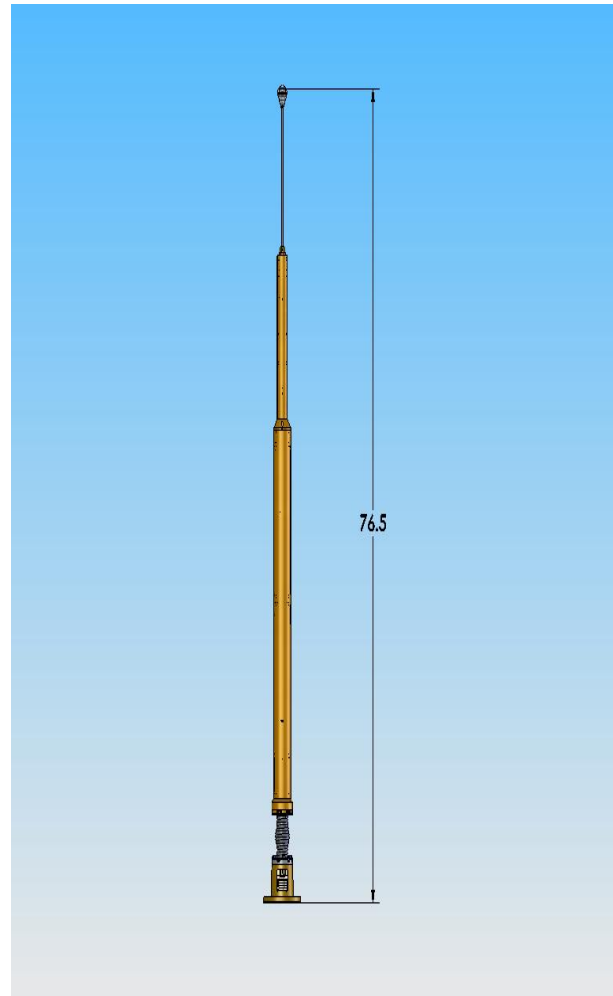


WDA - 3018

Our WDA – 3018 Tri Band Antenna is an innovative, reduced-height, multi-band (30-2000 MHz) omnidirectional communications antenna designed for ground-to-air, point-to-point, and mobile communications. The antenna structure is comprised of a 2.5 inch diameter tapered radome with a standard 4 bolt, 4.5 inch bolt pattern. The overall height is 76.5 inches, with the top 16 inches a flexible whip. The WDA - 3018 is ideal for a single structure vertically polarized antenna solution when individual band performance cannot be compromised. Three ports are utilized such that the antenna can simultaneously support three separate waveforms: Port 1 (30-88 MHz), Port 2 (225-500 MHz), and Port 3 (1200-2000 MHz).

The sealed radome offers mechanical stability and environmental protection for fixed and mobile installations. Some models are equipped with a heavy duty spring mount for use in vehicular applications where high velocity impacts are likely. Lightweight construction techniques allow the antenna to be flexible while remaining durable. The overall weight is less than 14 lbs. WDA – 3018 exhibits an excellent omnidirectional pattern performance while providing low VSWR over the bands of operation.



WDA – 3018

Port 1 (SINCGARS) is comprised of a reduced height monopole. The radiating element coexists with the other antenna elements without degrading their performance. An ARA proprietary matching device efficiently matches the feed point to the feed line. This unique matching technique allows for less platform dependence, providing excellent performance on fixed or mobile installations. A flexible whip offers convenience for storage and transportation.

Port 2 (WNW/SRW and EPLRS) consists of wideband radiating elements. A balanced matching device matches the feed point to the feed line to give excellent VSWR across the band. The balanced feed presents outstanding pattern performance. The antenna is designed to maximize gain on the EPLRS (420-450 MHz) portion of the band without compromising performance on the low end. An external Diplexer is available to provide a fourth port so that WNW/SRW and EPLRS waveforms can be supported simultaneously.

