MT-221014/TV

20 – 1250 MHz Airborne DF Blade Antenna

Wireless Edge Antenna Solutions
An MTI Company

Electrical

Frequency	20 – 1250 MHz										
Gain	MHz	20	30	34	60	88	108	136	174	225	400 - 1200	1200 - 1250
	dBi	-38	-28	-27	-21	-14	-10	-3	0	1	>0	-1
VSWR	2.6:1 max @100 – 1250 80% of the band 3.5:1 max @ 100 – 1250 20% of the band 3:1 max @ 30 – 100 3.5:1 max @ 20 – 30										
Azimuth	Omni										
Ripple	MHz	20 – 100	100 – 500	500 – 1200	1200 – 1250
	dB	±1	±2	±2.5	±3
Elevation pattern coverage	+25°, -10° without nulls										
Polarization	Vertical										
Phase Tracking	± 3 dB @ 20 – 150 MHZ ± 4 dB @ 150 – 1250 MHZ 90% of the band ± 7 dB @ 20 – 150 MHZ 10% of the band										
Monotonic Phase Tracking	No fast ripple change. Less than 12 sine waves over 20 – 1200 MHz										
Input impedance	50 Ω										
Input Power	10 W CW 1KW peak										
Lightning Protection	DC Grounded										

Mechanical

Dimensions LxWxD	327 x 317.5 x 118.4 mm max
Weight	2.1 Kg max
Connector	TNC Female
Radome	Fiberglass
Color	Polyurethane per MIL-C-83286 GRAY 36375 PER FED-STD-595
Base Plate	Aluminum with chemical conversion coating

Environmental

Test	Standard	Duration	Temperature	Notes
Low Temperature	MIL-STD-810E Method 501.3 Proc. I & II	24 h	-54° C	
High Temperature	MIL-STD-810E Method 501.3 Proc. I & II	96 h	+85° C	
Temperature/Altitude	MIL-STD-810C Method 504.2 Proc. I	33 h	-57° to 85° C	40,000 ft
Temperature Shock	MIL-STD-810E Method 503.3	2 h	-45° to 85° C	3 Cycles
Vibration	MIL-STD-810D Method 514.3 Cat. 4	3 X 1 h/axis	Li=0.6g^2/Hz F1 68 Hz	
Shock	MIL-STD-810D Method 516.4 Proc. I	11 msec/axis		3 x 20 g/axis
Humidity	MIL-STD-810E Method 507.3 Proc. I 98% @ 45°	240 h	98% 10 cycles of 24 h	
Salt Spray	MIL-STD-810E Method 509.3 Proc. I	48 h	5% Nacl	
Side Pressure			6 PSI	
Sand	MIL-STD-810E Method 510.3 Proc. II			
Dust	MIL-STD-810E Method 510.3 Proc. I			
Solar Radiation	MIL-STD-810E Method 505.3 Proc. I		7 cycles of 24 h	
Acceleration	MIL-STD-810E Method 513.4 Proc. I			13.5 g all axis
Rain		30 mm	10cm/hr 18m/sec Each side	
Fungus	MIL-STD-810E Method 508.4			
Endurance	MIL-STD-810D Method 514.4 Fig. 514.4-7 a	3 X 1 h/axis	L1=2.4 g^2/Hz F1=687 Hz	
Wind Speed		0.85 mach @ sea level		

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