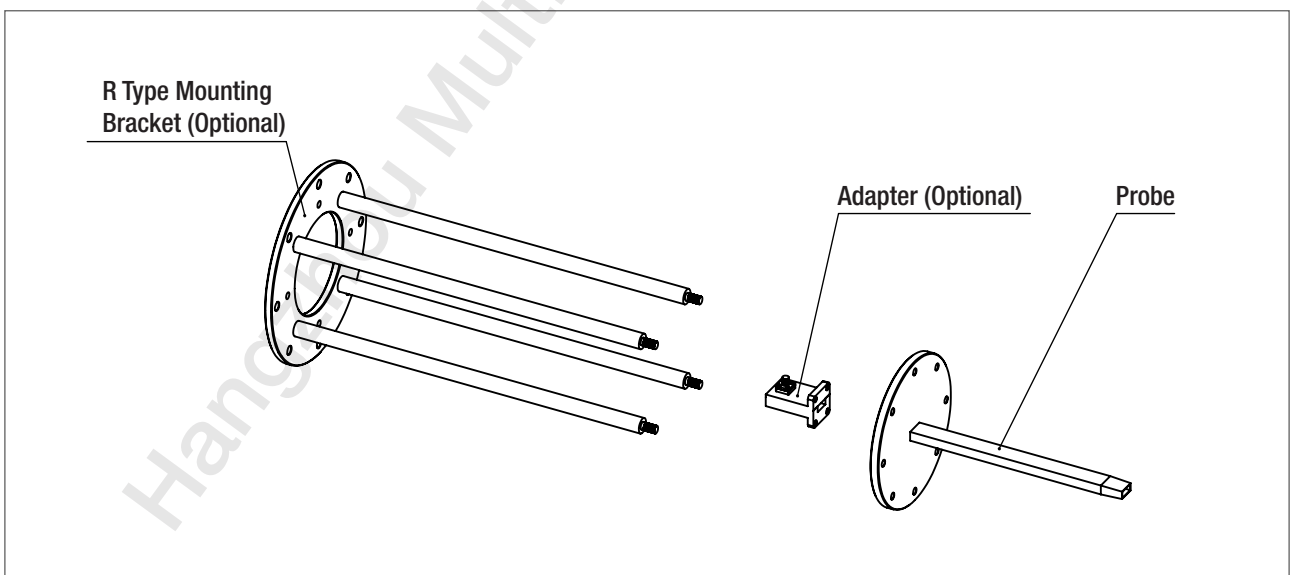
• Assembly dimensional drawing

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.

