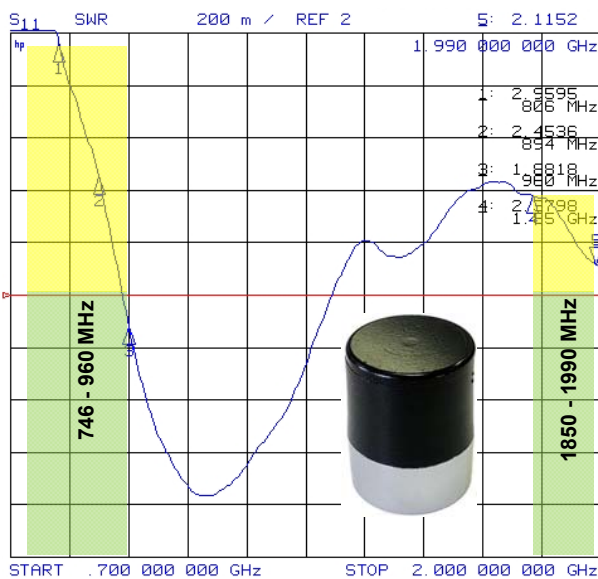


The Wireless Industry's Highest Performance
 Broadband/Multi-Band Low Profile Antenna
 746-960 / 1850-1990 MHz

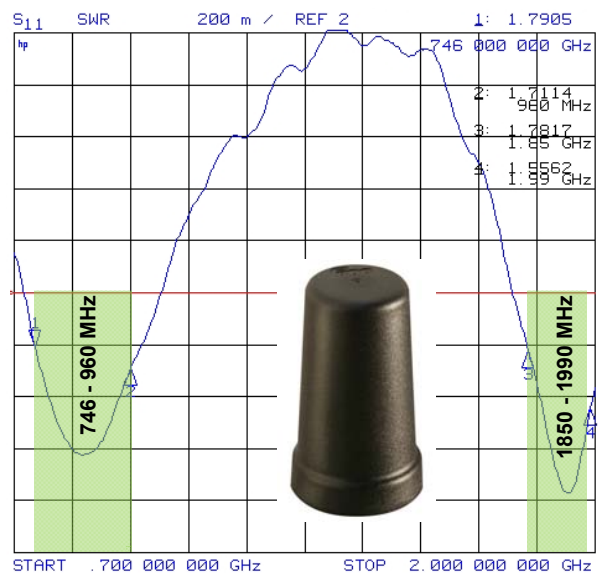
E/M Wave's low profile dual band antenna continues to provide "more antenna value" through its unique antenna architecture specifically designed for traditional NMO antenna mounts commonly used in Land Mobile Radio systems. The antenna is designed using a patent pending radiating element that provides self resonant impedance matching for broad band performance covering the 700, 800, 900 MHz and 1850-1990 MHz PCS bands.

Broad bandwidth performance includes recently expanded 700 MHz bands, as well as traditional 800 MHz (SMR/Cellular) and 900 MHz (ISM, SCADA, etc.) operation. This new technology provides typical monopole directivity with greater than 2 dBi gain. Enhanced directivity characteristics for the PCS 1900 MHz band are accomplished with the specially designed radiator, providing optimized half-wave resonance, independent of the mounted ground plane. For typical ground plane installed applications, realized gain is greater than 3 dBi. Additionally, the structure incorporates a contiguous high conductivity radiating aperture surface that exceeds the requirements of higher power LMR mobile/vehicular radios.

Key benefits to the design include the use of a traditional silver plated, phosphor bronze contact spring that maintains noise free, reliable RF continuity, coupled with the most efficient radiation transmission and highest power rating of any competitive device in its class. The design incorporates "All Brass" construction for maximum reliability, as exhibited by the industry's well known broadband sibling, the EM-M11002 (746-960 MHz), which has provided a unique design platform for the creation and introduction of the Broadband/Multi-band EM-M20005 version. These unique RF characteristics using the NMO mount combined with the rugged mechanical reliability of the Xenoy™ radome, make the EM-M20005 the "best in class" choice for all existing and newly emerging multi-banded LTE and Public Safety wireless systems. "Weigh the difference", it's an easy choice.



COMPETITOR'S VSWR MATCH, TYPICAL



EM-M20005 VSWR MATCH, TYPICAL

TRADITIONAL NMO MOUNT INSTALLATION

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EM-M20005 – High Performance Multi-band Design Features

- Patent Pending Broadband/Multi-Band Resonant Structure designed specifically to match with traditional Land Mobile Radio NMO mounts.
- Antenna structure that provides highly efficient broadband monopole radiation performance for 700/800/900 MHz bands, while simultaneously providing higher performance half-wave ground-plane independent directivity for the 1900 MHz PCS band.
- Highly conductive solid “All Brass” structure for all radiating components.
- 100 Watt power handling capability.
- 100% Xenoy™ Radome housing maximizes environmental resistance and cold temperature impact while providing long term UV resistance and color retention.
- Wireless Industry’s broadest bandwidth performance, including all bands within 746-960 and 1850-1990 MHz.
- Silver Plated Phosphor Bronze Spring Contact for optimal contact retention.
- Seamless monolithic housing, eliminating water and salt intrusion from critical conductive components.

Competitive Designs – Failures in Acceptable Performance Standards

- Chrome Plated Zinc Die-cast components subject to corrosion in salt brine environments.
- Environmentally exposed top load radiators can detune under wet snow/ice load conditions.
- Incorporate Plunger Pin contacts, bare brass, susceptible to corrosion and intermittent open circuit conditions. Bare brass components, and non-plated plunger pin construction exposes critical RF contact points to long term corrosion.
- Impedance match is not optimized for use with common, traditional NMO mounts. See VSWR comparison data above.
- Incorporate discrete element circuit components (capacitors) to achieve VSWR match for both bands.
- Low Voltage Ceramic Capacitors significantly reduce power handling capacity and are prone to premature failure.
- Capacitive circuit reduces 800 MHz band performance by decreasing the physical height of the radiator and lowering the antenna’s efficiency.
- PCB versions are power handling limited (typically less than 30 Watts) and provide lower efficiency due to glass filled epoxy resins and dielectric losses.