Port 3 (L Band) consists of ARA patented distributed radiating elements to provide superior gain while coexisting with the other radiating elements. A matching technique allows for exceptional VSWR while properly phasing the elements. The three bands in the antenna occupy the same structure while maintaining 25 dB of isolation.



WDA - 3018

Physical Specifications

Height:76.5 inches
Diameter:2.5 inch at the base tapering to 1/8 inch at top
Weight: 12 lbs.
Color: Tan or Green CARC

Low Band Specifications

Frequency:30 – 88 MHz
VSWR(max): 2.0:1
Gain:-6 to +3 dBi
Power: 100+ Watts CW
Input Impedance: 50 Ω
Port: 1
Connector: Type TNC

Mid Band Specifications

Frequency:225 – 500 MHz
VSWR(max): 2.5:1
Gain: 0 to +4.5 dBi
Power: 100+ Watts CW
Input Impedance: 50 Ω
Port: 2
Connector: Type TNC

High Band Specifications

Frequency: 1200 – 2000 MHz
VSWR(max): 2.0:1
Gain: +2.5 to +4.5 dBi, +3 to +4.5 from 1350 to 1500 and 1650 to 1850
Power: 100+ Watts CW
Input Impedance: 50 Ω
Port: 3
Connector: Type TNC

Port to Port Isolation

Isolation: 25 dB Typical

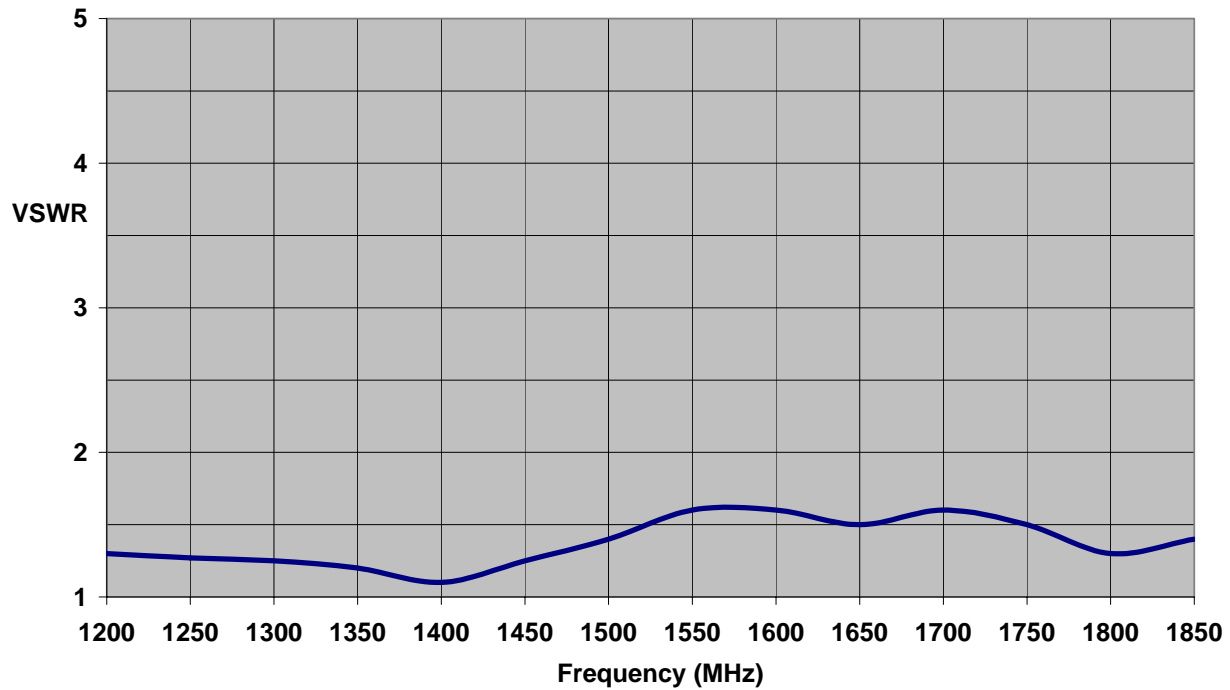
Antenna Installation

Mounts to the standard 4-hole vehicle mount as defined in CECOM Drawing A3207505

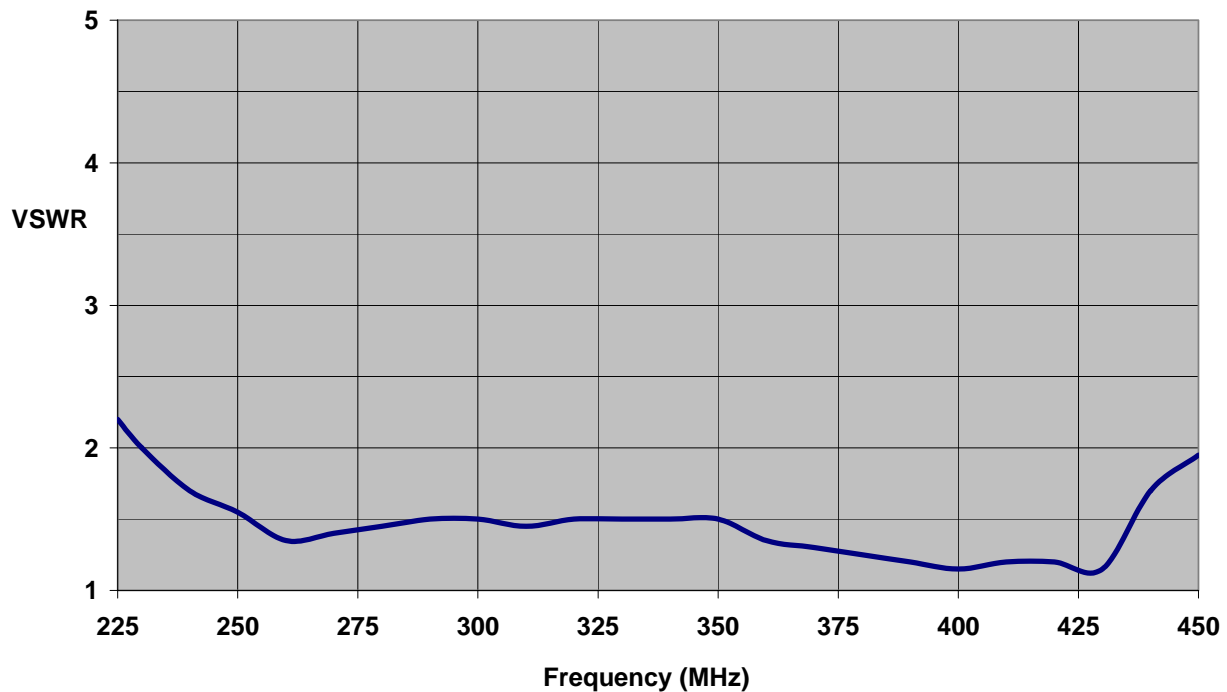
Mechanical and Environmental Specifications

