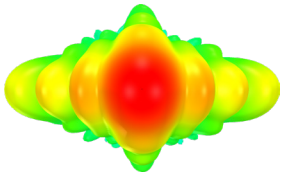
Standard Gain Horn Antennas

113 - 173 GHz, 20 dBi

Radiation pattern



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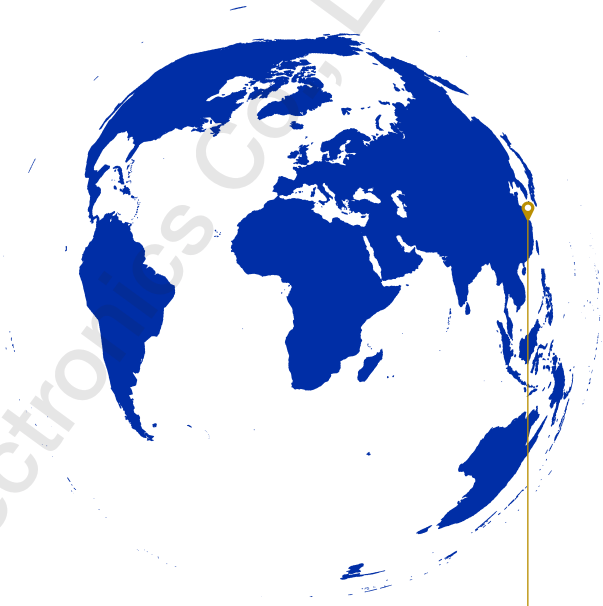


Hangzhou Multipath Electronics Co., Ltd., Zhejiang, China

Company Profile

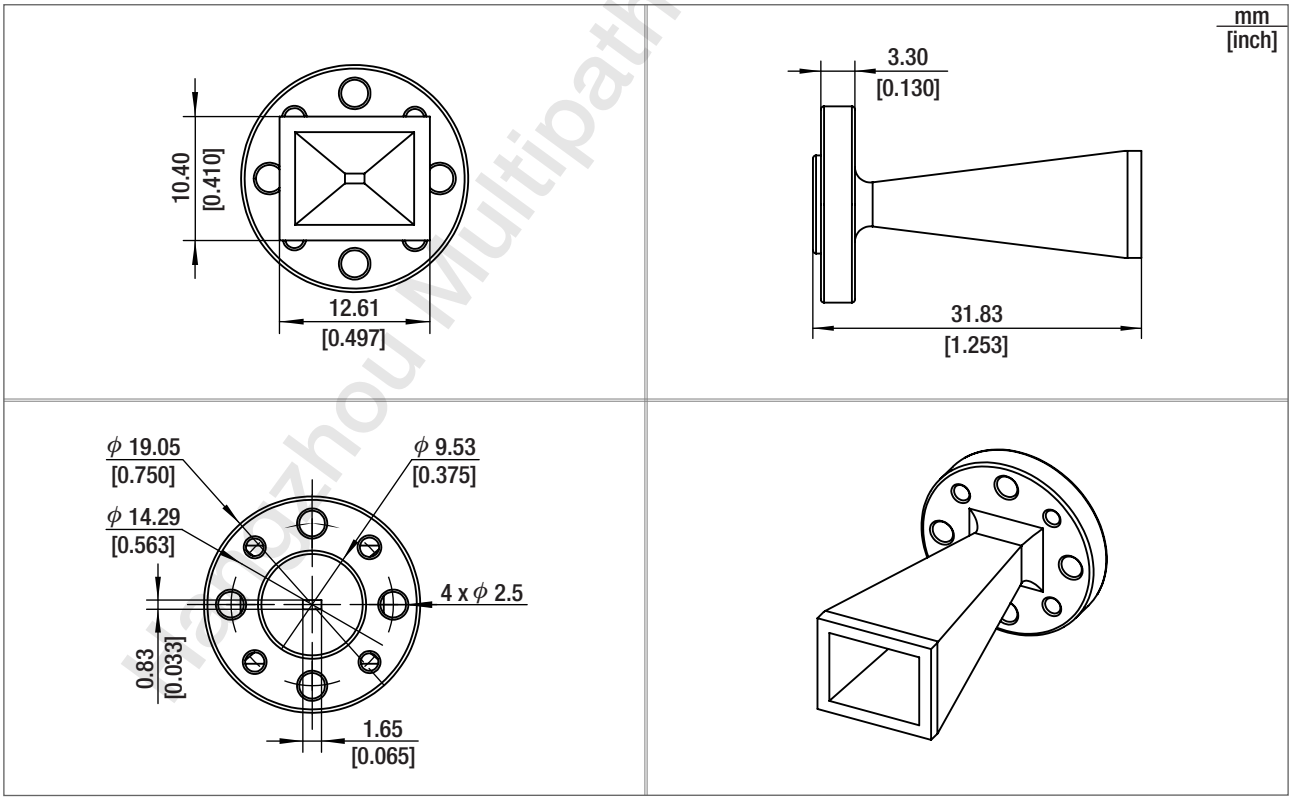
Hangzhou Multipath Electronics Co., Ltd. is a high-tech enterprise specializing in the research, production and sales of various high-performance standard gain horns, waveguide probes, transparent antennas, MIMO antennas for communication, and phased array radar antennas. The products cover various types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

