



# Standard Waveguide Detectors

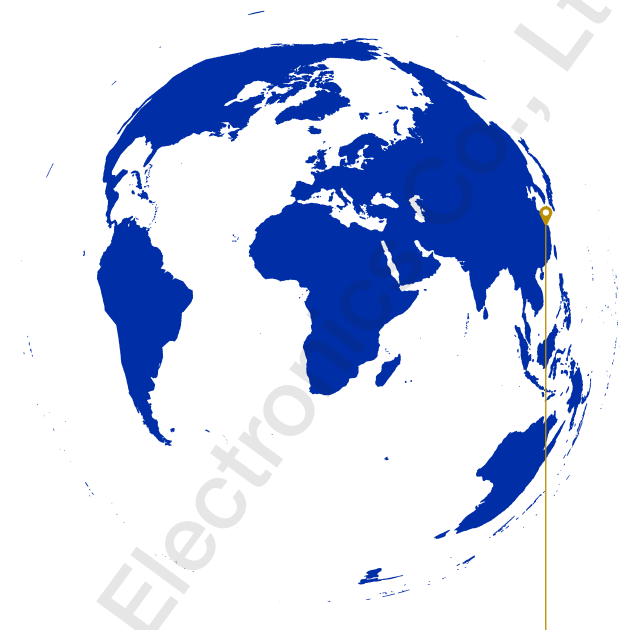
113 - 173 GHz



QR code



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



## 🔧 Company Profile

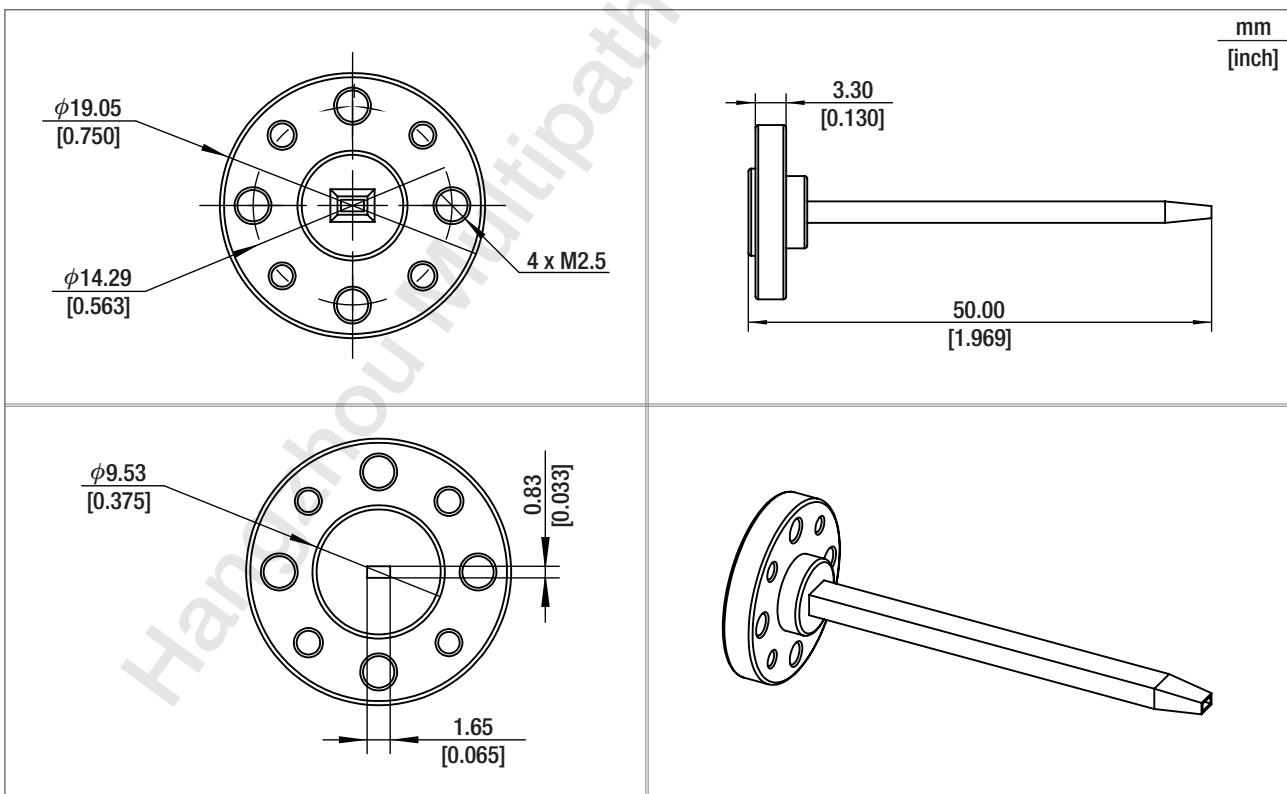
Hangzhou Multipath Electronics Co., Ltd. is a high-tech enterprise specializing in the research, production and sales of various high-performance standard gain horns, waveguide probes, transparent antennas, MIMO antennas for communication, and phased array radar antennas. The products cover various types of waveguide arrays, patch arrays, dipole arrays, and ultra-wideband angle scanning arrays, and the frequency range covers low frequency to millimeter waves. The founding team of the company has been deeply involved in the field of electromagnetic array structures for many years and has rich experience in array antenna design. The team first applied the principle of bionics to electromagnetic wave control, and the original wideband angle scanning, low loss, and high precision technology is at the leading level internationally, and related technologies have been applied in many large projects. The founding members currently have more than ten core invention patents in this field, and have published many SCI journal papers.

