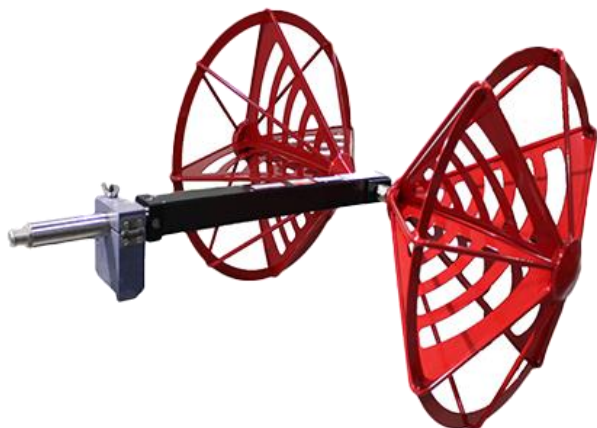


# 3180D Broadband Mini-Bicon Antenna



## Key Features

- Frequency Range:
  - Cage Elements: 30 MHz to 1 GHz
  - Cone Elements: 30 MHz to 3 GHz
- Omni-directional Pattern Ideal for:
  - Chamber Characterization
  - Broadband Spectrum Monitoring
  - Field Measurements
- Flexible Mounting

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

The model 3180D 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.

## Product Features

### Frequency Range

The model 3180D covers the traditional frequency range for EMC measurements. Additionally, the 3180D 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 3180D can be used up to 3 GHz.

### Radiation Pattern

The model 3180D 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 3180D antenna includes both an EMCO block mount and a rear stinger mount.

## Specifications

### Physical Specifications

Width (Element, tiptotip):	64.9 cm (25.5 in)
Length:	72.4 cm (28.5 in)
Diameter:	40.0 cm (15.7 in)

Model 3180D, Conical Elements	
Width (Element, tiptotip):	37.5 cm (14.8 in)
Length:	71.71 cm (28.2 in)
Diameter:	39.1 cm (15.4 in)

### Electrical Specifications

Model	Frequency Range	VSWR Ratio (Average)	Maximum Continuous Power	Impedance (Nominal)	Connectors	Pattern Type	Polarization
3180D (Cage Elements)	30 MHz to 1 GHz	~3:1	250mW	50	Type N (f)	Omnidirectional	Linear
3180D (Cone Elements)	30 MHz to 3 GHz	~3:1	250mW	50	Type N (f)	Omnidirectional	Linear

### Product Configuration

Antenna Includes:

- Balun
- One Pair of Cage Elements
- One Pair of Cone Elements
- Individually Calibrated. Actual factors and a signed Certificate of Calibration Conformance included.
- Manual

# 3181 Broadband Mini-Bicon Antenna



## Key Features

- 500 MHz to 18 GHz Frequency Range  
(The antenna is recommended for the 500 MHz to 9 GHz range but data is supplied up to 18 GHz where it can be used for spectrum monitoring.)
- Ideal for : Chamber Characterization  
Broadband Spectrum Monitoring
- Omnidirectional Pattern Conforms with CISPR-16

ETS-Lindgren's Model 3181 Broadband Mini-Bicon Antenna is a broadband omnidirectional antenna with a radiation pattern that conforms to the CISPR-16 specifications. The 3181s frequency range covers most wireless bands worldwide, it can also be used for surveying or spectrum monitoring when used with a portable spectrum analyzer.

## Product Features

### Low VSWR

The model 3181 is designed to have the lowest possible VSWR across its range of operation. The antenna exhibits better than 2: 1 VSWR for most of its range, and never exceeds 4: 1 above 1 GHz.

### Radiation Pattern

The radiation pattern of the model 3181 is omnidirectional in the H-plane. This means the antenna can receive signals from every direction around its axis.

### Spectrum Monitoring

The model 3181 can be used for EM Field surveying and spectrum monitoring. Its low weight design allows for use as a surveying tool, when connected to a portable spectrum analyzer. Optional weatherproofing is available for long term monitoring outdoors.

## Specifications

### Physical Specifications

Length: 36.2 cm (14.25 in)    Width: 15.25 cm (6.00 in)    Stinger Length: 17.8 cm (7.01 in)

### Electrical Specifications

Frequency Minimum: 500 MHz

Frequency Maximum: 18 GHz

Connectors: SMA (F)

