

## 3121D DIPOLE

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ETS-Lindgren's Model 3121D Tuned Dipole Antenna's behavior approaches to the theoretically perfect half-wavelength resonant dipole. ETS-Lindgren has made select physical improvements to the original design assuring optimal performance and years of trouble-free use. The 3121D offers an accurate standard for precise EMI measurements including FCC and EN compliance testing, site

attenuation as described in EN55022 and ANSI C63.4, and antenna calibration as described in ANSI C63.5.

The model 3121D covers a frequency range of 30 MHz to 1 GHz and its behavior approaches to the theoretically perfect loss-less half-wavelength resonant dipole.

Each 3121D Dipole is individually calibrated at 10 meters per ANSI C63.5, using the preferred three antenna method. All measurement equipment used is NIST traceable.

These measurements are made without the use of attenuators, so antenna factors are a true presentation of actual performance. A printout of the calibration data of each antenna is included with the Manual and is also archived. Individual calibration and actual antenna factors are preferred over typical or theoretical factors and provide confidence of test data.

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**ETS-LINDGREN**  
An ESCO Technologies Company

## Key Features

- Frequency Range 30 MHz to 1 GHz
- FCC Design
- Low VSWR and Balun Loss
- Individually Calibrated
- Appropriate for Site Attenuation Measurements
- Both Stinger and EMCO Mounts Included

## Features

### FCC Design

ETS-Lindgren has incorporated contemporary materials, precision manufacturing and select improvements (such as Type N connectors for balun and cable connections) to the optimally matched, compensated balun design used by Willmar K. Roberts at the FCC laboratory. The result is a quality product that provides years of use.

### Low VSWR and Balun Loss

The model 3121D has an average VSWR of less than 1.6:1 and a balun loss of less than .5 dB throughout its frequency range of 30 MHz to 1 GHz. Appropriate for EMI Testing and Site Attenuation ETS-Lindgren's Tuned Dipole Antenna is suitable for both commercial and military EMI emissions and immunity testing. The model 3121D also can be used to perform site attenuation per EN55022 and ANSI C63.4.

### Quality Construction Complete with Accessories

ETS-Lindgren's Tuned Dipole is constructed of lightweight corrosion resistant elements, providing years of trouble-free indoor and outdoor service. A clamp block, delrin support rod, and aluminum mounting base are included in the set. The aluminum mounting base accepts standard 1/4 in x 20 threads from an ETS-Lindgren Tripod or most other tripods. All components, including a tape measure, and ruler which shows corresponding frequency, are included in a shock-resistant carrying case.

## Specifications

### Electrical Specifications

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**Impedance (Nominal):** 50  $\Omega$

**VSWR:** <1.6:1

**Pattern Type:** Omnidirectional

**Polarization:** Linear

| Model   | Frequency           | Connectors | Maximum Continuous Power |
|---------|---------------------|------------|--------------------------|
| Balun 1 | 30 MHz to 60 MHz    | Type N (f) | 260 W                    |
| Balun 2 | 60 MHz to 140 MHz   | Type N (f) | 160W                     |
| Balun 3 | 140 MHz to 400 MHzT | Type N (f) | 80 W                     |
| Balun 4 | 400 MHz to 1 GHz    | Type N (f) | 50 W                     |

### Additional Specifications

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- Two Low-frequency Adjustable Elements
- Base Drilled to Accept ETS-Lindgren or Other Tripod Mount with Standard 1/4 in x 20 Threads
- Two Medium Frequency Adjustable Elements
- One (1) 5 m Tape Measure
- Support Rod
- 7.6 m (25 ft) Cable with Type N Connectors
- One High Frequency Ruler for DB4
- Four (4) Element Extension Rods
- Carrying Case
- Clamp Block
- Both Stinger and EMCO Mounts Included
- Actual Individual Calibration Factors and Signed Certificate of Conformance
- Users Manual