Hangzhou Multipath Electronics will be dedicated to the research of cutting-edge electromagnetic field technology, to be a leader in antenna arrays, to tap the potential of electromagnetic fields, and to contribute to the development of science and technology.

⚙️ Product specifications

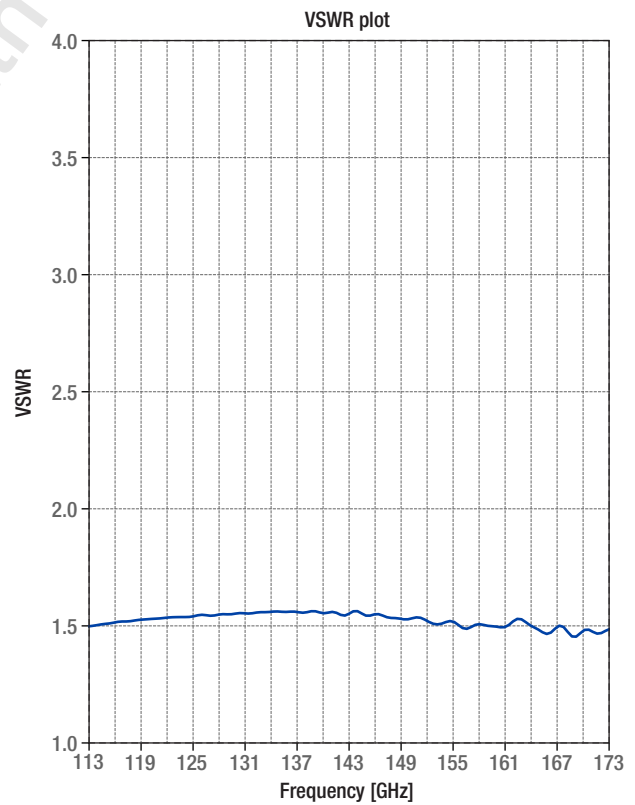
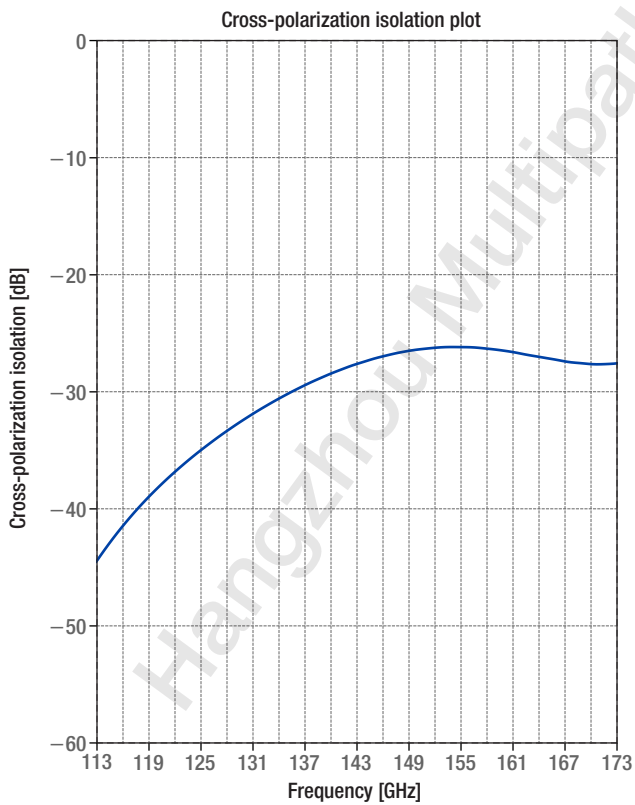
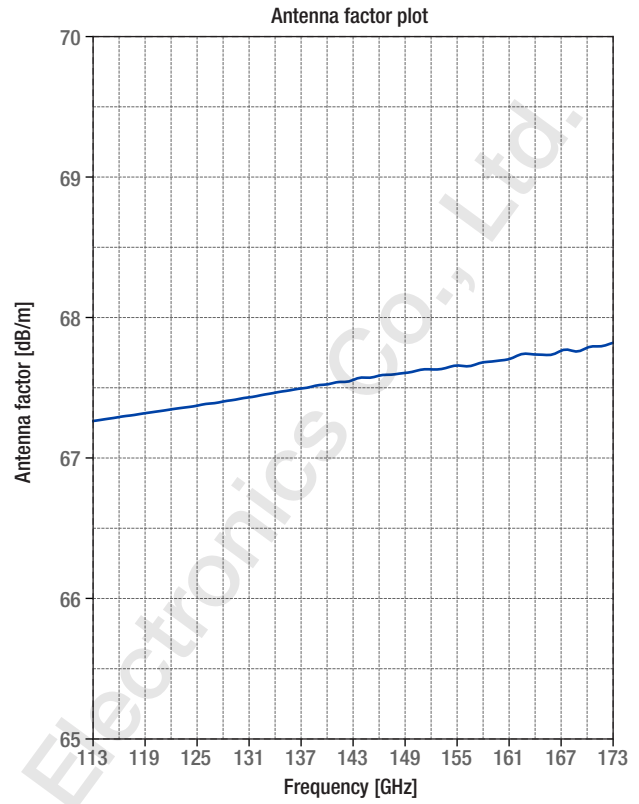
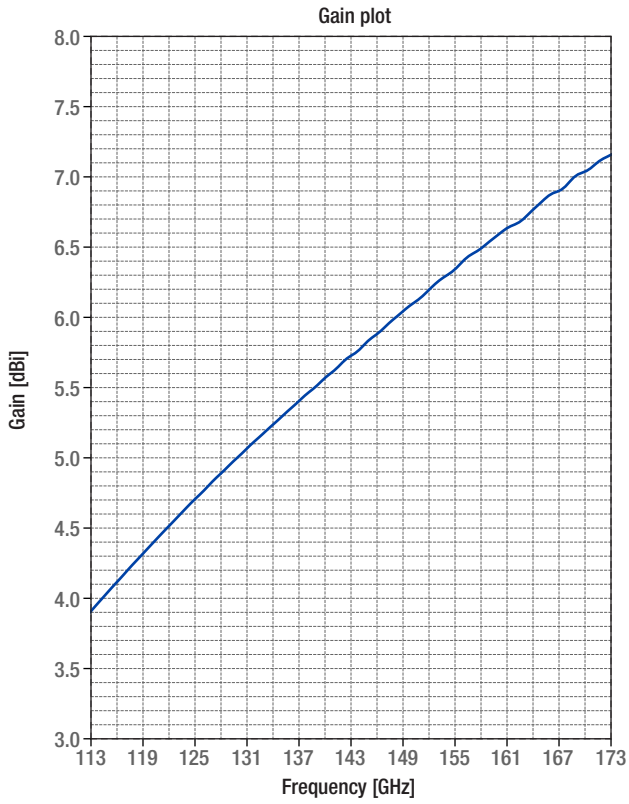
<b>Part number</b>	WD-WR7	<b>Polarization</b>	Single linear
<b>Antenna type</b>	Waveguide detector	<b>Gain [dBi]</b>	6 Typ.
<b>Frequency range [GHz]</b>	113 – 173	<b>3dB beamwidth [deg]</b>	E-plane: 99 Typ. H-plane: 69 Typ.
<b>Waveguide band</b>	WR7	<b>Cross-polarization isolation [dB]</b>	30 Typ.
<b>Dimensions (H x W x L) [mm; inch]</b>	19.05 x 19.05 x 50.00; 0.75 x 0.75 x 1.97	<b>VSWR</b>	1.5 Typ.
<b>Weight (approx.) [kg; lb]</b>	0.01; 0.022	<b>RF connector</b>	UG-387/U-M
<b>Material</b>	Cu (Gold plated)		

