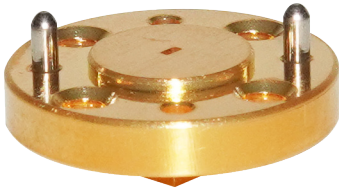


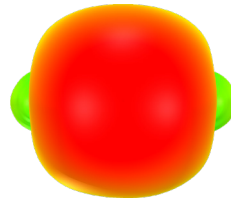


# Standard Gain Horn Antennas

145 - 220 GHz, 10 dBi



Radiation pattern



QR code



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

## Company Profile

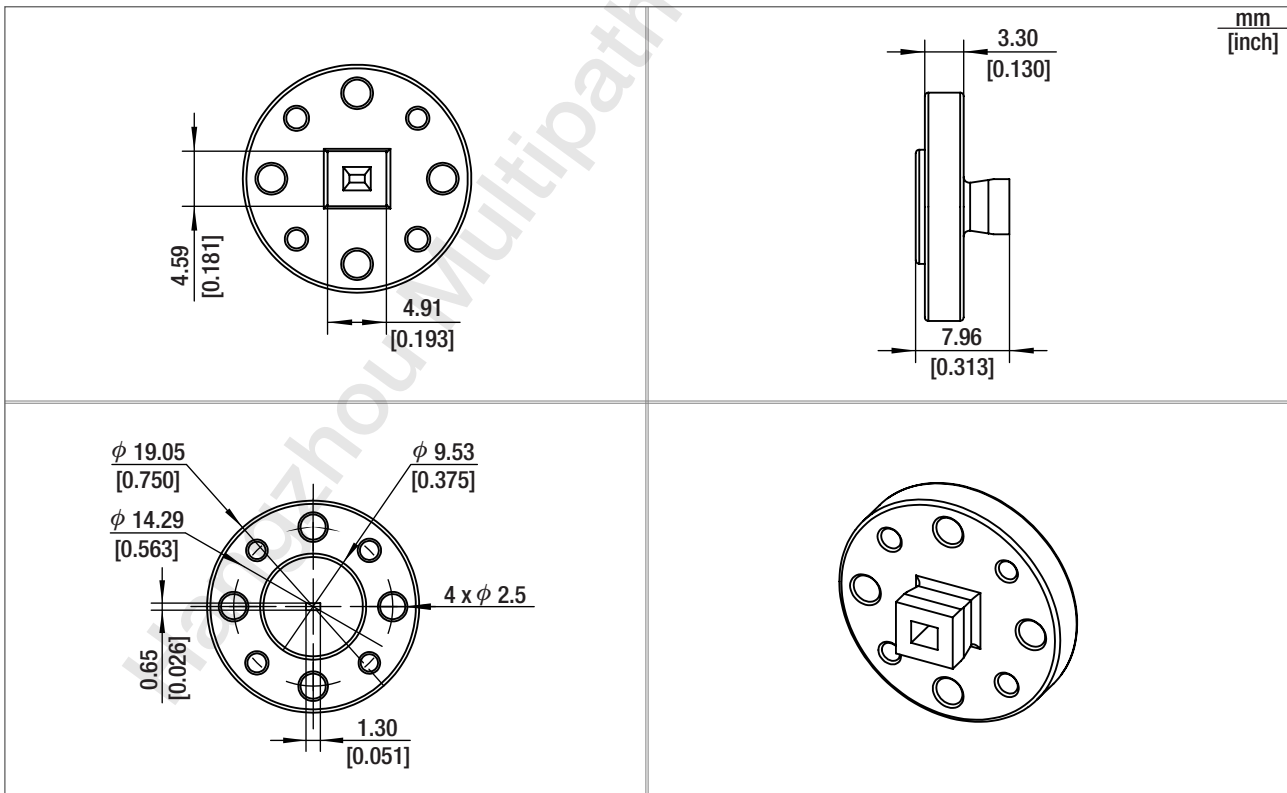
Hangzhou Multipath Electronics Co., Ltd. is a high-tech enterprise specializing in the research, production and sales of various high-performance standard gain horns, waveguide probes, transparent antennas, MIMO antennas for communication, and phased array radar antennas. The products cover various types 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