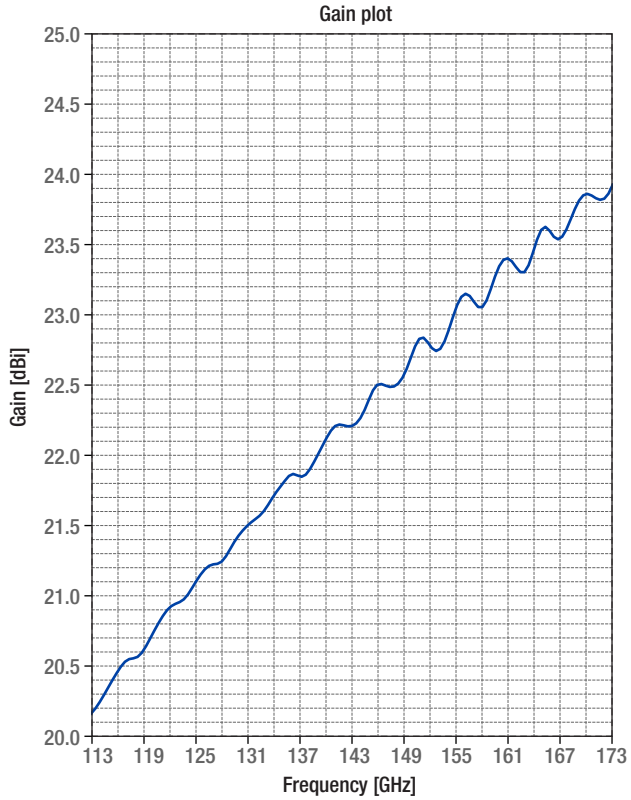
Part number	HA-WR7-20	**Polarization**	Single linear
Antenna type	Pyamidal horn	**Gain [dBi]**	20 Typ.
Frequency range [GHz]	113 – 173	**3dB beamwidth [deg]**	E-plane: 14 Typ. H-plane: 14 Typ.
Waveguide band	WR7	**Cross-polarization isolation [dB]**	50 Typ.
Dimensions (H x W x L) [mm; inch]	19.05 x 19.05 x 31.83; 0.75 x 0.75 x 1.25	**VSWR**	1.10 Typ.
Weight (approx.) [kg; lb]	0.02; 0.044	**RF connector**	UG-387/U-M
Material	Cu (Gold plated)		