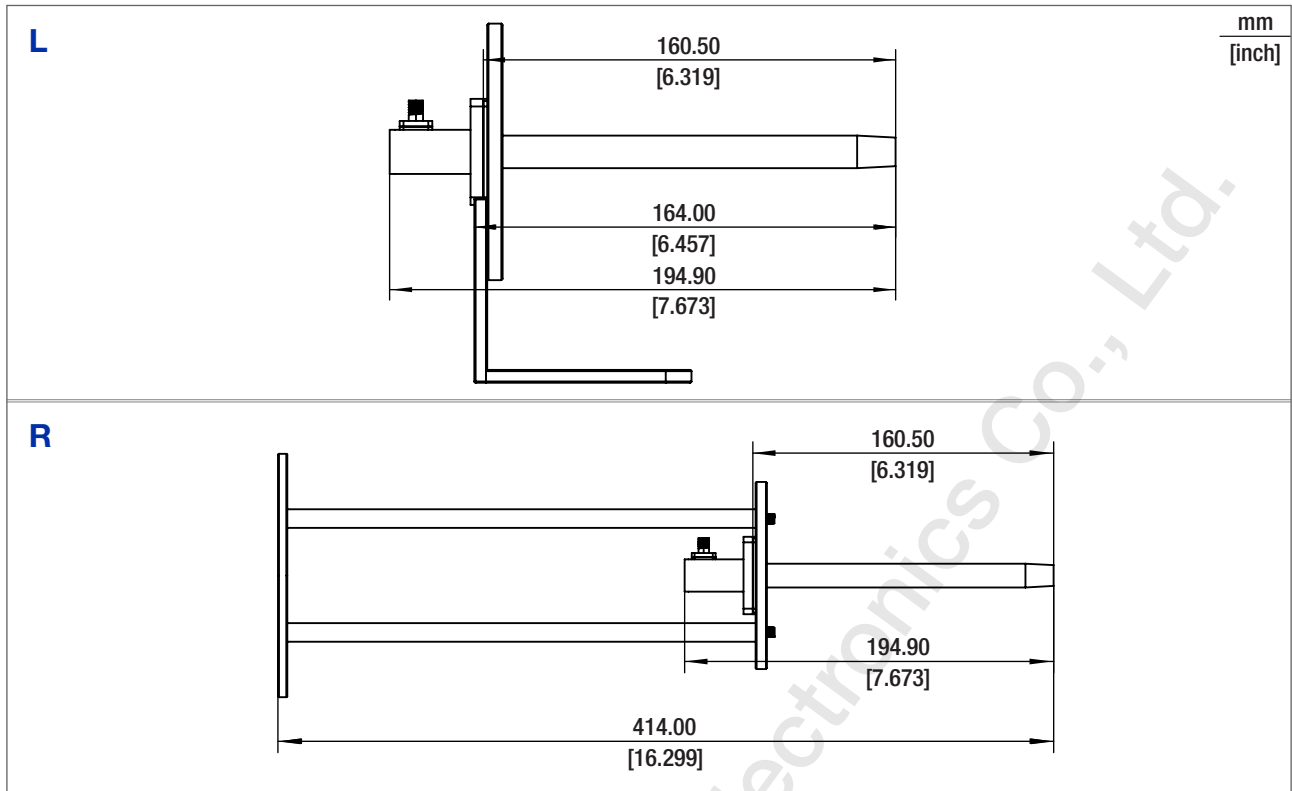
L_detector explosive body



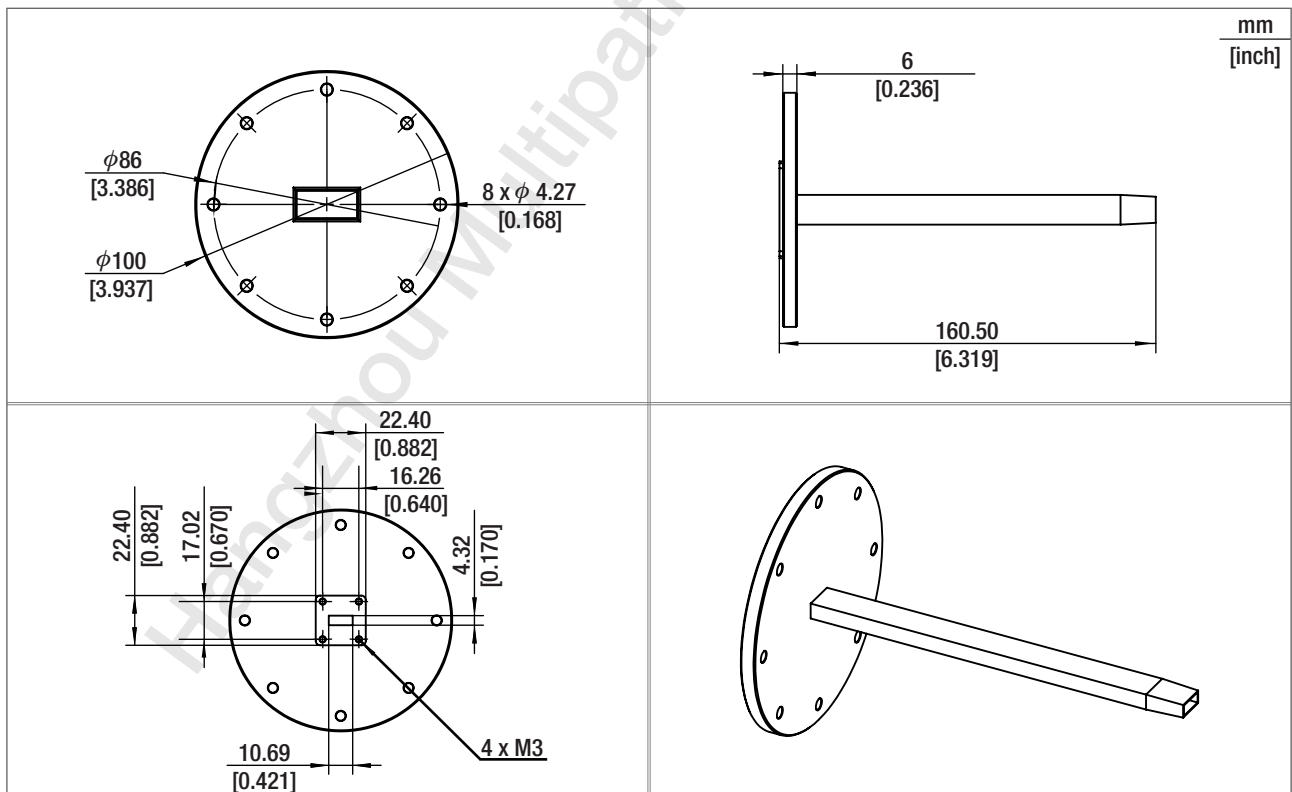