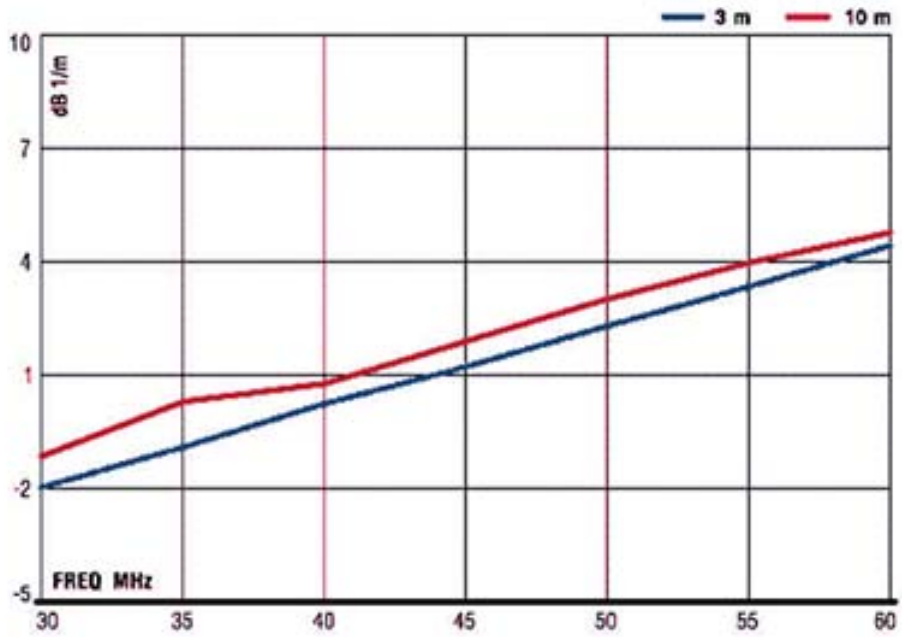
### Product Options

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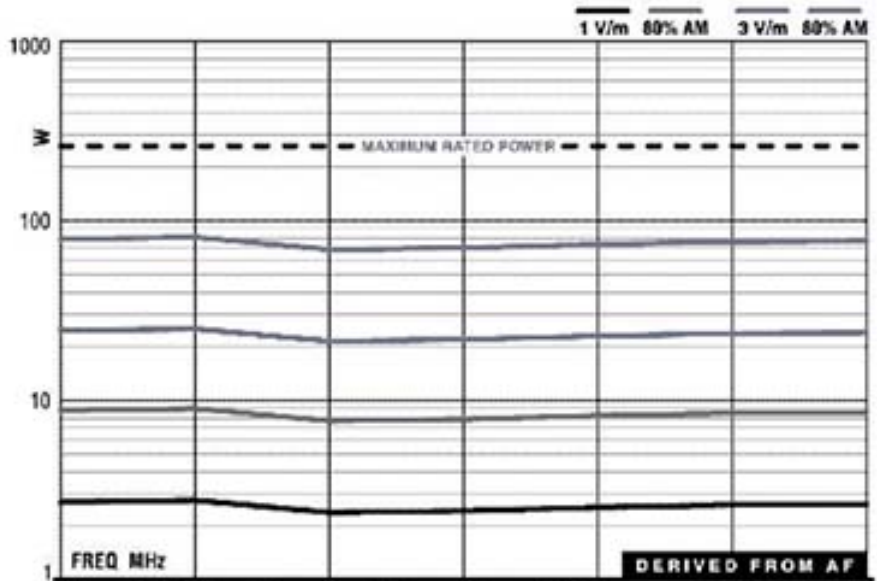
- 4-TR Tripod
- 7-TR Tripod

