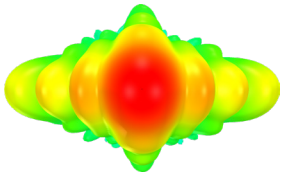
Standard Gain Horn Antennas

145 - 220 GHz, 20 dBi

Radiation pattern



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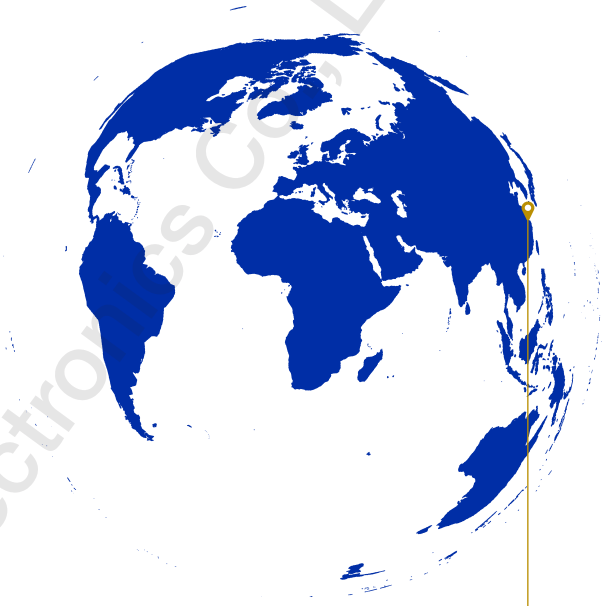


Hangzhou Multipath Electronics Co., Ltd., Zhejiang, China

Company Profile

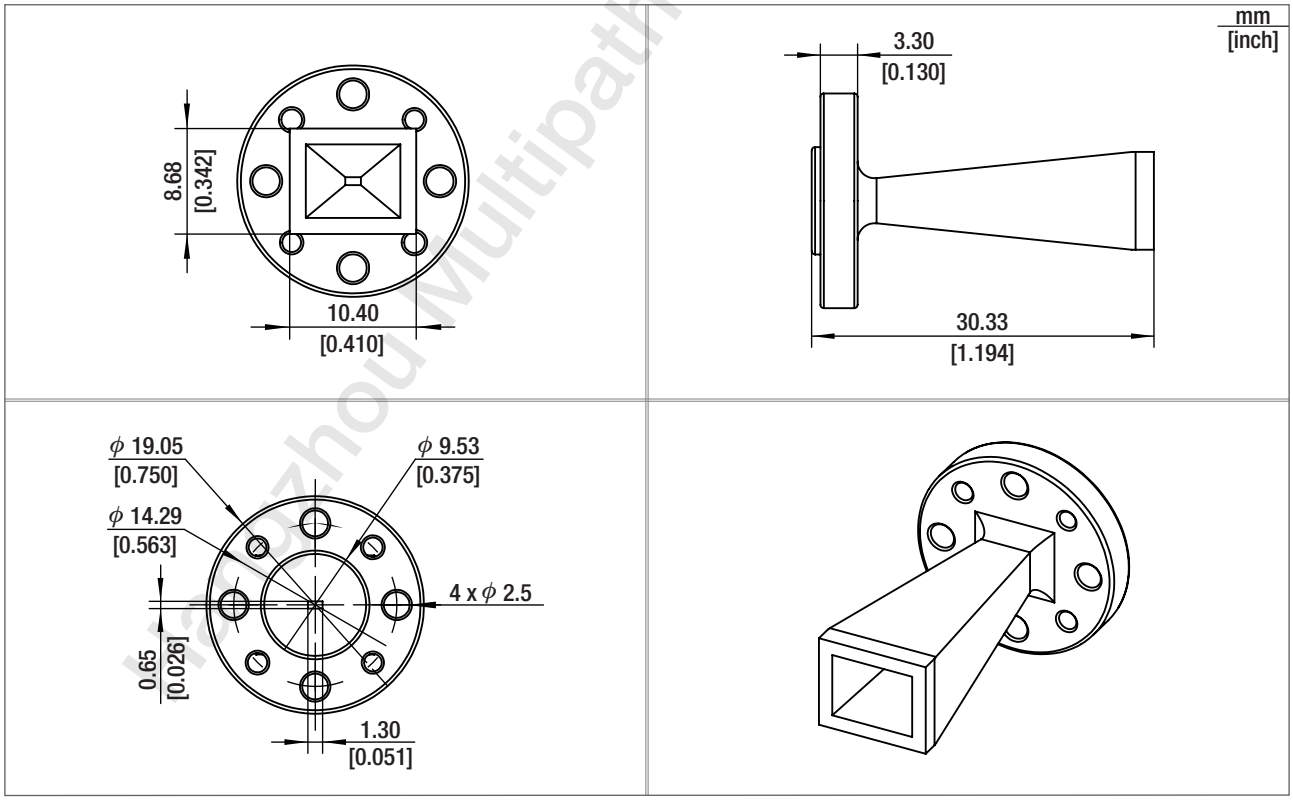
Hangzhou Multipath Electronics Co., Ltd. is a high-tech enterprise specializing in the research, production and sales of various high-performance standard gain horns, waveguide probes, transparent antennas, MIMO antennas for communication, and phased array radar antennas. The products cover various types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