R_detector explosive body



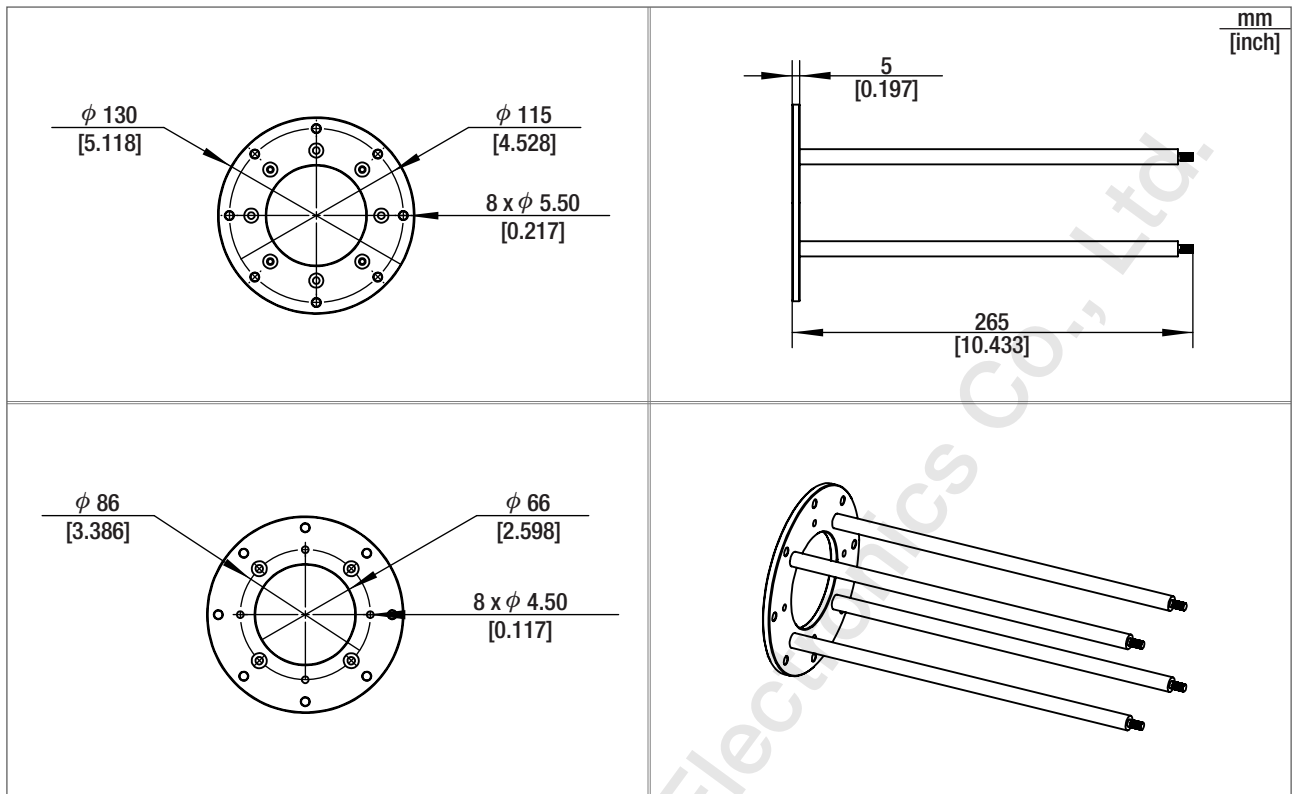
• Side view of the