Product Charts

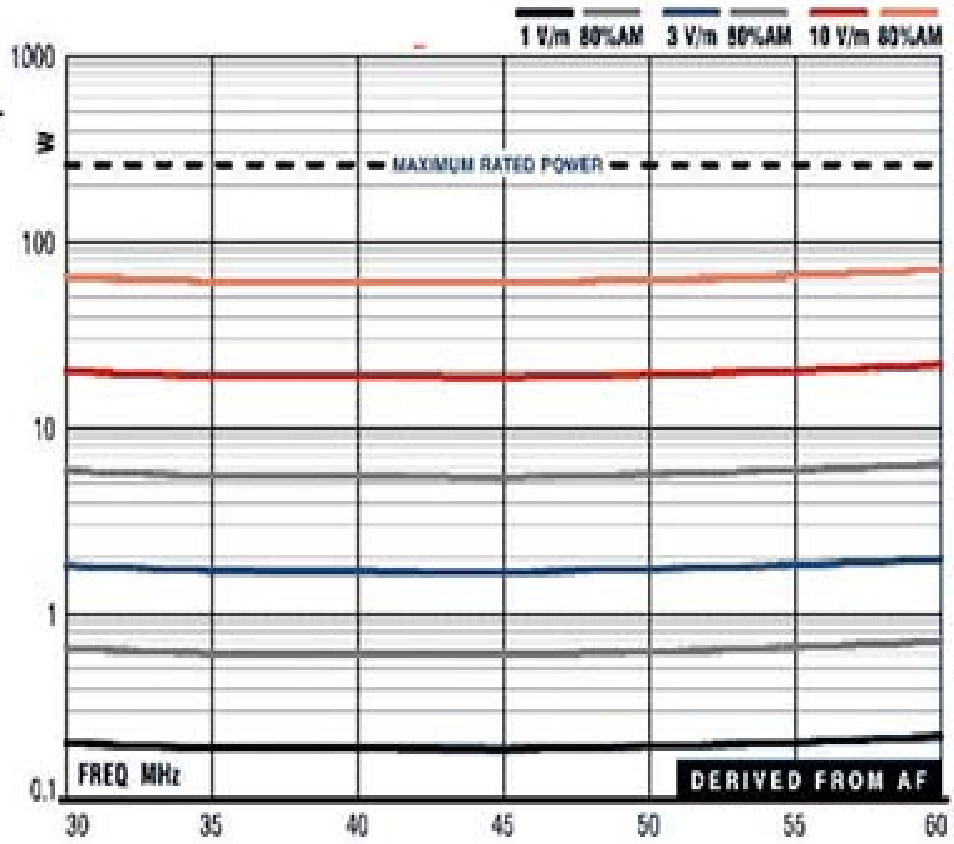
3121D Dipole DB-1  
Antenna Factor



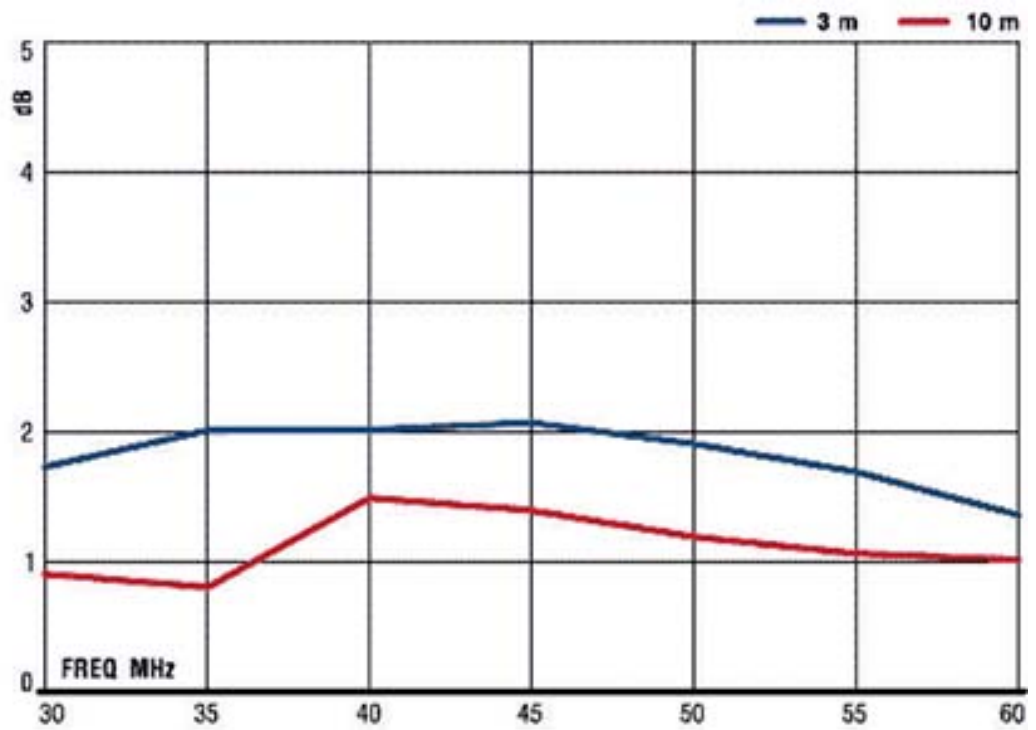
3121D Dipole  
DB-1 Forward Power  
at 10 m



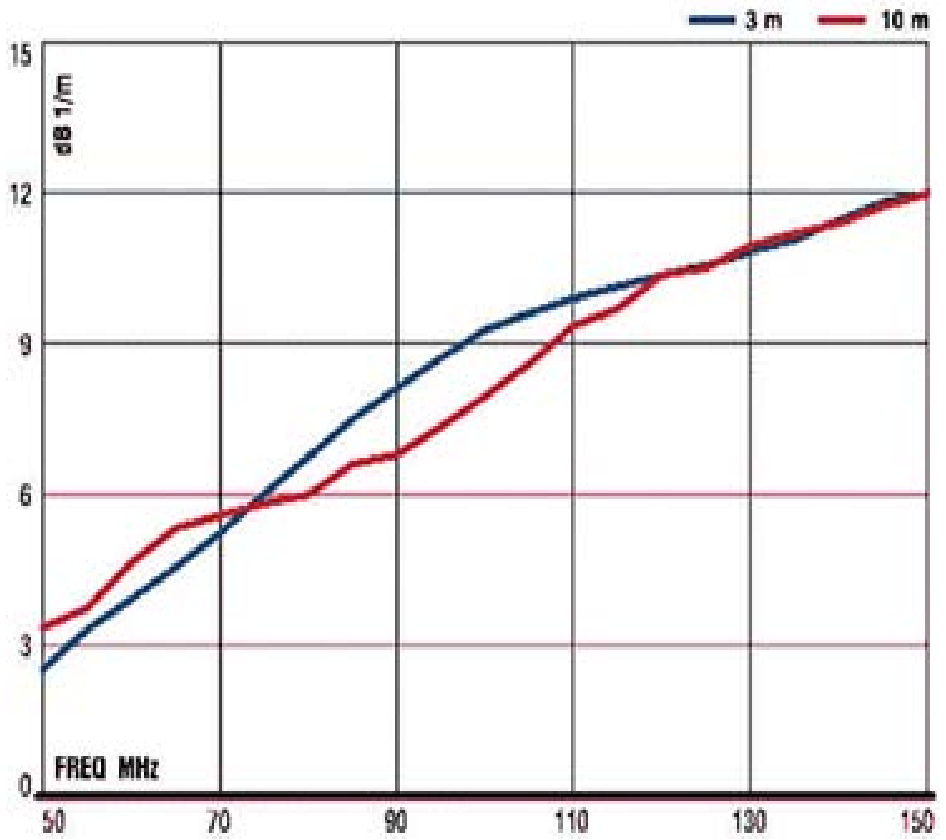
3121D Dipole  
DB-1 Forward Power  
at 3 m



