

EMC Antennas
Broadband
Mini-Bicon Antenna
Model 3180B

FEATURES:

- **Frequency Range:**
 - **Large Cage Elements:** 30 MHz – 1 GHz
 - **Small Cone Elements:** 30 MHz – 3 GHz
- **Omnidirectional Pattern**
- **Ideal for:**
 - **Chamber Characterization**
 - **Broadband Spectrum Monitoring**
 - **Field Measurements**
- **Flexible Mounting Systems**



ETS-Lindgren's Model 3180B Broadband Mini-Bicon Antenna

The ETS-Lindgren Model 3180B Broadband Mini-Bicon Antenna has been designed for optimal performance across the frequency range of 30 MHz – 1 GHz (cage elements) and 30 MHz – 3 GHz (cone elements). The Model 3180B's uniquely designed elements provide a omnidirectional pattern, without the beam splitting.

The Model 3180B is ideal for the free space NSA (FSNSA) test for fully anechoic rooms. Its small size allows for harmonic monitoring when testing per the IEC 61000-4-3.

FEATURES

Frequency Range

The Model 3180B covers the traditional frequency range EMC measurements. Additionally, the

Model 3180B covers all of the VHF and UHF bands, making it ideal for spectrum monitoring of FM, TV and some cellular phones.

With the small cone elements in place, the 3180B can be used up to 3 GHz.

Radiation Pattern

The Model 3180B has been designed to have a radiation pattern that is omnidirectional. The elements have been optimized to avoid any splitting of the main radiation beam in the elevation cut.

Flexible Mounting System

The Model 3180B antenna includes both an EMCO block mount and a rear "stinger" mount.

APPLICATIONS

- Fully Anechoic Room Testing
- Harmonic Level Measurements
- Spectrum Monitoring
- CISPR 16-1-4

STANDARD CONFIGURATION

- **Antenna Includes:**
 - Balun
 - One Pair of Cage Elements
 - One Pair of Cone Elements
- Manual
- Individually calibrated. Actual factors and a signed Certificate of Calibration Conformance included.

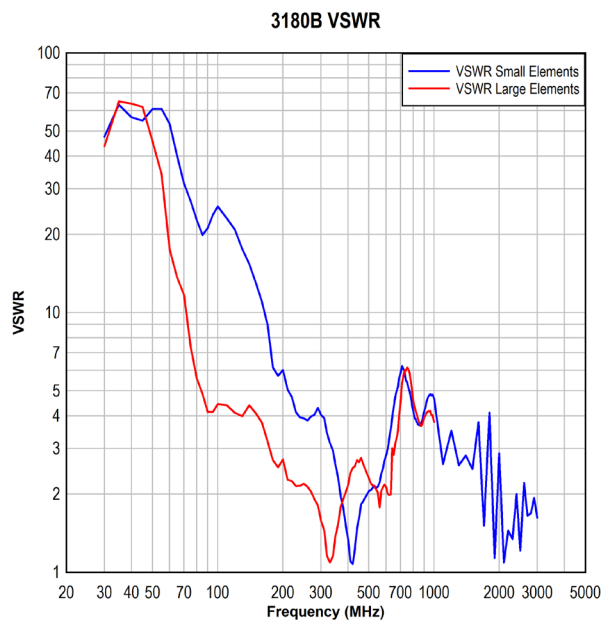
Electrical Specifications

| MODEL | FREQUENCY RANGE | VSWR RATIO (AVG) | MAXIMUM CONTINUOUS POWER | IMPEDANCE (NOMINAL) | CONNECTORS |
|-----------------------|-----------------|------------------|--------------------------|---------------------|------------|
| 3180B (Cage Elements) | 30 MHz - 1 GHz | ~ 5:1 | 200 W | 50 Ω | Type N (F) |
| 3180B (Cone Elements) | 30 MHz - 3 GHz | ~ 5:1 | 50 W | 50 Ω | Type N (F) |