mounting system



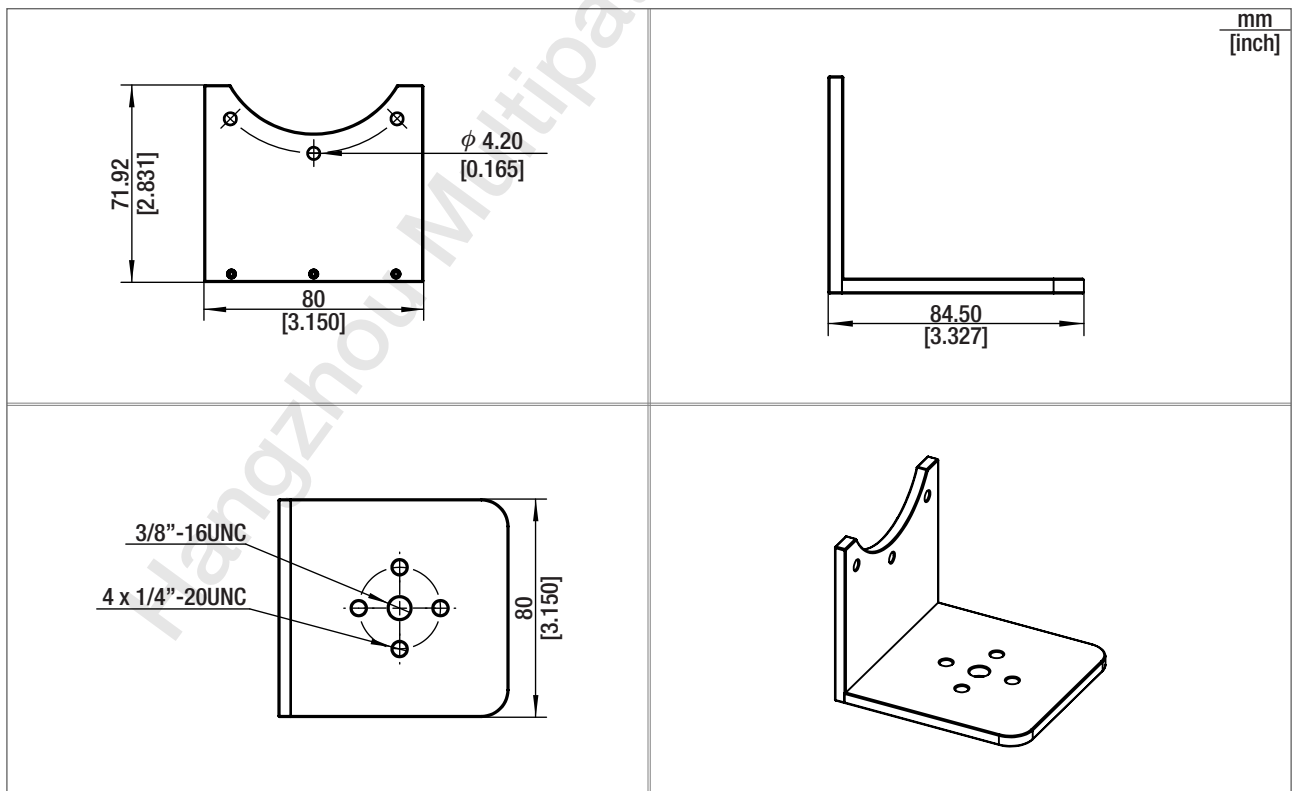
• Dimensional drawing: detectors, WP-WR34