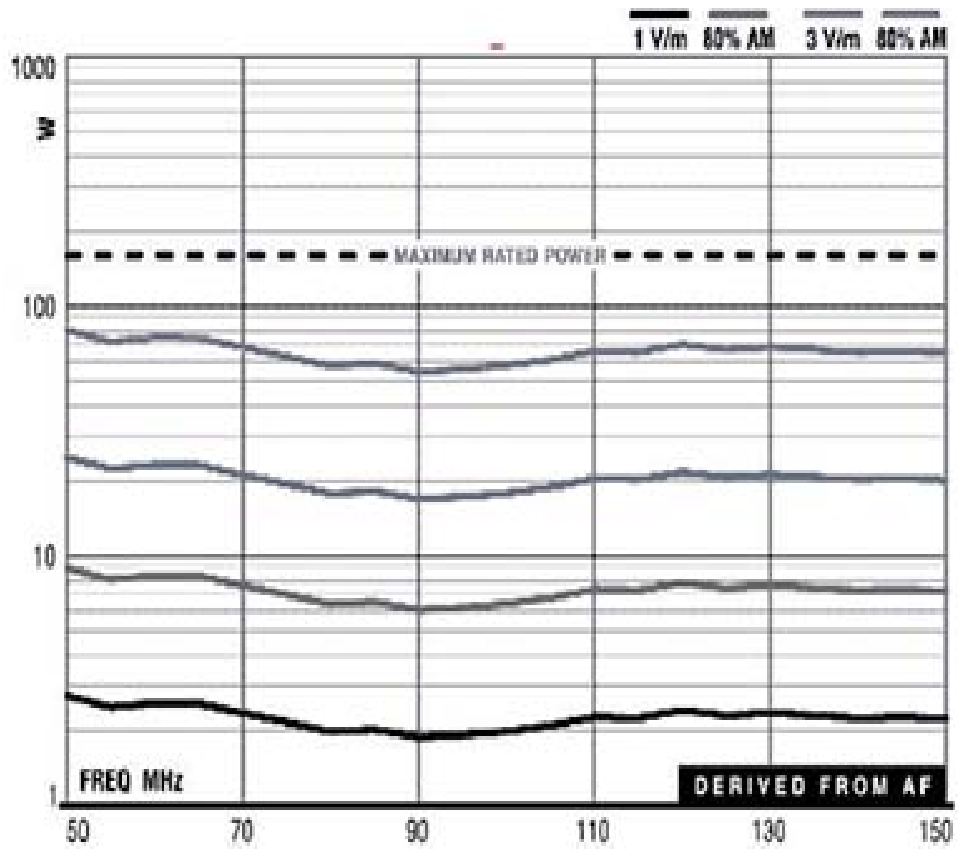
3121D Dipole  
DB-1 Gain



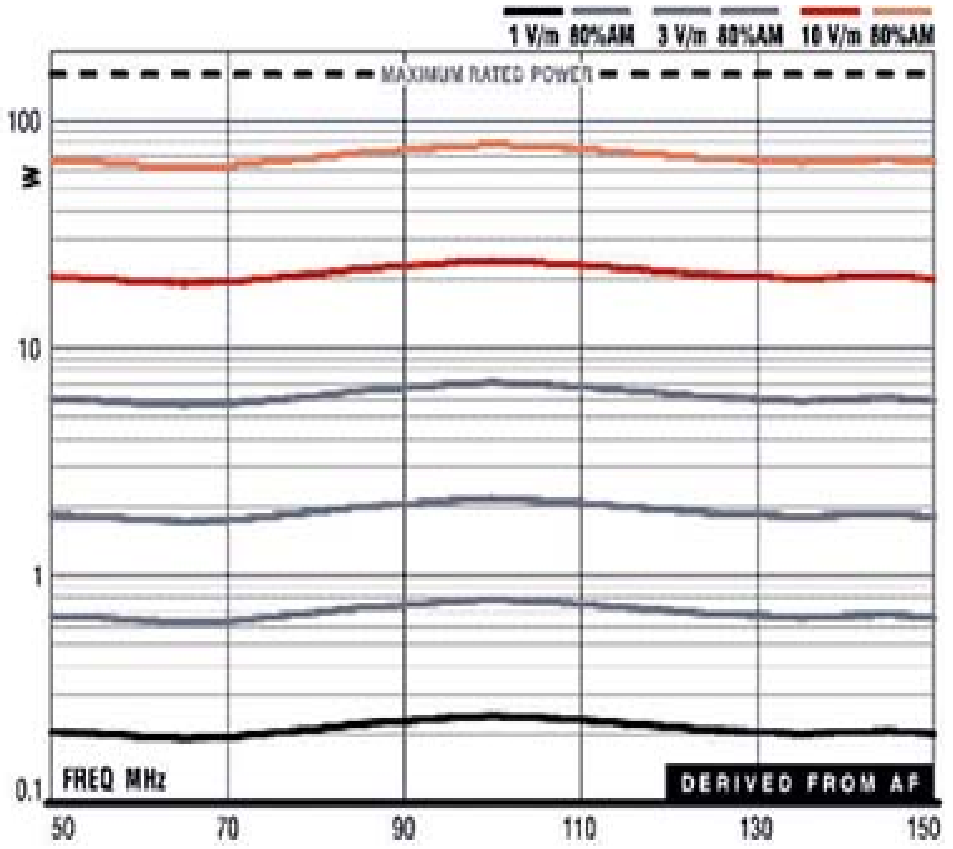
3121D DB-2 Dipole  
Antenna Factor



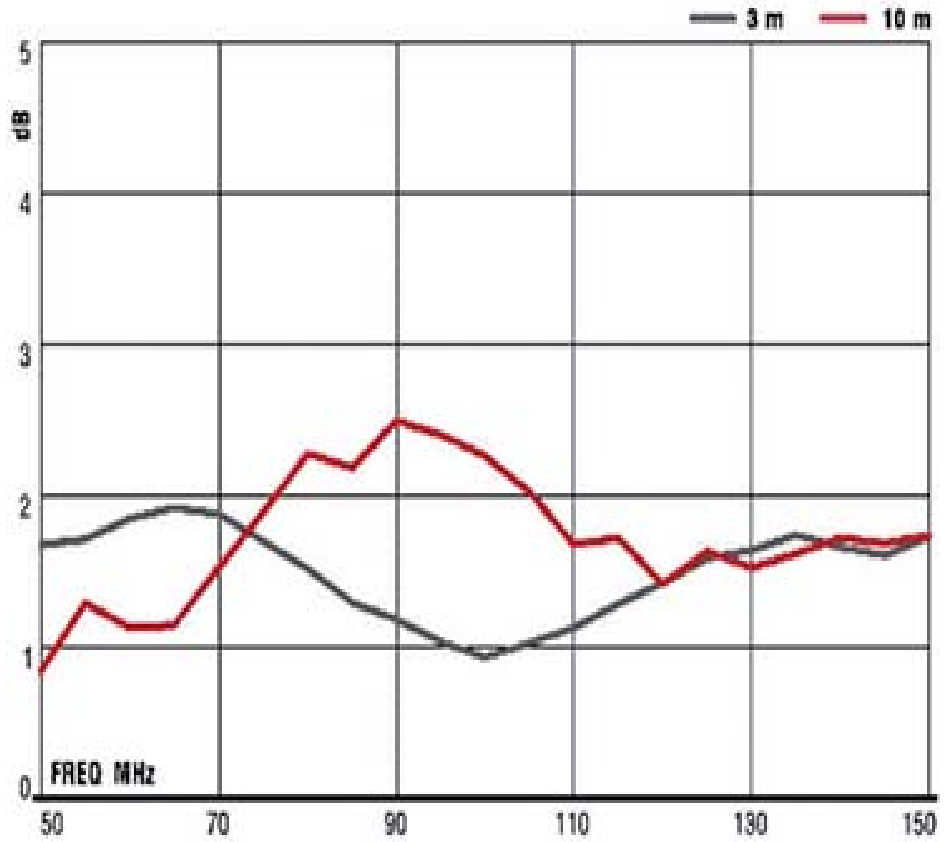
3121D Dipole DB-2  
Forward Power  
at 10 m