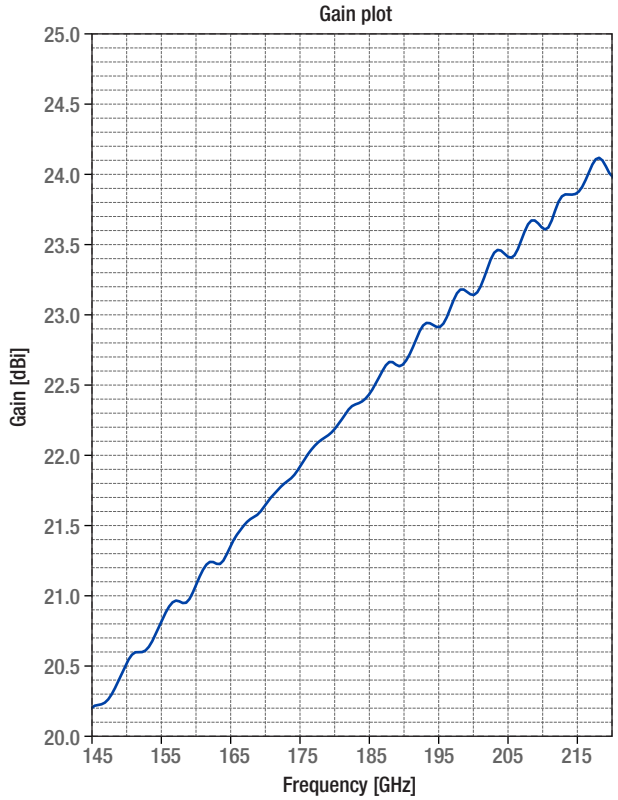
Part number	HA-WR5-20	**Polarization**	Single linear
Antenna type	Pyamidal horn	**Gain [dBi]**	20 Typ.
Frequency range [GHz]	145 – 220	**3dB beamwidth [deg]**	E-plane: 14 Typ. H-plane: 14 Typ.
Waveguide band	WR5	**Cross-polarization isolation [dB]**	50 Typ.
Dimensions (H x W x L) [mm; inch]	19.05 x 19.05 x 30.33; 0.75 x 0.75 x 1.19	**VSWR**	1.10 Typ.
Weight (approx.) [kg; lb]	0.02; 0.044	**RF connector**	UG-387/U-M
Material	Cu (Gold plated)		