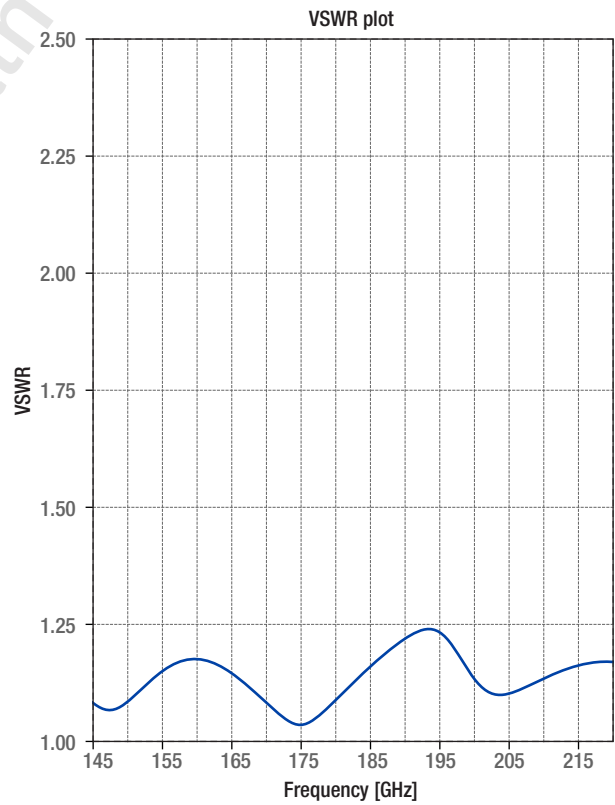
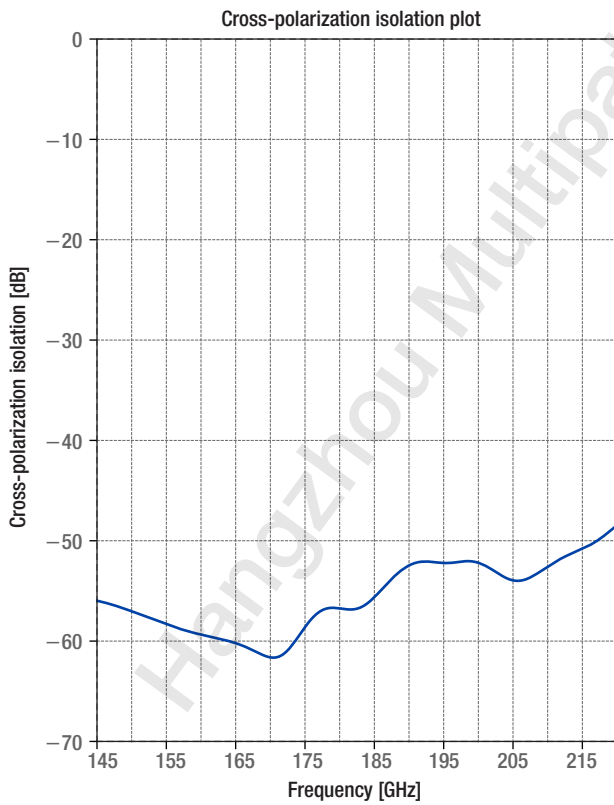
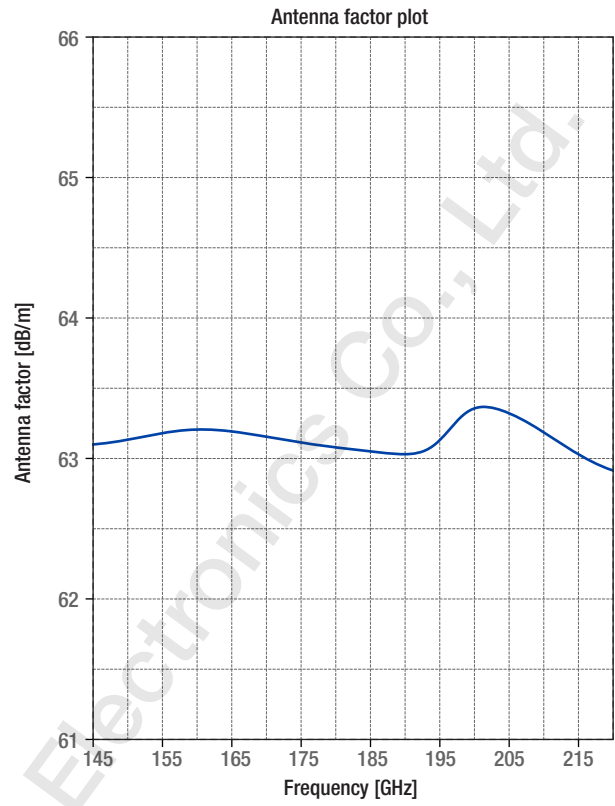
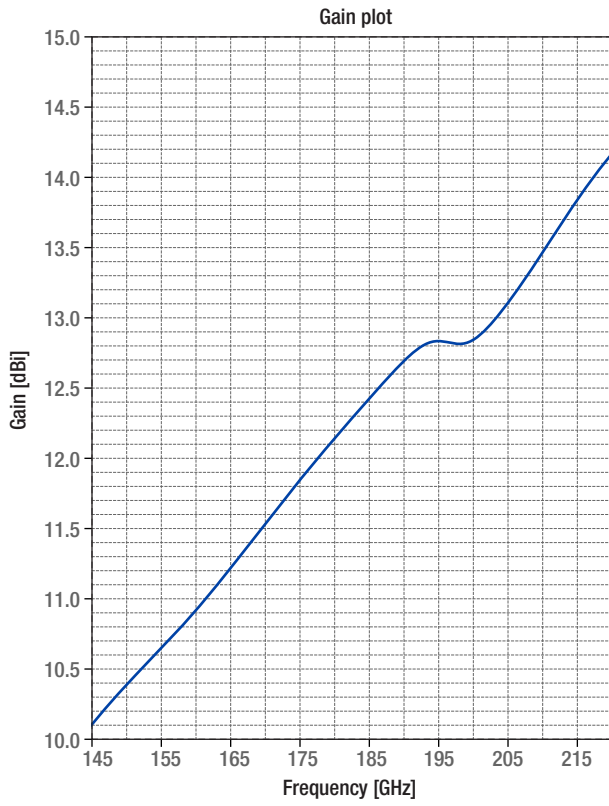
<b>Part number</b>	HA-WR5-10	<b>Polarization</b>	Single linear
<b>Antenna type</b>	Pyramidal horn	<b>Gain [dBi]</b>	10 Typ.
<b>Frequency range [GHz]</b>	145 – 220	<b>3dB beamwidth [deg]</b>	E-plane: 45 Typ. H-plane: 45 Typ.
<b>Waveguide band</b>	WR5	<b>Cross-polarization isolation [dB]</b>	55 Typ.
<b>Dimensions (H x W x L) [mm; inch]</b>	19.05 x 19.05 x 7.96; 0.75 x 0.75 x 0.31	<b>VSWR</b>	1.20 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: horn, HA-WR5-10