• Dimensional drawing: round mounting bracket (Optional)

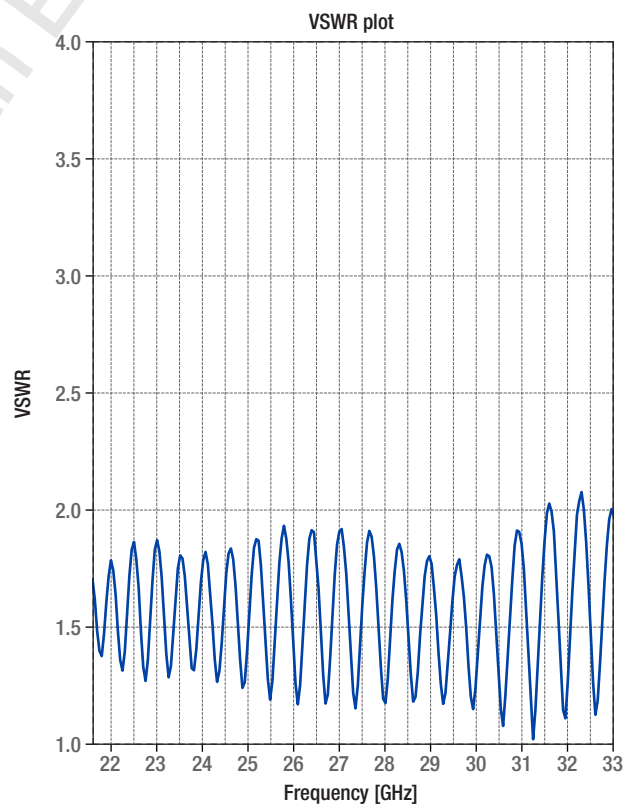