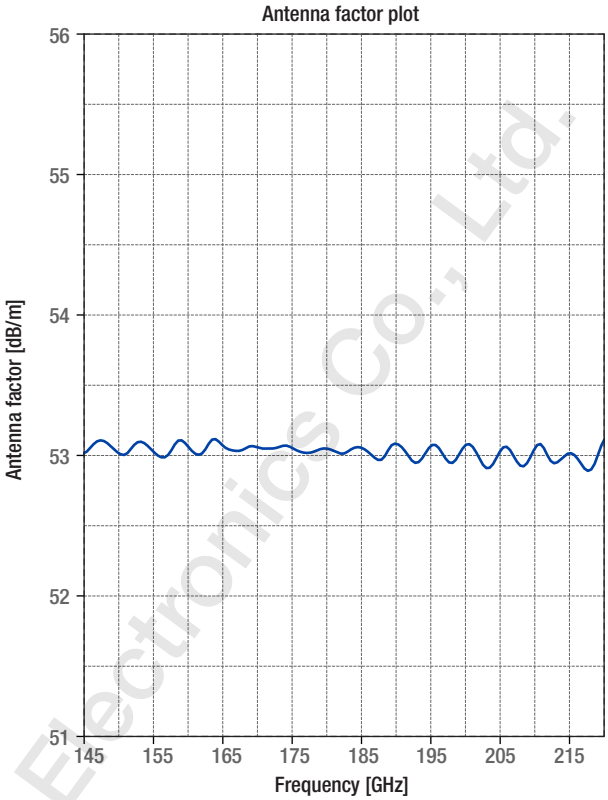
• Dimensional drawing: horn, HA-WR5-20

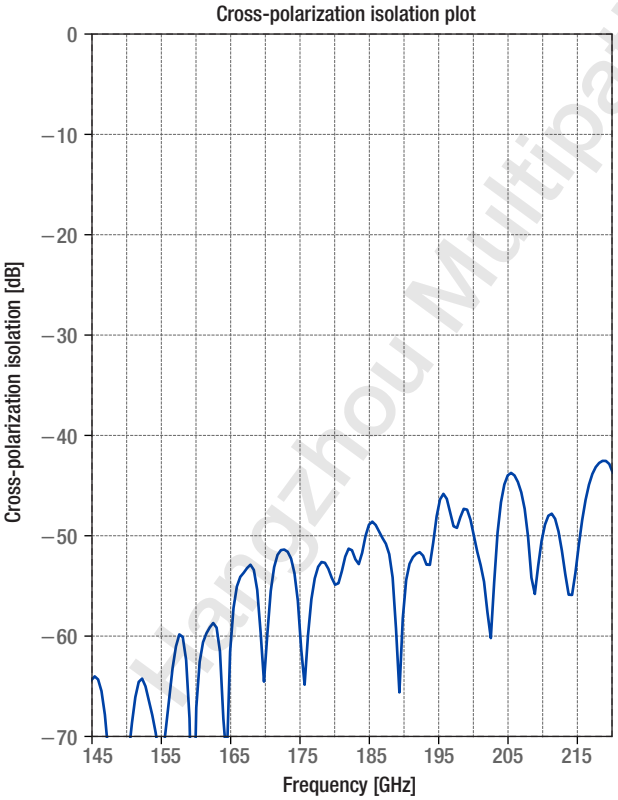


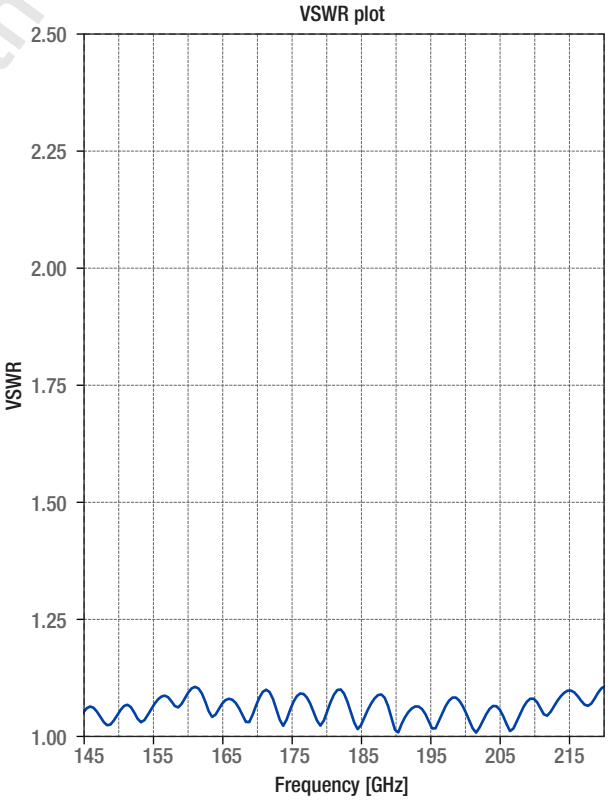
Electrical characteristics

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



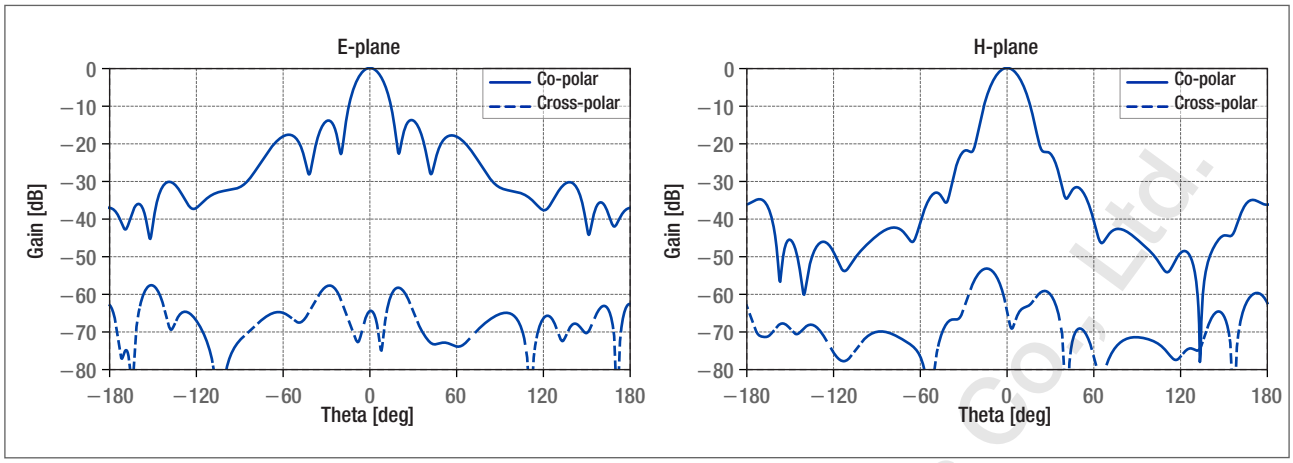




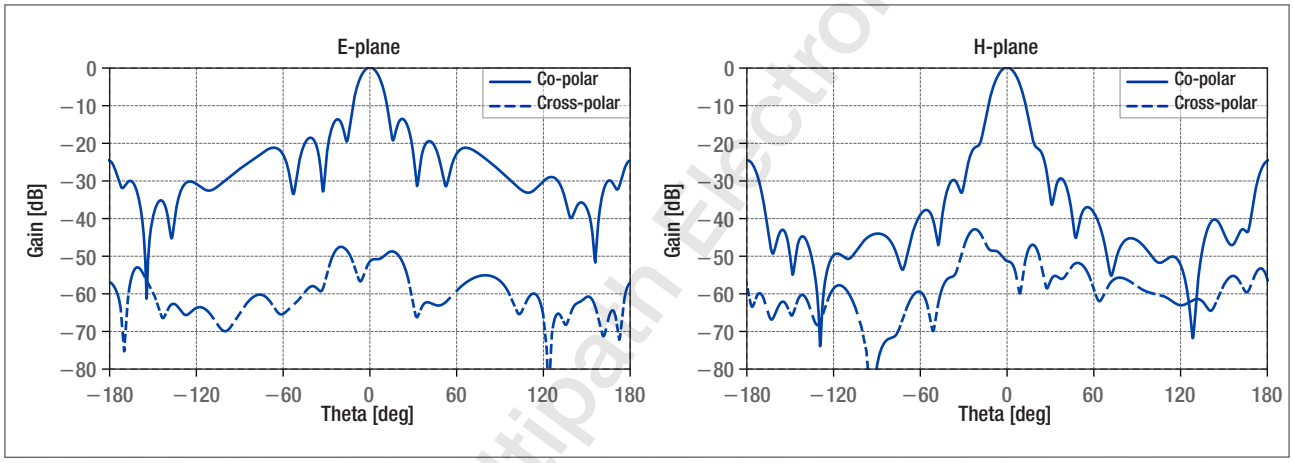


• Radiation patterns

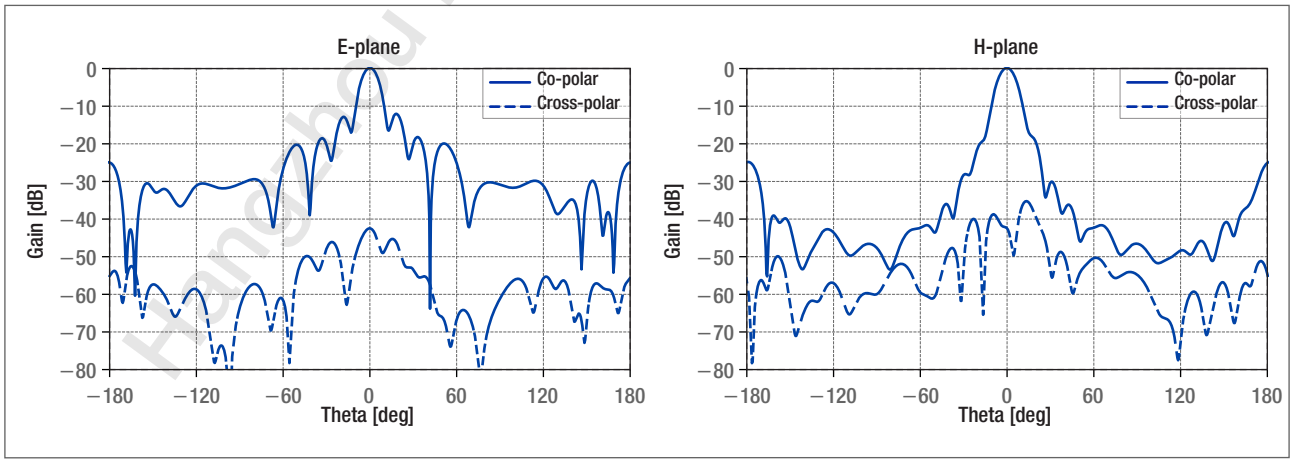
Patterns @ 145 GHz



Patterns @ 182 GHz



Patterns @ 220 GHz



• Data table