Meets MIL - STD 810 requirements
Meets requirements for “Oak Beam” Test

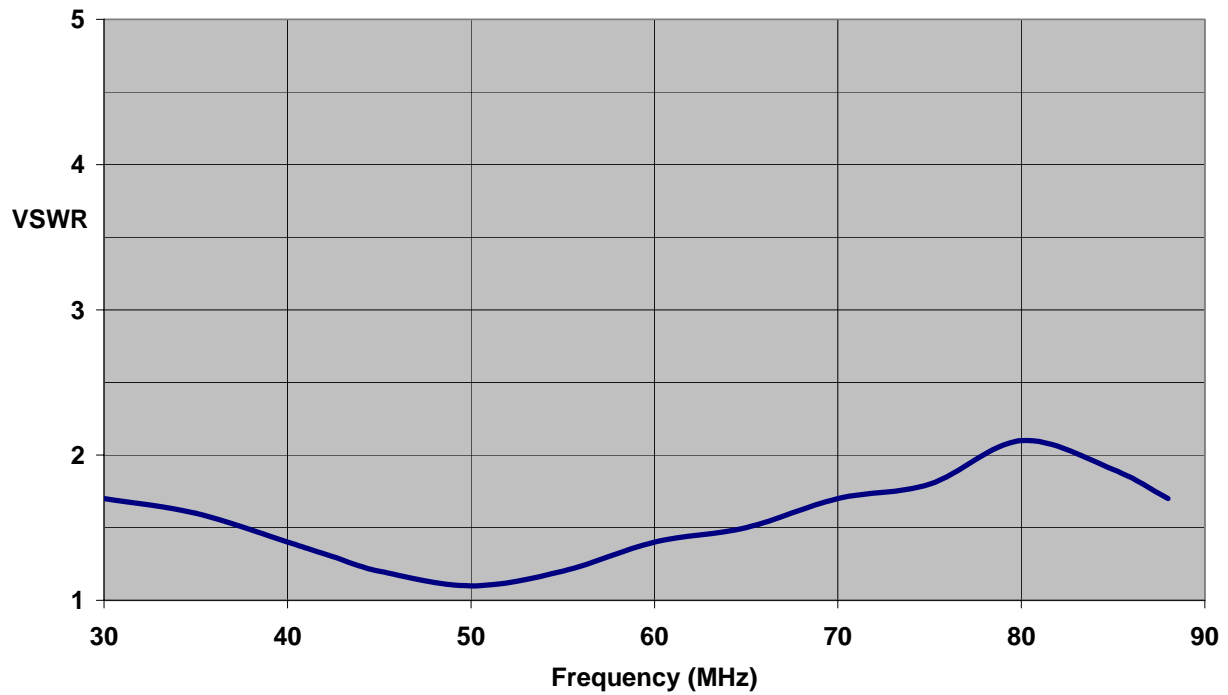
High Band VSWR



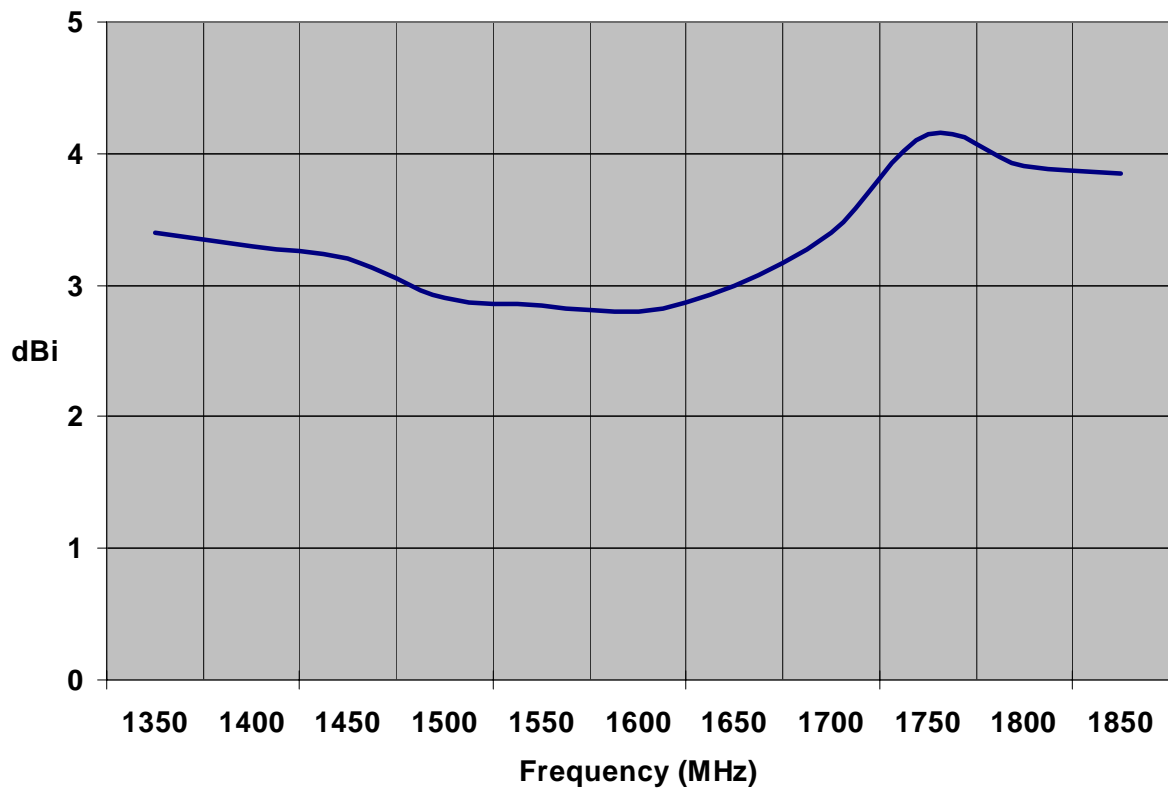
