WIDE BANDWIDTH OMNIDIRECTIONAL DIPOLE ARRAY 1200 – 2000 MHz

WDA-1220-1 Series

The **WDA-1220-1** antenna is a single band omni- directional vehicular mounted WNW antenna. The antenna has been designed for optimum gain from 1200 MHz to 2000 MHz. The gain has been tuned for 0° to 10° in elevation and azimuthal variations are ±1 dB. The low SWR ensures maximum power transfer to the antenna elements and minimal antenna heating at the tested 125 Watts CW.
This antenna is a fully qualified (qualifications listed below), Commercial Off the Shelf (COTS), TRL-7 (Technology Readiness Level) antenna. The rugged design has also passed the Oak Beam Test. This rigorous test involves 25 oak beam strikes to the mid point of the antenna at 25 miles per hour.
The WDA-1220-1B is an antenna with an aluminum mount for excellent electrical bonding to a standard vehicular NATO mount. The WDA-1220-1C is equipped with a thermoset epoxy base with an isolation of greater than 50 kV.

Electrical Specifications

Frequency (MHz): ..... 1200 - 2000
VSWR:..... < 2.0:1 typical
VSWR (*max*): 3.0:1
Gain ..... 3 to 6.5 dBi
Power: ..... 125+ Watts
Input Impedance: ..... 50 Ω
Port:..... J1
Connector:..... Type N Female

Mechanical Specification

Weight ..... <10 lbs (4.5 kg)
Height..... 42.5 in (1.08m)
Diameter..... 2.5 in (63 mm)
Diameter (base) ..... 5.5 in (89 mm)
Mount ..... NATO 4-hole
Finish..... CARC II Green
Spring..... >40,000 flexures

WDA-1220-1

MODEL	FREQUENCY (MHZ)	INPUTS	MOUNT	LENGTH (IN)	DIAMETER (RADOME)	WEIGHT (LBS / KG)
WDA-1220-1B	1200 – 2000	1	Metallic	43	2.5"	9.5 / 4.3
WDA-1220-1C	1200 – 2000	1	Non-Metallic	43	2.5"	10 / 4.5

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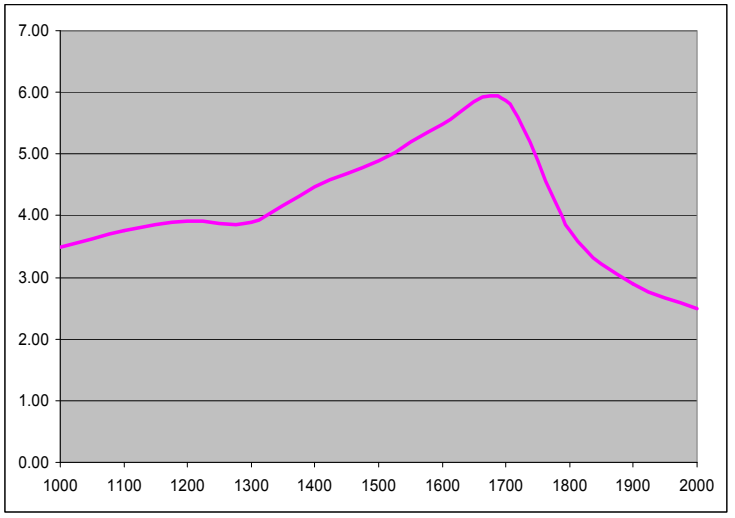
Mechanical Qualifications

Qualification	Standard	Description
High Temperature - Operating	MIL-STD-810F	Test Method 501.4 Procedure II
High Temperature - Storage	MIL-STD-810F	Test Method 501.4 Procedure I
Low Temperature - Operating	MIL-STD-810F	Test Method 502.4 Procedure II
Low Temperature - Storage	MIL-STD-810F	Test Method 502.4 Procedure I
Low Pressure - Operating	MIL-STD-810F	Test Method 500.4 Procedure II
Low Pressure - Storage	MIL-STD-810F	Test Method 500.4 Procedure I
Low Pressure - Rapid Decompression	MIL-STD-810F	Test Method 500.4 Procedure III
Solar Radiation	MIL-STD-810F	Test Method 505.4 Procedure I
Rain & Wind	MIL-STD-810F	Test Method 506.4 Procedure I
Sand & Dust	MIL-STD-810F	Test Method 510.4 Procedure I & II
Explosive Atmosphere	MIL-STD-810F	Test Method 511.4 Procedure II
Humidity	MIL-STD-810F	Test Method 507.4
Salt Fog	MIL-STD-810F	Test Method 509.4
Vibration - Tracked & Wheeled	MIL-STD-810F	Test Method 514.5 Procedure I
Shock - Operational	MIL-STD-810F	Test Method 516.5 Procedure I
Shock - Transport	MIL-STD-810F	Test Method 516.5 Procedure II
Shock - Service	MIL-STD-810F	Test Method 516.5 Procedure VI
Shock - Crash Hazard	MIL-STD-810F	Test Method 516.5 Procedure V
Shock - Ballistic	MIL-STD-810F	Test Method 522.4 Procedure III, 5' blow
Impact	Oak Beam Strike	25 strikes @ 25 mph
Immersion & Water Fording	MIL-STD-810F	Test Method 512.4 Procedure I & II
Fungus	MIL-STD-810F	Test Method 508.5
High Altitude Electromagnetic Pulse (HEMP)	MIL-STD-2169B	
Electrostatic Discharge	RTCA-DO-160E	Section 25
Near Strike Lightning (NSL)	RTCA-DO-160E	Section 22
High Voltage Protection		30kV @ 60Hz

WDA-1220-1B Gain (5° Elevation)



Frequency [MHz]

WDA-1220-1B VSWR