Frequency [GHz]	Gain [dBi]	Antenna factor [dB/m]	Cross-polarization isolation [dB]	VSWR
145	20.38	53.04	−64.24	1.06
148	20.54	53.05	−72.71	1.02
151	20.74	53.03	−64.48	1.05
154	20.91	53.03	−71.84	1.05
157	21.08	53.02	−59.73	1.07
160	21.25	53.02	−62.48	1.09
163	21.34	53.10	−61.44	1.03
166	21.57	53.02	−53.98	1.07
169	21.70	53.05	−59.51	1.04
172	21.87	53.04	−51.31	1.07
175	22.02	53.03	−61.23	1.06
178	22.19	53.01	−52.50	1.04
181	22.32	53.02	−53.41	1.08
184	22.45	53.04	−51.58	1.02
187	22.65	52.97	−50.10	1.07
190	22.70	53.07	−58.12	1.01
193	22.96	52.94	−51.87	1.06
196	22.98	53.06	−45.68	1.01
199	23.21	52.96	−47.18	1.07
202	23.29	53.01	−54.47	1.00
205	23.45	52.97	−44.75	1.06
208	23.60	52.95	−47.18	1.03
211	23.62	53.06	−48.76	1.06
214	23.86	52.94	−53.72	1.07
217	23.95	52.96	−46.28	1.08
220	24.05	52.99	−42.39	1.08

Frequency [GHz]	E-plane, 3dB beamwidth	H-plane, 3dB beamwidth
145	18.18°	17.31°
182	14.67°	13.88°
220	12.26°	11.44°

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