Mid Band VSWR



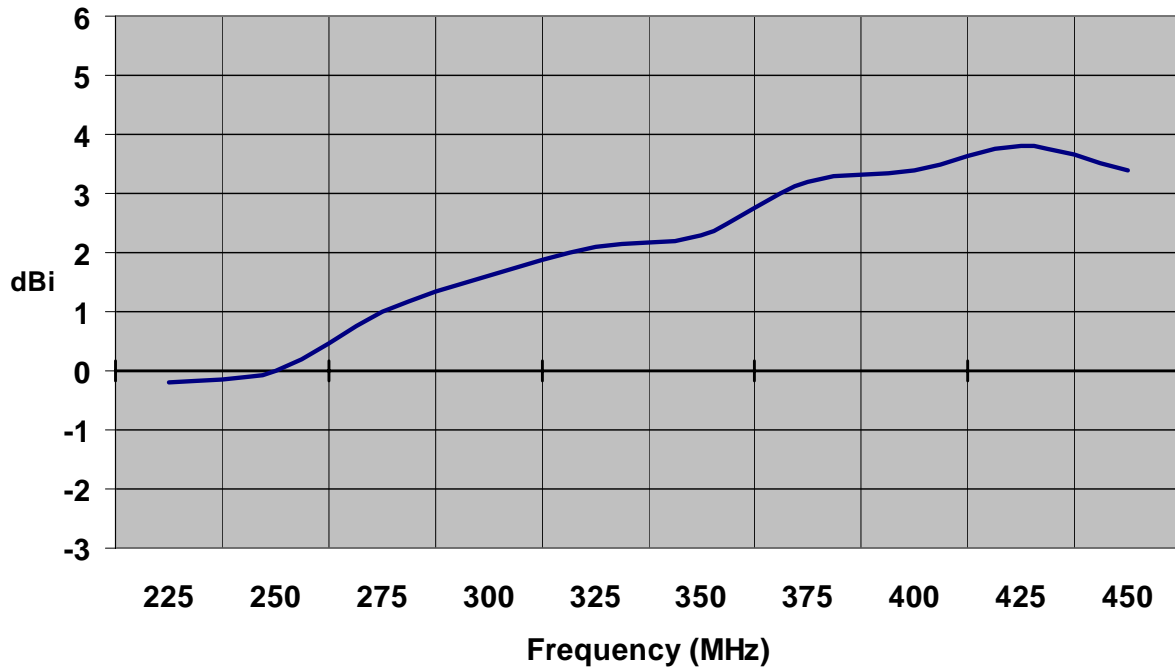
Low Band VSWR



Hi Band Gain



Mid Band Gain



Low Band Gain Compared to SINGARS AS3900