• Dimensional drawing: detectors, WD-WR7



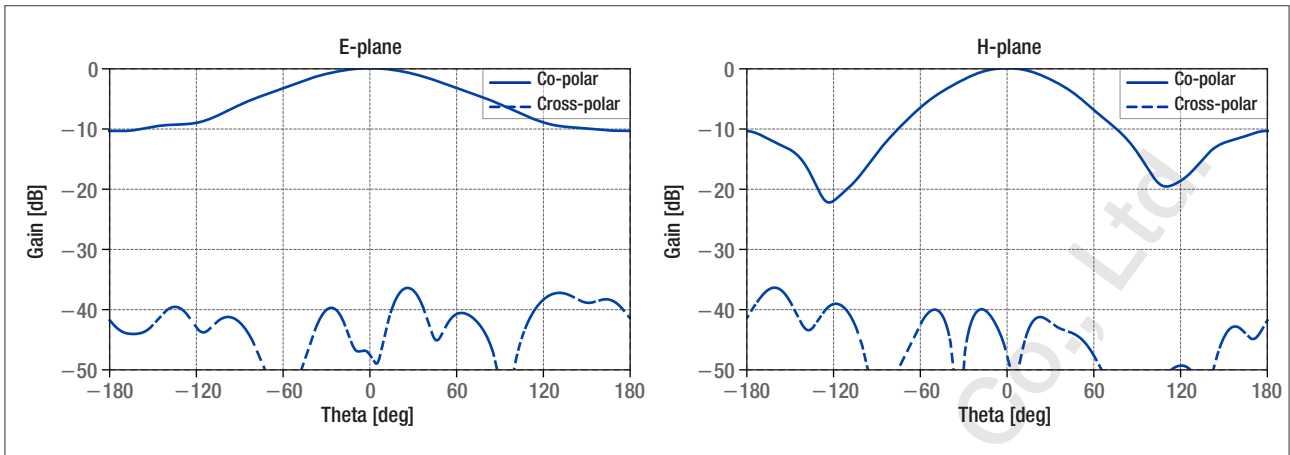
## Electrical characteristics

### Gain & Antenna factor & Cross-polarization isolation & VSWR

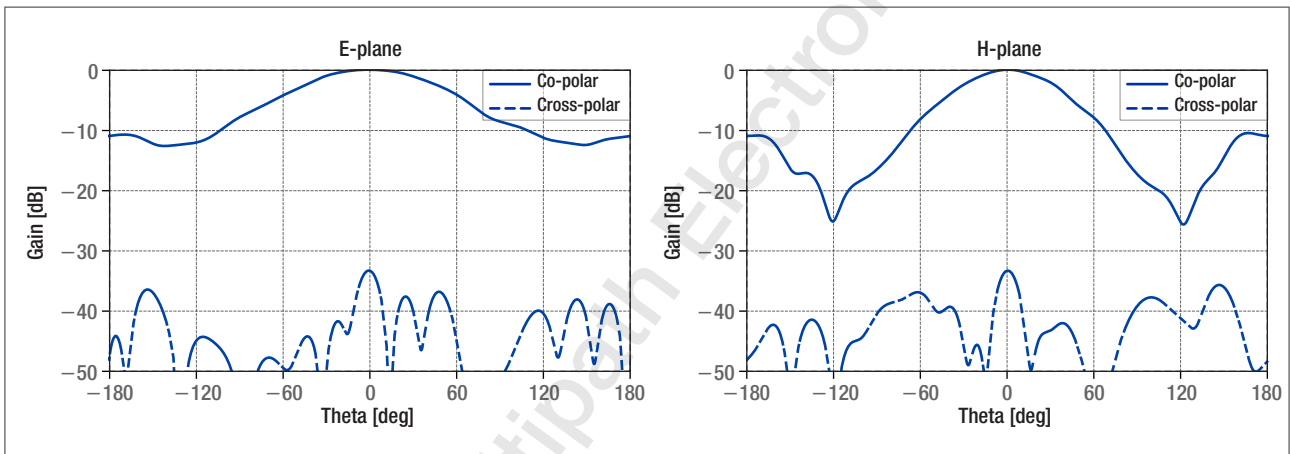


## • Radiation patterns

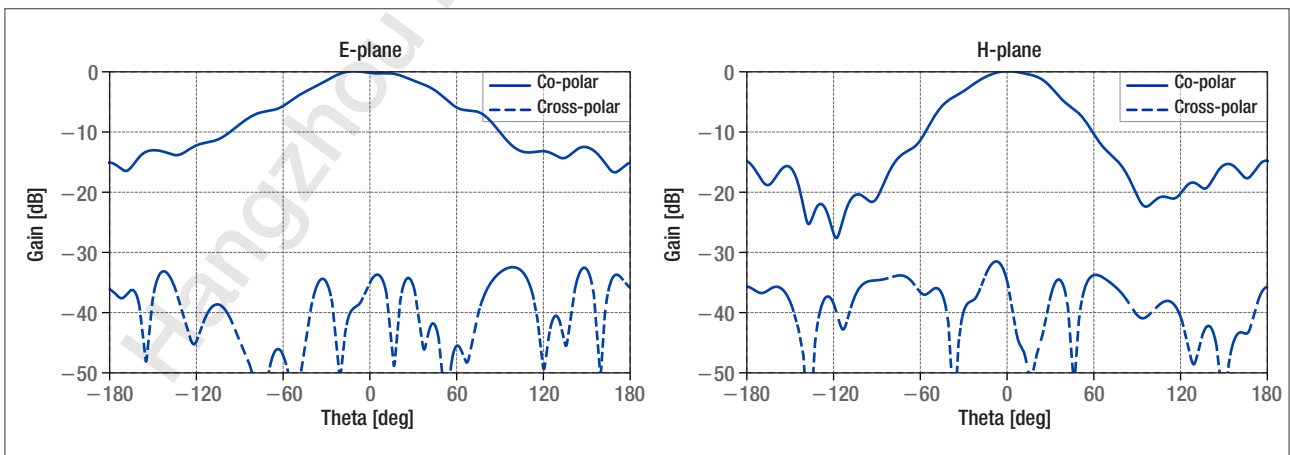
Patterns @ 113 GHz



Patterns @ 143 GHz



Patterns @ 173 GHz



• Data table

Frequency [GHz]	Gain [dBi]	Antenna factor [dB/m]	Cross-polarization isolation [dB]	VSWR
113	3.97	67.28	-43.37	1.50
116	4.17	67.31	-40.62	1.52
119	4.37	67.33	-38.30	1.53
122	4.56	67.36	-36.30	1.54
125	4.74	67.39	-34.54	1.54
128	4.92	67.41	-32.98	1.55
131	5.09	67.44	-31.57	1.55
134	5.26	67.47	-30.33	1.56
137	5.42	67.50	-29.22	1.56
140	5.58	67.53	-28.27	1.55
143	5.73	67.56	-27.47	1.55
146	5.88	67.59	-26.83	1.55
149	6.04	67.61	-26.37	1.53
152	6.19	67.64	-26.10	1.53
155	6.33	67.66	-26.03	1.52
158	6.48	67.68	-26.13	1.50
161	6.62	67.70	-26.39	1.49
164	6.74	67.75	-26.78	1.52
167	6.89	67.75	-27.15	1.47
170	7.03	67.77	-27.43	1.45
173	7.14	67.81	-27.47	1.47

Frequency [GHz]	E-plane, 3dB beamwidth	H-plane, 3dB beamwidth
113	112.51°	77.53°
143	99.30°	68.84°
173	85.04°	59.63°



Multipath Electronics

**Contact**

+86-571-56201039

sales@multipath.cn

https://www.multipath-electron.com

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