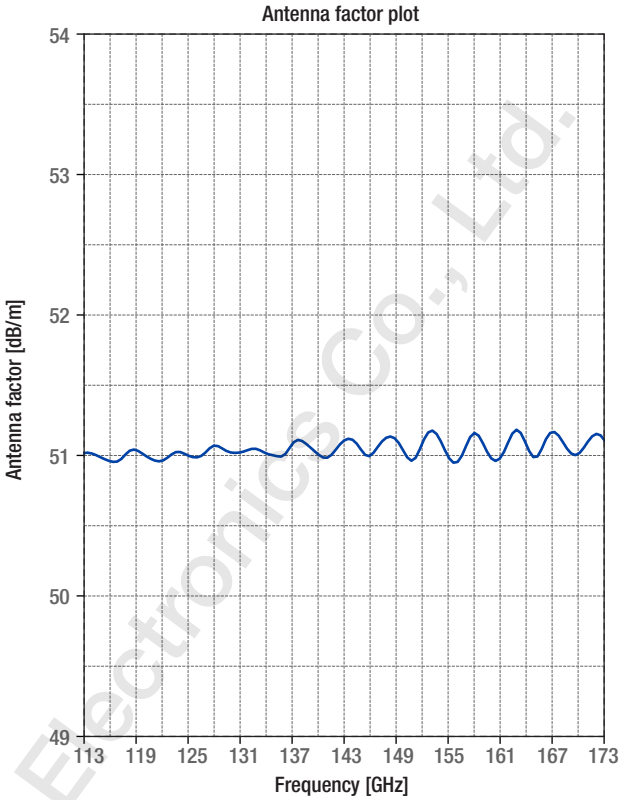
• Dimensional drawing: horn, HA-WR7-10

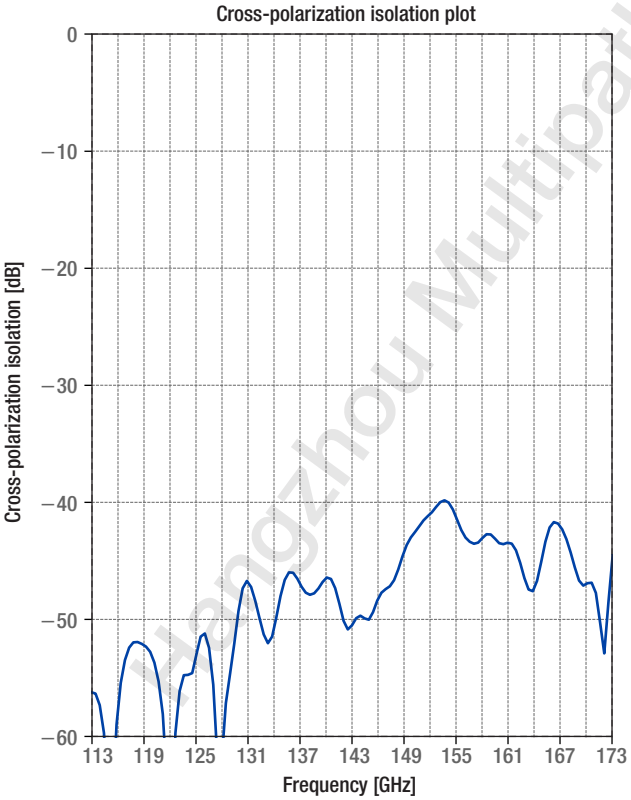


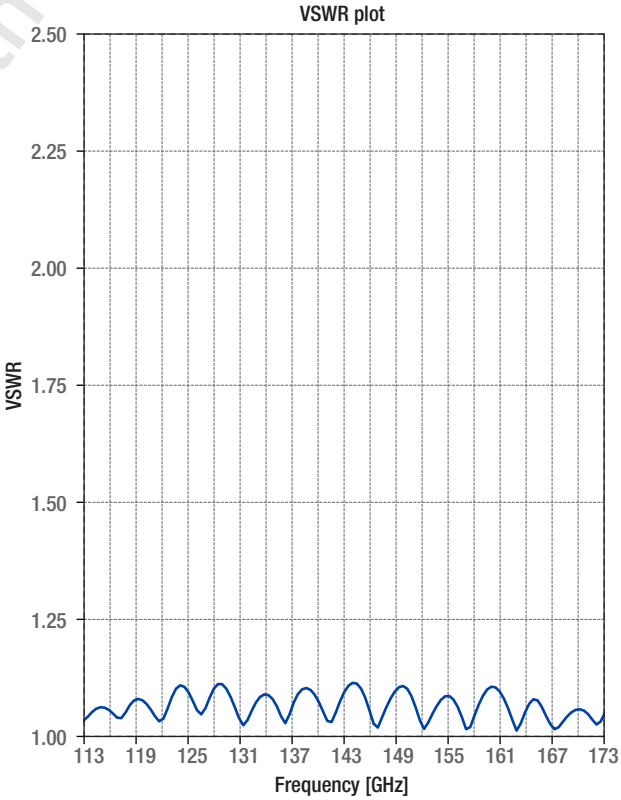
Electrical characteristics

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



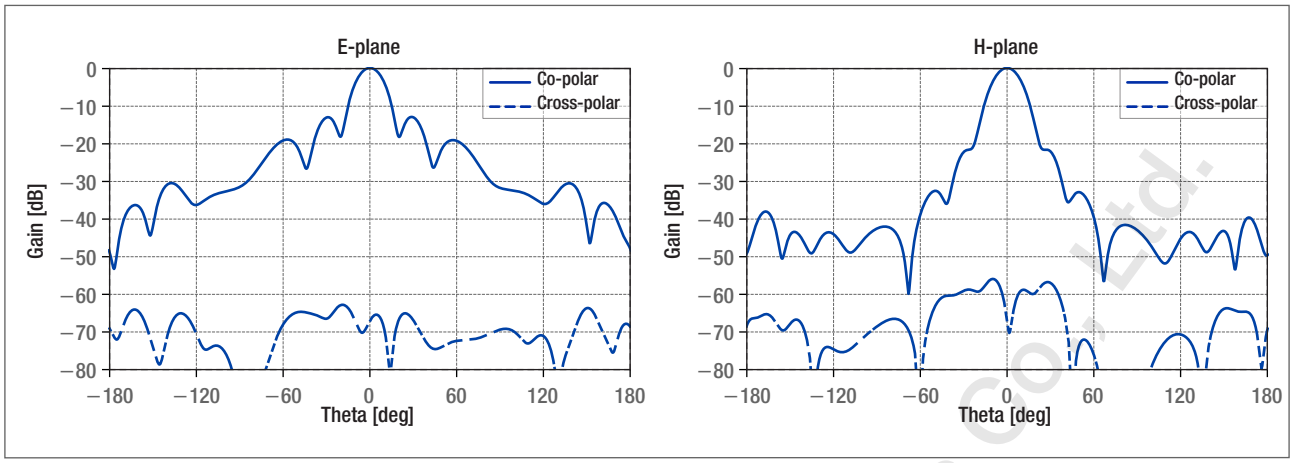




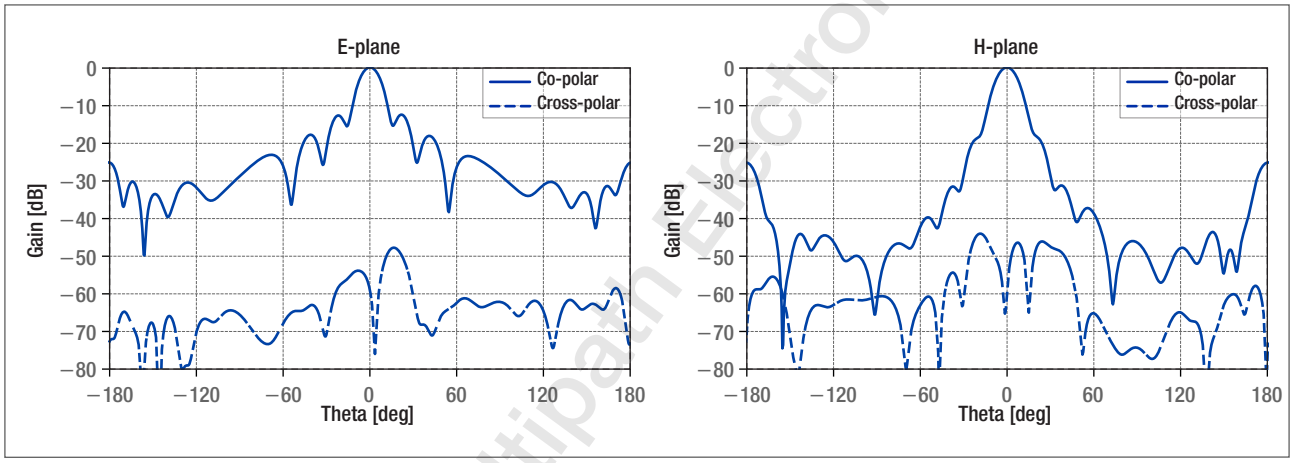


• Radiation patterns

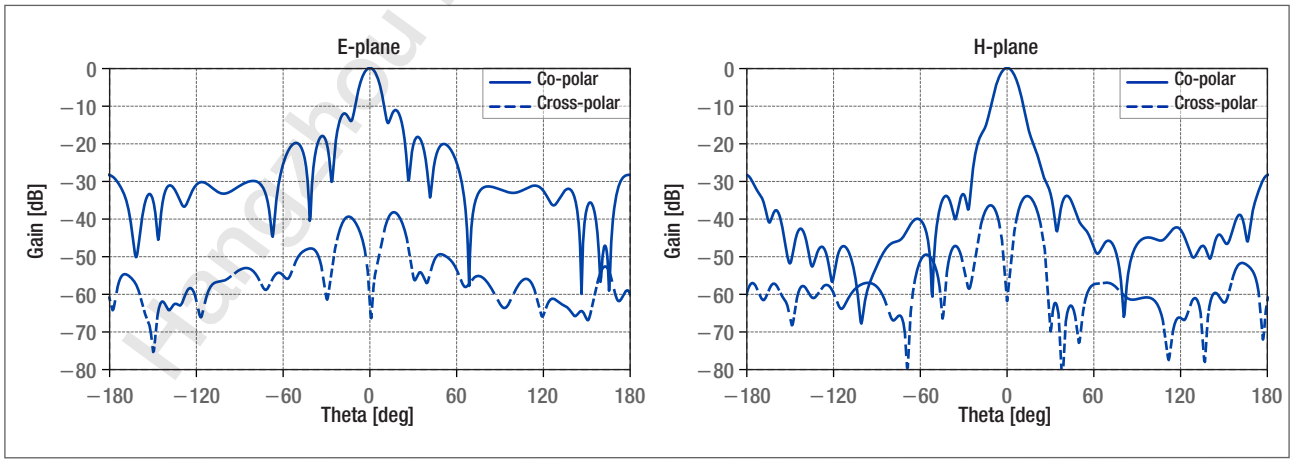
Patterns @ 113 GHz



Patterns @ 143 GHz