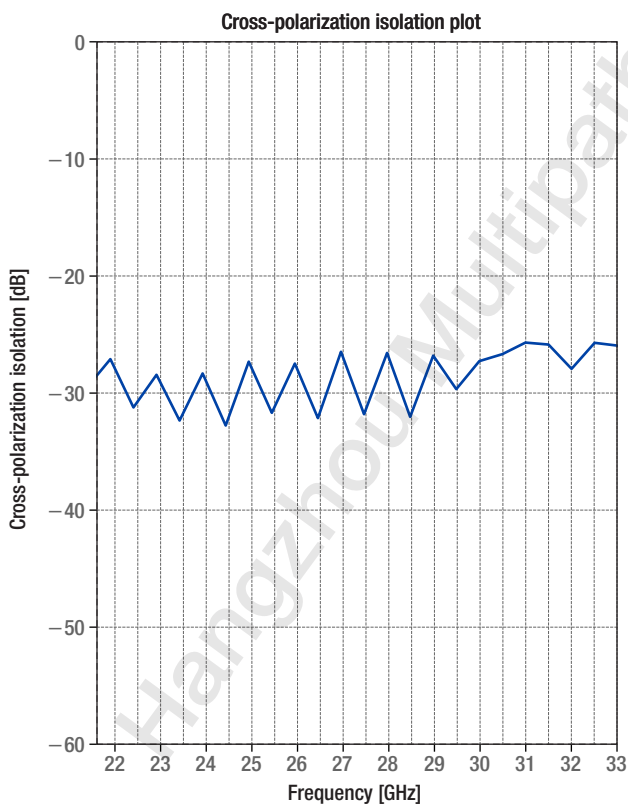
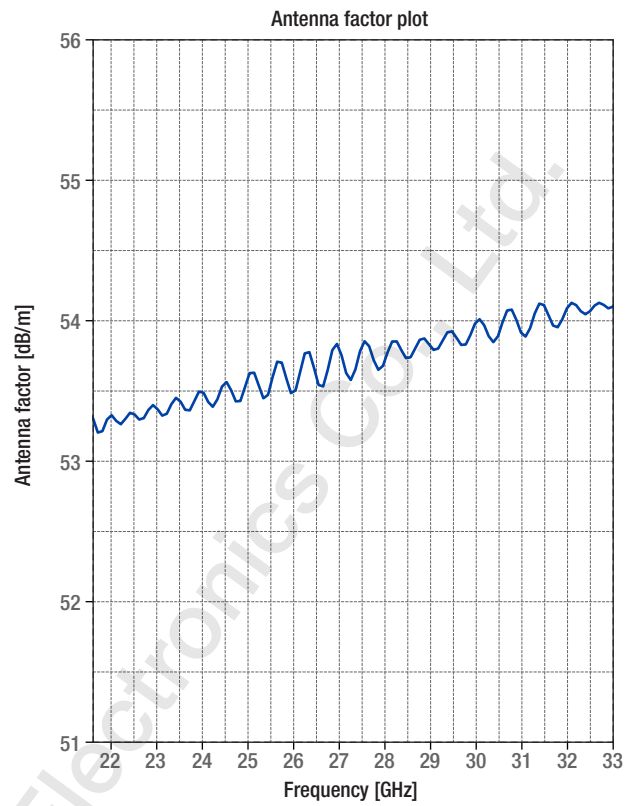
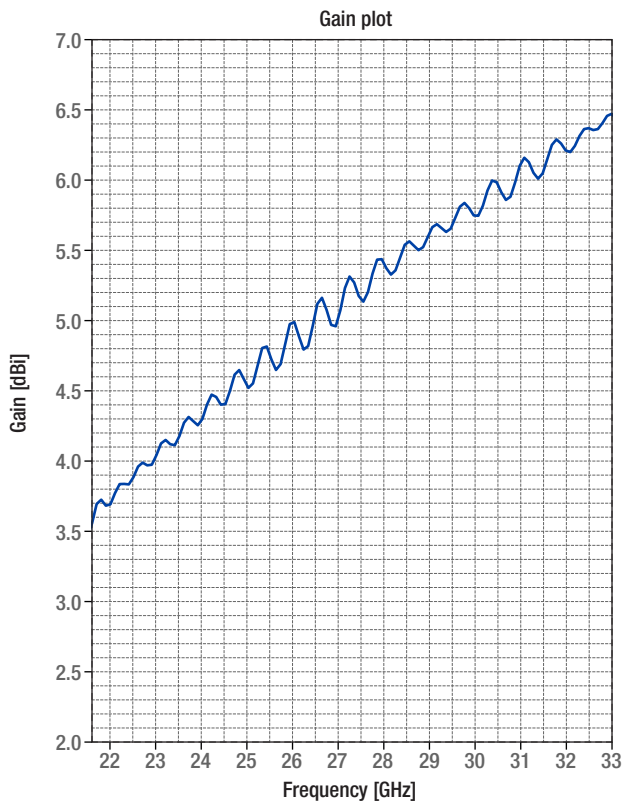


