

MT-461003/SV

4.39–5.11 GHz , 1.5 dBi , Airborne Omnidirectional Antenna

Electrical

Frequency	4.39 – 5.11 GHz
Peak Gain	1.5 dBi min
VSWR	2 : 1 max
3 dB Beam Width	
Azimuth	Omnidirectional
Elevation	60 deg min
Polarization	Linear Vertical
Radiation Pattern In Elevation Plane	Within $\pm 10^\circ$ with respect to horizon
Peak To Peak Ripple	2 dB max
Feed Point	221.1 mm from antenna bottom*
Input Impedance	50 Ω
Input Power	30 W CW min

Mechanical

Dimensions (Height x Width x Leg thickness)	250 x 31 x 5.5 mm max
Weight	200 gr max
Connector	SMA Female
Radome	Fiberglass
Mounting	Through a flange with four $\varnothing 4.3$ holes
Color	Tambour polyurethane topdor 399-069 color RAL 7040

Environmental

Test

Temperature Operating	-40°C to +50°C
Temperature Storage	-40°C to +71°C
Humidity	Up to 95% at +30°C
Wind Load	Speed up to 250 km/hr
Vibration	Per MIL-STD-810E, method 514.4, Proc I for Category 4 (for propeller aircraft). The vibration envelope shall be in accordance with: Product Function Specification For The FDF Ranger RFDSPC0000 Section 3.2.5.10.1. Applicable Vibration per Zone 3. See fig 1. In the last page
Mechanical Shock	10g during 11 msec sinus wave
Acceleration	9g
Altitude Operating	Up to 15,000 ft
Transportation	Up to 40,000 ft
Rain	2 mm/hr during 4 hours in flight. 5 mm/hr with 75 km/hr wind velocity for 12 h in non-operating conditions. Exposure to drip per MIL-STD-810E, method 506.3, Proc.II
Icing	Light icing condition less than 5 mm of ice on antenna
Snow Load	Not Applicable
Salt And Salt Fog	Per MIL-STD-810D, method 509.3

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Sand And Dust	Per MIL-STD-810D, method 510.3
Solar Radiation On Ground	+1000 Watt/m ² for a duration of 1 hour, so that the UAV surface temp' does not exceed 60°C at ambient temp' of up to +35°C
During Flight	1000 Watt/m ² with no limit of time
Fungus	Materials, that are nutrient for fungi shall not be used where it is practical to avoid them. Where used, and not hermetically sealed, they shall be treated with fungicide agent acceptable to the procuring activity. If the material is used in hermetically sealed enclosures, fungicidal treatment is not necessary.
Transit Drop	Antenna in its container shall withstand transit drops for height of 150mm .
Transport Vibrations	The antenna in its transportation configuration shall meet the performance and requirements of this specification, and shall not suffer any damage, after exposure to transportation vibration during Road/Cross Country.
Transportation Shock	The antenna in its transportation configuration shall meet the performance and requirements of this specification and shall not suffer any damage after exposure to transportation shocks, as experienced during the Road/Cross Country test.

- 5mm higher from feed point of antenna VRNG5300001-501

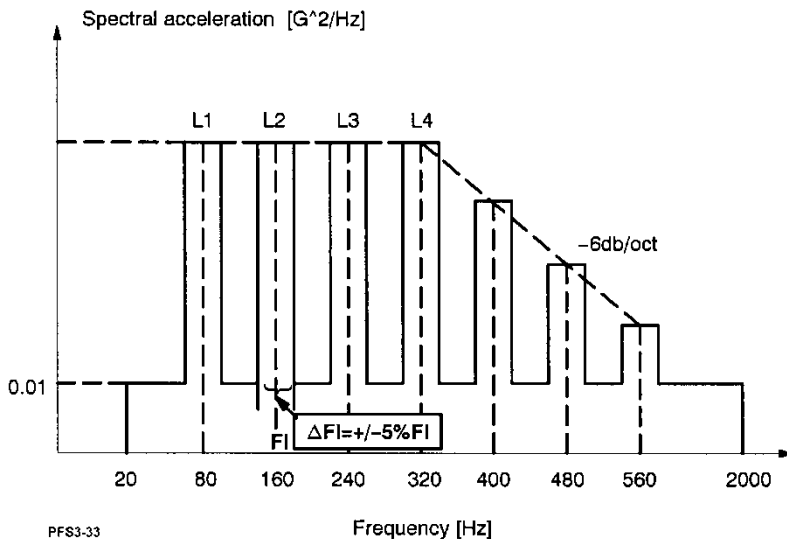


FIG 1

EQUIPMENT LOCATION	L1[G2/Hz]	L2 [G2/Hz]	L3 [G2/Hz]	L4 [G2/Hz]
Zone-3: Ahead of STA 1607	0.04	0.04	0.04	0.04
Zone-2: STA 1607 to STA 2039, engine bulkhead and engine cover mounted equipment	0.1	0.1	0.5	0.1
Zone-4: On the empennage (rear of STA 2039) and on the wings	0.04	0.04	0.04	0.04
Zone-1: On engine mount	0.05	0.3	0.5	0.1
Mounted directly on the engine	5	1	8	2

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