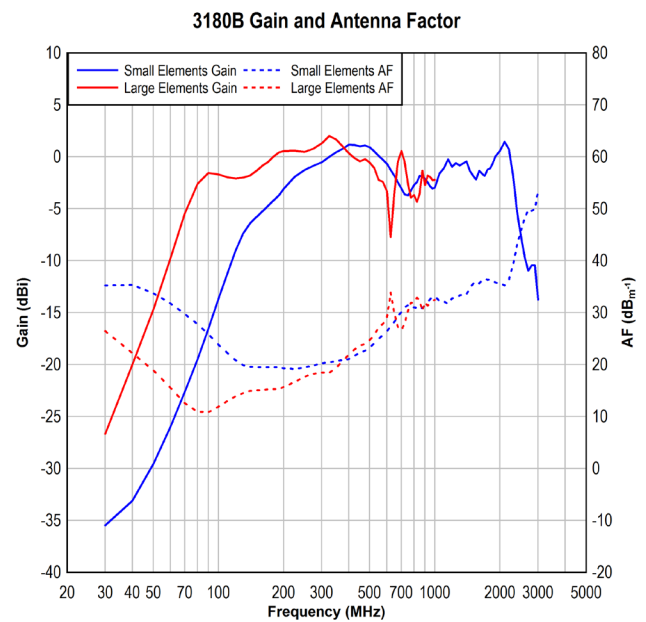
Physical Specifications

| MODEL | LENGTH | HEIGHT | WIDTH |
|-----------------------|----------------------|----------------------|----------------------|
| 3180B (Cage Elements) | 72.16 cm 28.41 in | 40.00 cm 15.75 in | 66.34 cm 26.12 in |
| 3180B (Cone Elements) | 60.45 cm 23.80 in | 16.50 cm 6.50 in | 30.07 cm 11.84 in |

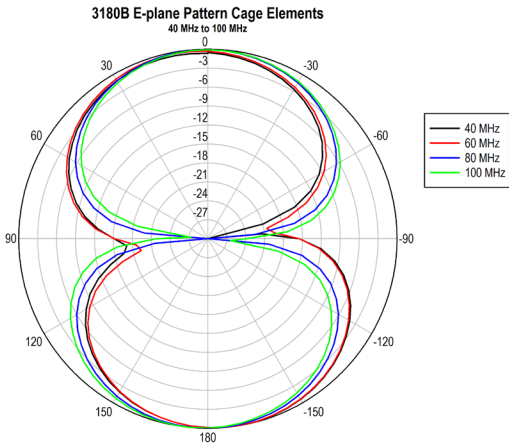
Model 3180B VSWR Typical Performance



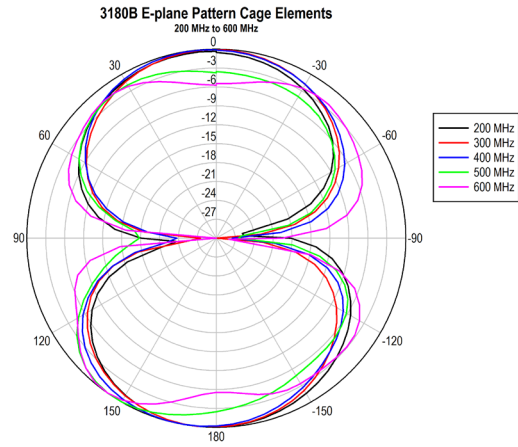
Model 3180B Gain and Antenna Factor Typical Performance



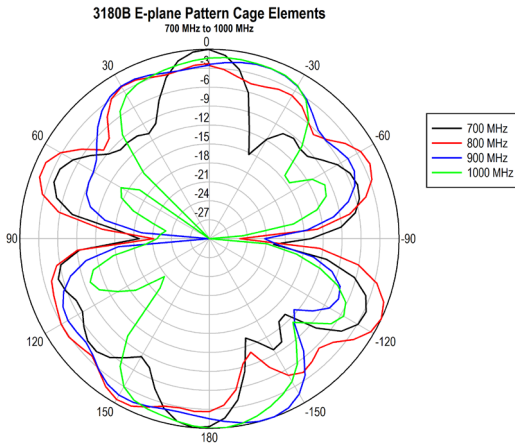
**Model 3180B Cage Elements
Typical Measured Pattern**



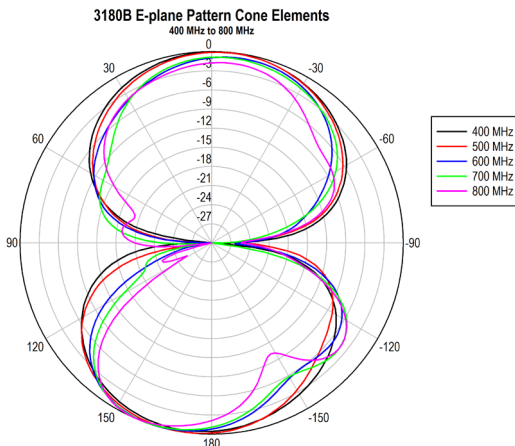
**Model 3180B Cage Elements
Typical Measured Pattern**



**Model 3180B Cage Elements
Typical Measured Pattern**



**Model 3180B Cone Elements
Typical Measured Pattern**



**Model 3180B Cone Elements
Typical Measured Pattern**