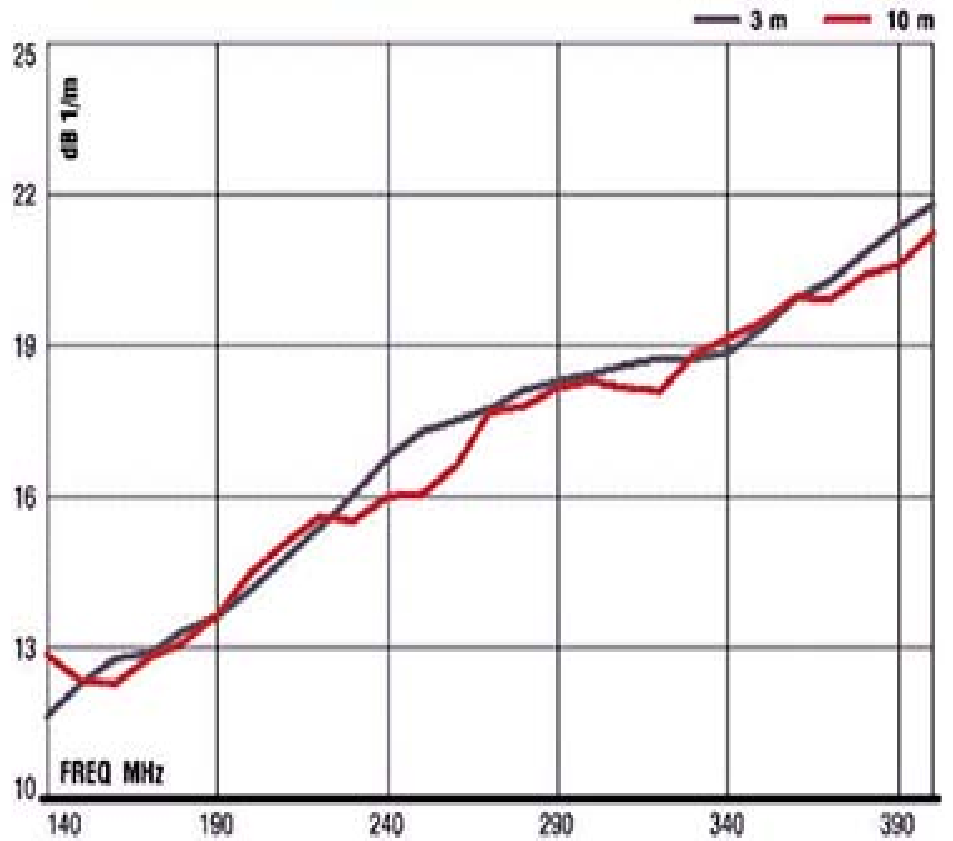
### 3121D Dipole DB-2 Forward Power at 3 m