• Dimensional drawing: L type mounting bracket (Optional)



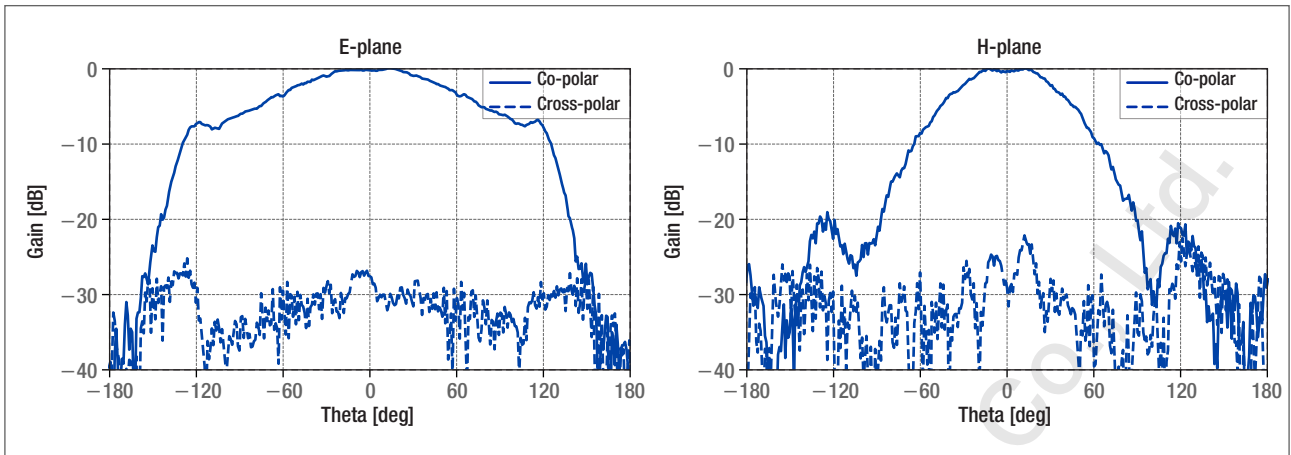
Electrical characteristics

Gain & Antenna factor & Cross-polarization isolation & VSWR

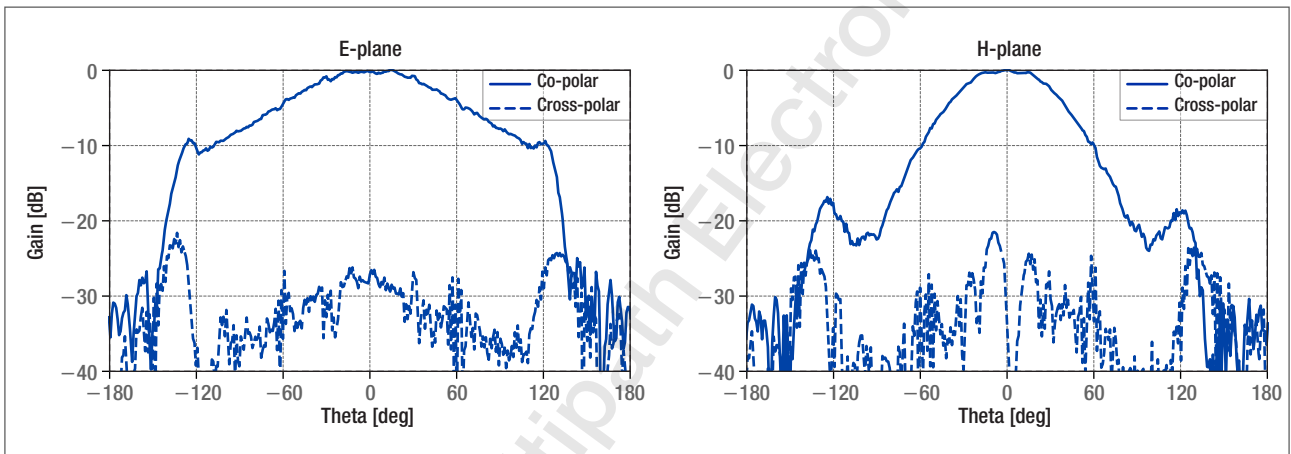


• Radiation patterns

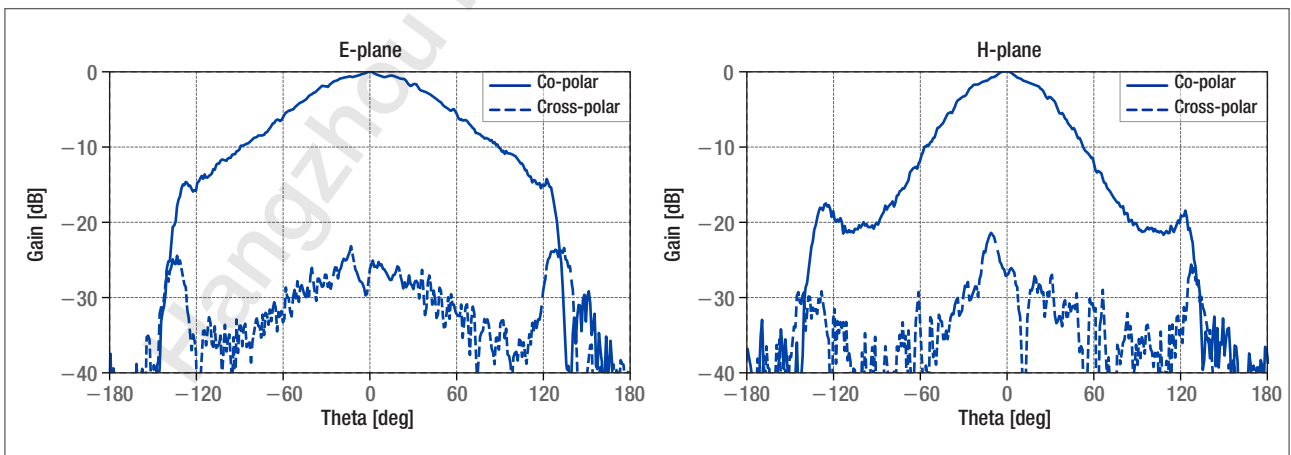
Patterns @ 22.0 GHz



Patterns @ 27.0 GHz



Patterns @ 33.0 GHz



• Data table

| Frequency [GHz] | Gain [dBi] | Antenna factor [dB/m] | Cross-polarization isolation [dB] | VSWR |
|-----------------|------------|-----------------------|-----------------------------------|------|
| 22.0 | 3.73 | 53.31 | -27.20 | 1.61 |
| 22.5 | 3.88 | 53.35 | -31.23 | 1.72 |
| 23.0 | 4.02 | 53.41 | -28.51 | 1.70 |
| 23.5 | 4.15 | 53.46 | -32.32 | 1.62 |
| 24.0 | 4.29 | 53.50 | -28.39 | 1.55 |
| 24.5 | 4.44 | 53.54 | -32.74 | 1.43 |
| 25.0 | 4.62 | 53.53 | -27.41 | 1.26 |
| 25.5 | 4.84 | 53.48 | -31.68 | 1.28 |