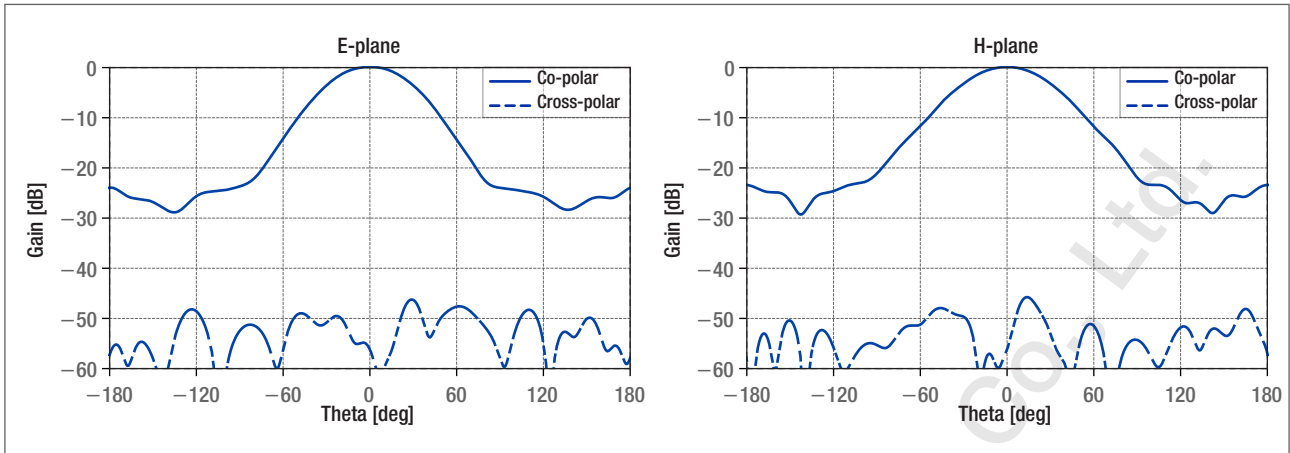
## Electrical characteristics

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

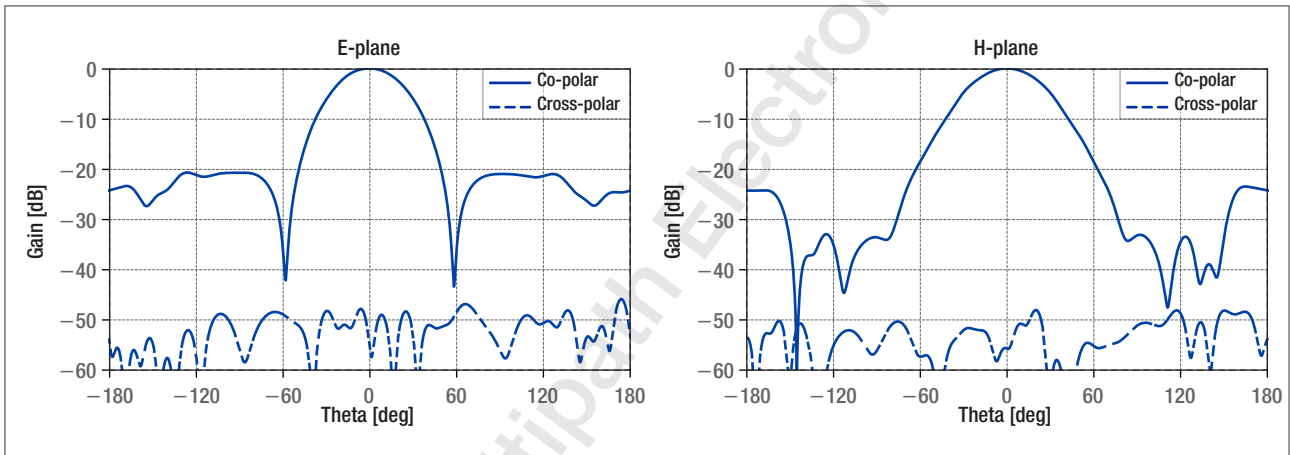


## • Radiation patterns

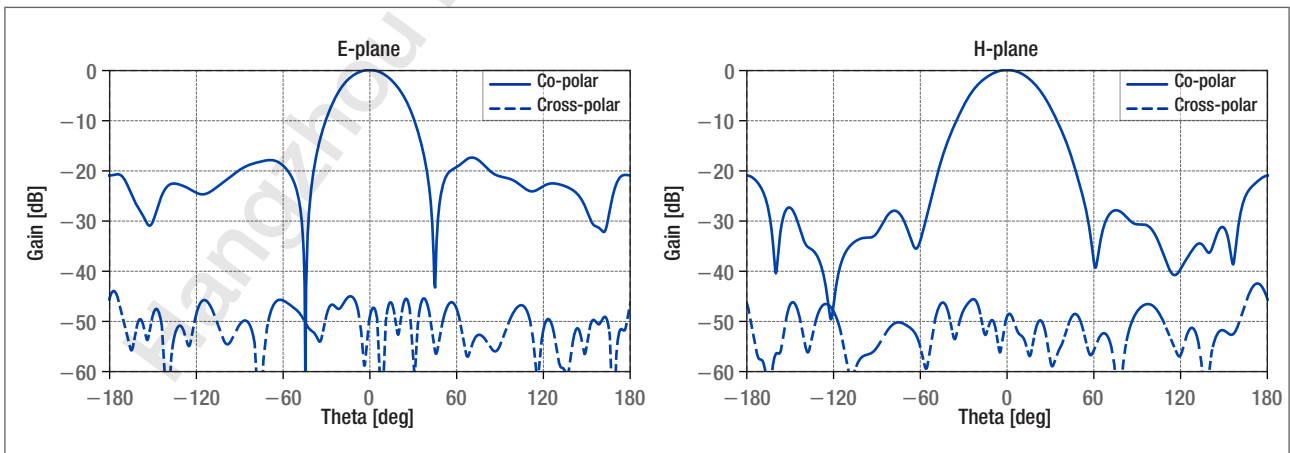
Patterns @ 145 GHz



Patterns @ 182 GHz



Patterns @ 220 GHz



• Data table

Frequency [GHz]	Gain [dBi]	Antenna factor [dB/m]	Cross-polarization isolation [dB]	VSWR
145	10.32	63.10	-56.01	1.07
148	10.48	63.12	-56.62	1.07
151	10.63	63.14	-57.38	1.10
154	10.77	63.17	-58.14	1.14
157	10.92	63.19	-58.81	1.16
160	11.08	63.20	-59.34	1.17
163	11.24	63.19	-59.80	1.15
166	11.42	63.17	-60.46	1.12
169	11.60	63.15	-61.40	1.09
172	11.77	63.13	-61.00	1.05
175	11.94	63.11	-58.34	1.03
178	12.11	63.09	-56.65	1.06
181	12.27	63.07	-56.73	1.10
184	12.43	63.05	-56.15	1.14
187	12.59	63.04	-54.12	1.18
190	12.74	63.03	-52.40	1.21
193	12.85	63.05	-51.95	1.23
196	12.88	63.16	-52.10	1.22
199	12.86	63.30	-51.91	1.16
202	12.95	63.35	-52.57	1.11
205	13.11	63.32	-53.73	1.10
208	13.30	63.25	-53.57	1.11
211	13.51	63.17	-52.31	1.13
214	13.72	63.08	-51.21	1.15
217	13.92	63.00	-50.27	1.16
220	14.11	62.93	-48.83	1.16

Frequency [GHz]	E-plane, 3dB beamwidth	H-plane, 3dB beamwidth
145	56.94°	54.97°
182	48.10°	44.29°
220	40.10°	36.48°



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.