3121D Dipole  
DB-2 Gain

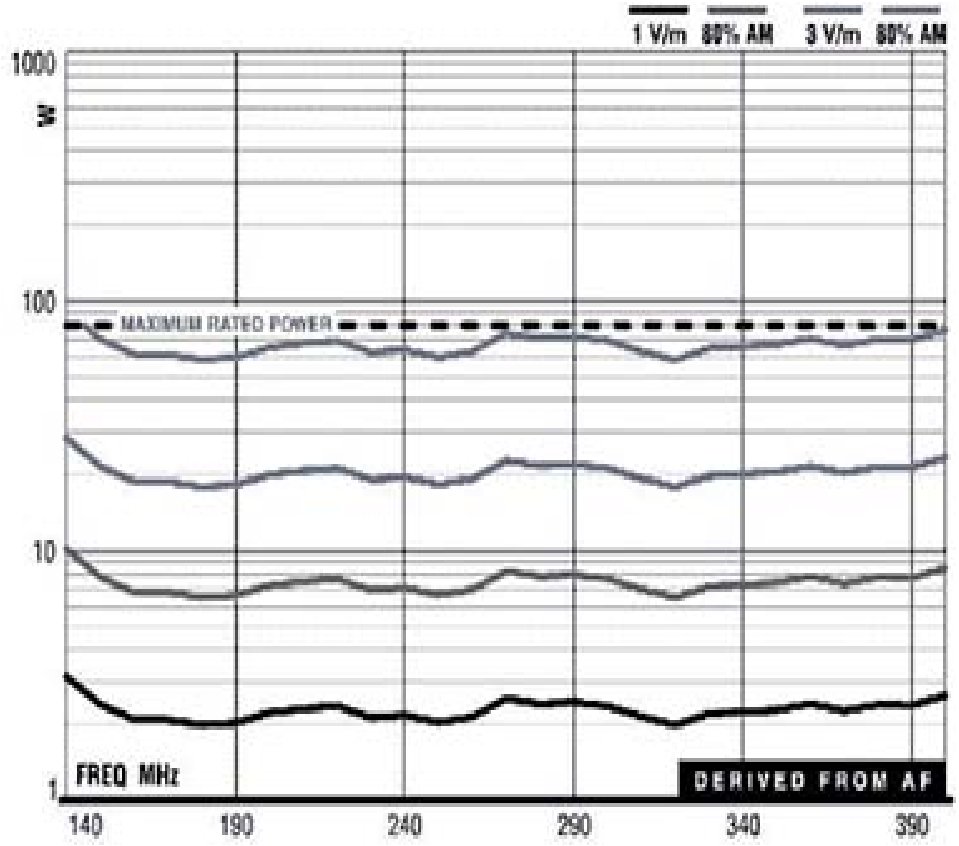


3121D Dipole DB-3  
Antenna Factor

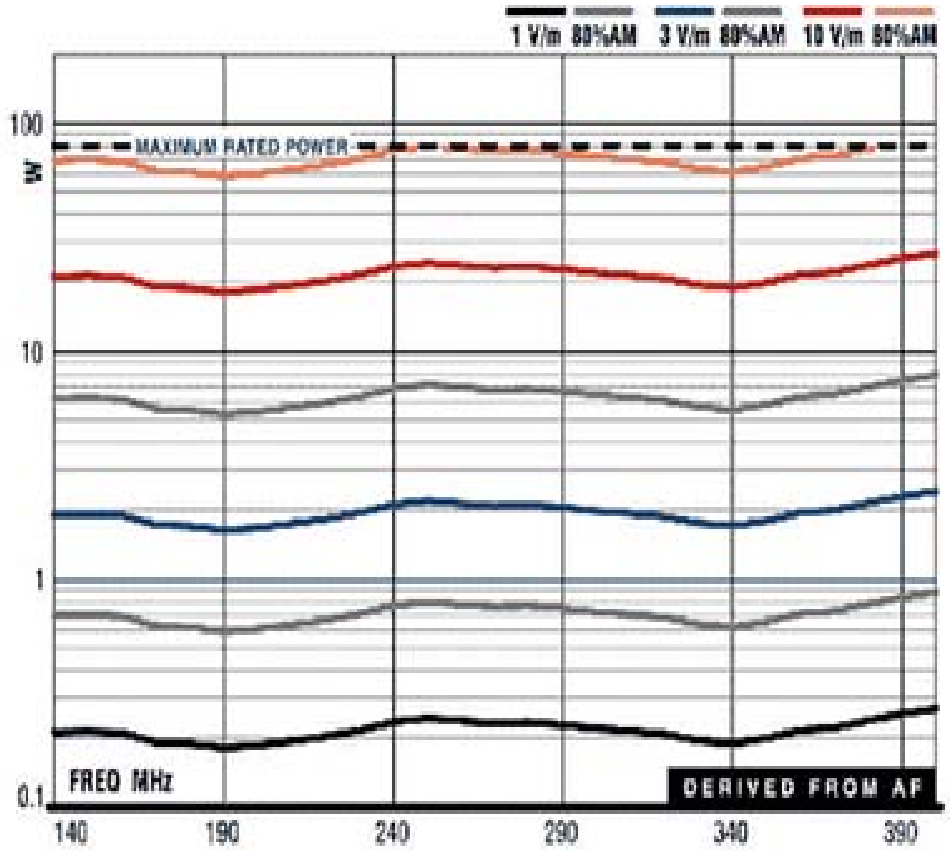




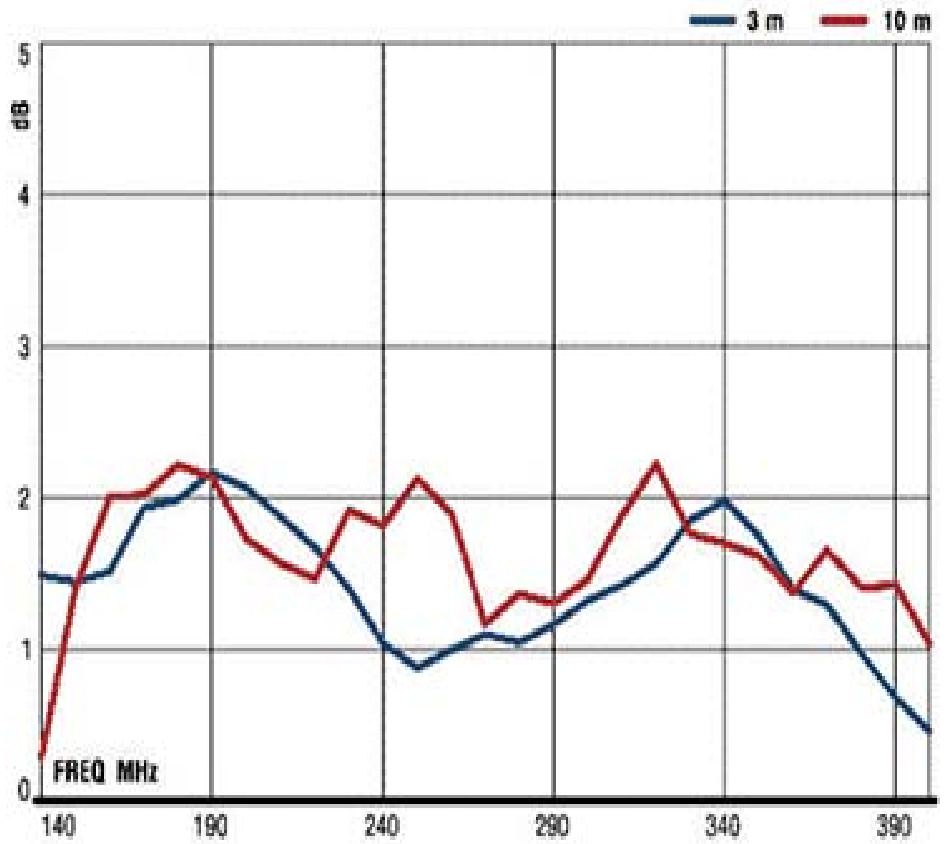
### 3121D Dipole DB-3 Forward Power at 10 m



