

MT-953003/S

8 – 18GHz DF Horn Antenna

Electrical

Configuration	Set of four antennas	
Frequency	8-18 GHz	
Gain	GHz	dBi
	8	9
	14	10.5
	18	13
VSWR	1:8:1 typ, 2.5:1 max 2.6:1 max at 17.5-18 GHz.	
Polarization	45° Slant	
3 dB Azimuth Beam width	65° - 115°, 160° max at 8 GHz, H+45° 150° max at 9 GHz, Vertical Polarization 155° max at 13 -17 GHz	
10 dB Azimuth Beam width for 90% Band Range	130° - 180°, 205° max at 8 GHz, H+45° 195° max at 9 GHz & 14 GHz	
12 dB Azimuth Beam width for 10% Band Range	130° - 180°	
Amplitude Decreases Monotonically from	+/-60° to +/-80° in azimuth, +/-10° to +/-20° in elevation	
3 dB Elevation Beam width	20° min 18° at 16-17 GHz 17° at 18 GHz	
Gain Difference Over AZ ±60° And EL ±15° Between V And H Polarizations	Angle	Gain Difference (dB)
	0°	<3
	+/-30°	<4 at 8 -10GHz, < 4 all cuts
	+/-60°	< 7 at 9,10 at +/-15° El cut <6.5 all Cuts < 7.5 at 15 GHz* < 9 at 16,17 GHz* <11 at 18GHz*
Amplitude Matching Between 4 Antennas over ±60° Azimuth And ±15° Elevation At V,H and 45°	dB	Angle
	+/-1	0°
	+/-1.5	+/-30°
	+/-3	+/-60°
Phase Matching Between 4 Antennas Over ±60°Azimuth and Elevation Over ±15°At V,H and 45°	Phase	Azimuth Angle
	+/-6	0°
	+/-8	+/-30°
	+/-14	+/-60°
Front to Back Ratio	dB	GHz
	-20	8
	-30	18
Azimuth Side Lobe Level	-15 dB	
Isolation to Signals Below 1.5 GHz	-59 dB max	
Input Impedance	50 Ω	
Squint V, H, 45° Over ±60°AZ. And ±15° EL	8° max at Elevation cuts 0 ° 18° max at Elevation cuts + - 10° 30° max at Elevation cut ±15°	
Delta Squint Between Antennas in Set of Four at V,H and 45°	±1°	
Power Handling	36 dBm CW max	

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Mechanical

Dimensions (LxWxH)	157x29x117 mm
Weight	250 gr max
Connector	SMA female, right angle

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
Vibrations	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
Altitude	operating Up to 20,000 Ft non-operating Up to 40,000 Ft
Shock	MIL-STD-810E, Method 516.4 Fig 516.4-4. Max value 209.

* For Elevation +/-15° only

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