

MT-463003/S

4 – 8 GHz DF Horn Antenna

Electrical

Frequency	4–8 GHz	
Match Gain @ Boresight	4 GHz	9.5 dBi
	6 GHz	11 dBi
	8 GHz	12.5 dBi
VSWR	1:8:1 typ 2:1 max	
Polarization	Slant 45°	
3 dB Azimuth Beam Width	65°- 115°	
	50° min at 4 GHz	
	125° max at 7 GHz matched polarization 150° max at 6-7 GHz and Horizontal polarization	
10 dB Azimuth Beam Width for 90% of the Band	130° - 180° matched polarization 195° for V and H polarizations	
12 dB Azimuth Beam Width for 10% of the Band	130° - 180° matched polarization 195° for V and H polarizations	
Amplitude Decreases Monotonically from	±60° - ± 80° in azimuth, ±10° - ±20° in elevation	
Azimuth Side Lobe	-15 dB	
Front to Back Ratio	-20 dB @4 GHz, -30 dB @ 8 GHz	
Isolation To Signals Below 1.5 GHz	-60 dB max	
3 dB Elevation Beam width	20° min, 18° min at 8 GHz	
Input Impedance	50 Ω	
Power Handling	36 dBm CW max	

Performance Over AZ±60° And EL±15°

Gain Difference Between V & H polarizations *5.5 dB in *Elevation cuts +/-15deg **7.5dB in Elevation cut +/-15 deg	Gain Difference dB	Angle °
	< 3	0
	< 5 *	+/-30
	<6.5**	+/-60
Amplitude Matching Between 4 Antennas (V, H, 45°)	Angle°	DB
	0	+/-1
	+/-30	+/-1.5
	+/-60	+/-3
Phase Matching Between 4 Antennas (V, H, 45°)	Azimuth angle	Phase
	0	+/-6
	+/-30°	+/-8
	+/-60°	+/-14
Squint (V,H,45°)	3° max at elevation cut 0 °	
	14° max at elevation cuts +/-10 °	
	18.5°max at elevation cuts +/-15°	
Delta Squint for set of four antennas (V,H,45°)	±1°	

Mechanical

Dimensions (LxWxH)	317 x 62 x 179 mm
Weight	980 gr max
Connector	SMA Female, right angle
Mounting	Antenna is not sealed and must be installed under radome

Environmental

Temperature operating	-40°C to +71°C
Temperature storage	-50°C to +85°C
Humidity	98% including condensing
Salt fog	5% for 48 hours
Vibration	MIL-STD-810E, Proc.514.4 Fig . 514.4-16, PSD 0.049 ² /Hz 60 minutes per each axis
Fungus	MIL-STD-810E, Method 508.4
Operating Altitude	Up to 20,000 Ft
Non-operating Altitude	Up to 40,000 Ft
Shock	MIL-STD-810E, Method 516.4 Fig 516.4-4. Max value 209.

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