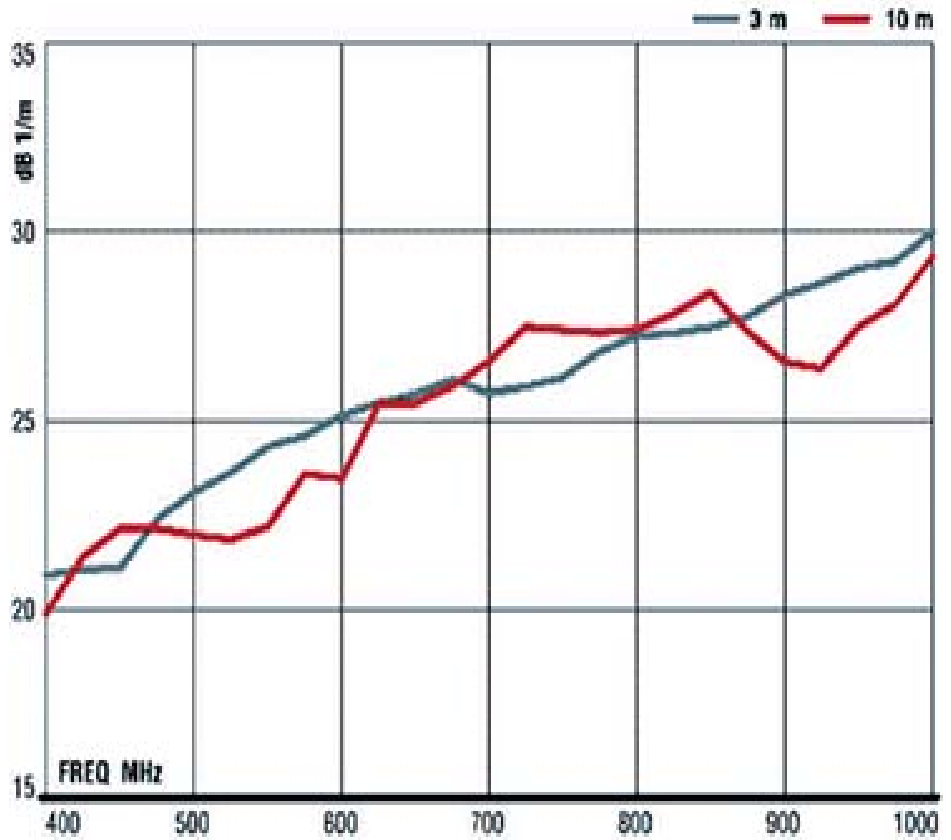
### 3121D Dipole DB-3 Forward Power at 3 m