Patterns @ 173 GHz



• Data table

Frequency [GHz]	Gain [dBi]	Antenna factor [dB/m]	Cross-polarization isolation [dB]	VSWR
113	20.25	51.00	−66.81	1.04
116	20.54	50.94	−62.29	1.03
119	20.70	51.00	−61.47	1.07
122	20.95	50.97	−69.58	1.05
125	21.16	50.97	−59.96	1.07
128	21.28	51.05	−66.60	1.10
131	21.52	51.01	−54.99	1.01
134	21.74	50.99	−58.03	1.08
137	21.85	51.08	−54.96	1.06
140	22.12	50.99	−54.05	1.06
143	22.21	51.09	−58.82	1.08
146	22.50	50.98	−56.36	1.05
149	22.55	51.11	−51.93	1.09
152	22.80	51.03	−47.92	1.02
155	22.98	51.02	−47.25	1.08
158	23.05	51.11	−50.56	1.01
161	23.38	50.95	−50.71	1.09
164	23.34	51.14	−55.25	1.02
167	23.55	51.10	−48.51	1.03
170	23.80	51.00	−54.35	1.04
173	23.81	51.14	−61.63	1.02

Frequency [GHz]	E-plane, 3dB beamwidth	H-plane, 3dB beamwidth
113	18.23°	17.64°
143	14.60°	13.98°
173	12.44°	11.50°

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