| 26.0 | 5.00 | 53.49 | -27.57 | 1.62 |
| 26.5 | 4.99 | 53.67 | -32.12 | 1.91 |
| 27.0 | 4.98 | 53.83 | -26.59 | 1.85 |
| 27.5 | 5.19 | 53.78 | -31.80 | 1.43 |
| 28.0 | 5.45 | 53.68 | -26.68 | 1.19 |
| 28.5 | 5.55 | 53.74 | -32.02 | 1.61 |
| 29.0 | 5.61 | 53.83 | -26.90 | 1.80 |
| 29.5 | 5.66 | 53.92 | -29.70 | 1.61 |
| 30.0 | 5.76 | 53.98 | -27.37 | 1.24 |
| 30.5 | 5.99 | 53.89 | -26.78 | 1.31 |
| 31.0 | 6.10 | 53.91 | -25.82 | 1.86 |
| 31.5 | 6.05 | 54.11 | -25.98 | 1.87 |
| 32.0 | 6.21 | 54.08 | -28.01 | 1.26 |
| 32.5 | 6.37 | 54.06 | -25.84 | 1.47 |
| 33.0 | 6.47 | 54.09 | -26.07 | 1.98 |

| Frequency [GHz] | E-plane, 3dB beamwidth | H-plane, 3dB beamwidth |
|-----------------|------------------------|------------------------|
| 22.0 | 112.93° | 68.50° |
| 27.0 | 96.31° | 65.72° |
| 33.0 | 81.82° | 54.02° |



Multipath Electronics

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