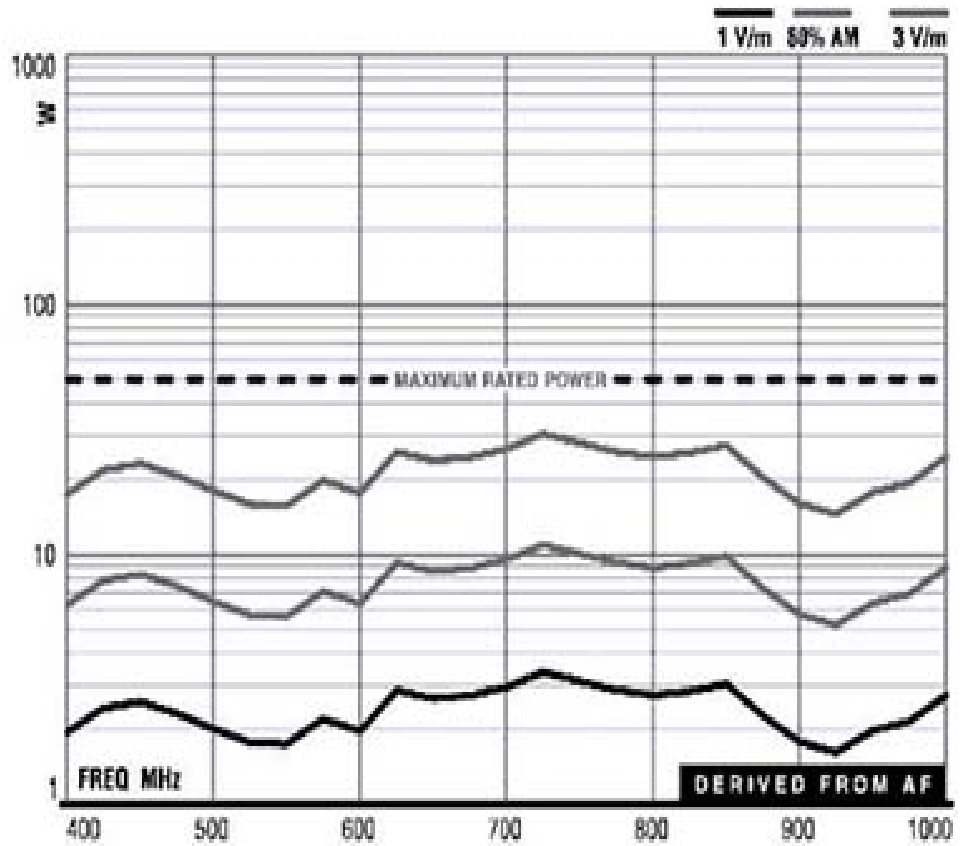
### 3121D Dipole DB-3 Gain



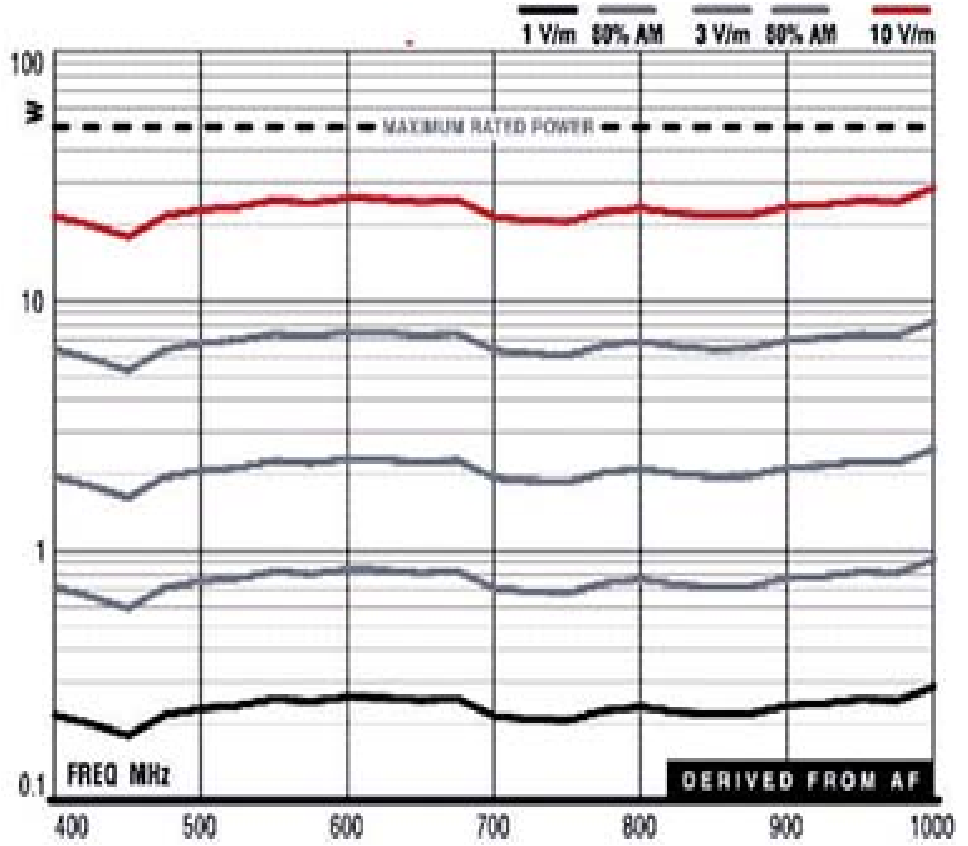
3121D Dipole DB-4  
Antenna Factor



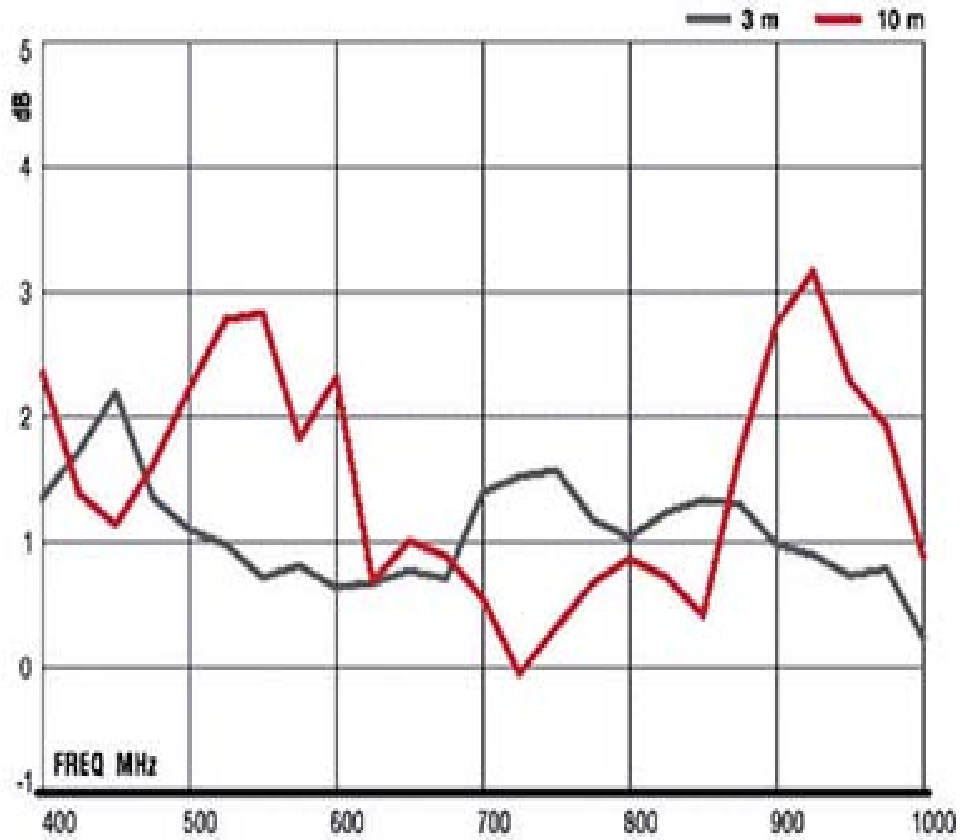
3121D Dipole DB-4  
Forward Power  
at 10 m



3121D Dipole DB-4  
Forward Power  
at 3 m



3121D Dipole  
DB-4 Gain



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