Impedance (Nominal): 50

Maximum Continuous Power : 200 watts @ 500 MHz    25 watts @ 18 GHz

VSWR Ratio (Average): <2:1

Pattern Type: Omnidirectional

Polarization: Linear

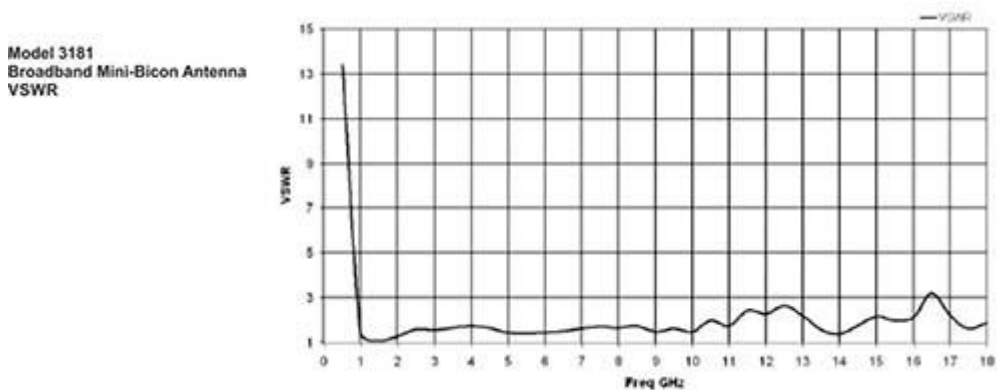
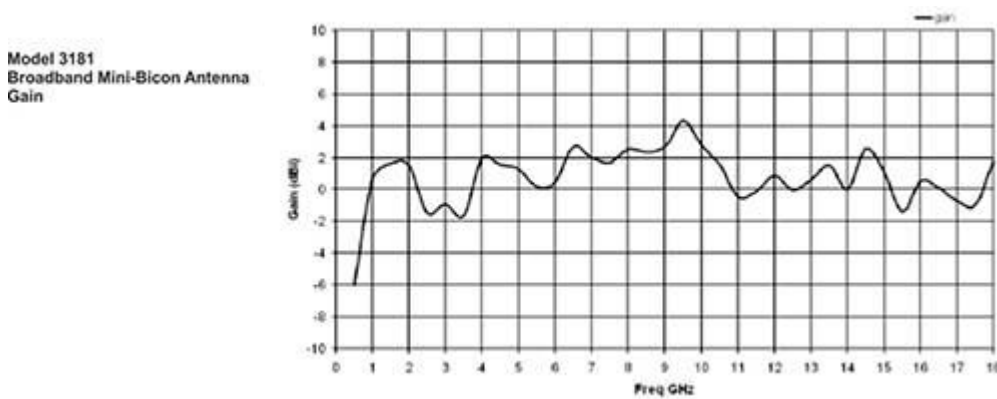
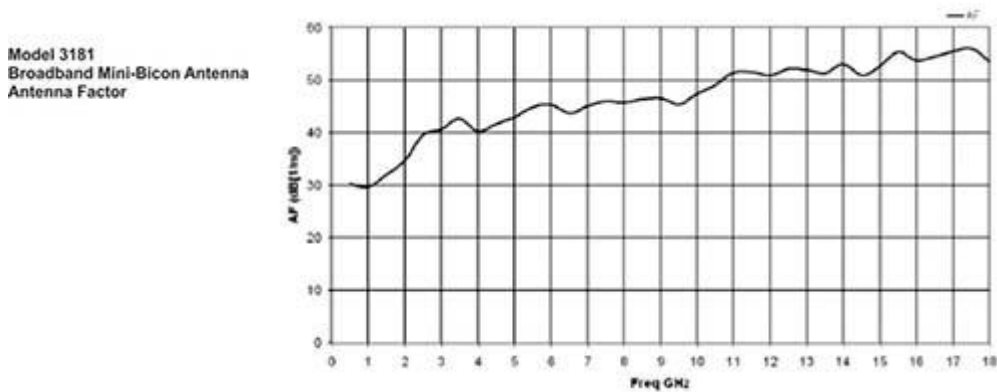
## Product Options

- Carrying Cases
- ETS-Lindgren Offers Several Non-metallic, Non-reflective Tripods

## Product Configuration

- **Model 3181 Antenna**
- **Weather-proofing**
- Mounting Adapter for Tripod Mounting
- Individually calibrated at 1 m per SAE ARP 958 at our A2LA accredited lab. 3 m calibration per ANSI C63.5 available at additional cost. Actual antenna factors and a signed Certificate of Calibration Conformance included with manual.
- Manual

## Charts



# 3183B Broadband Mini-Bicon Antenna



## Key Features

- Named 2019 EMC Product of the Year
- 1 GHz to 18 GHz Frequency Range
- 2:1 VSWR Average
- Up to 20W Input Power
- Constant E- and H-Plane Beamwidth
- Flat Directivity

The radiation pattern is omni directional in the H plane, allowing the antenna to receive signals from every direction around the axis. The range covers most wireless bands worldwide, and is designed for the lowest possible VSWR across the range of operation. The antenna exhibits better than 2: 1 VSWR for most of the range, and never exceeds 5: 1 above 1 GHz. The small size of the antenna enables it to be used for amplifier harmonic measurements when performing tests per IEC 61000-4-3. It is also ideal when performing the TDsVSWR test as per ANSI C63.25 standard.

## Product Features

### Frequency Range

The antenna covers a frequency range of 1 GHz to 18 GHz, making it ideal as a receive antenna for performing the site VSWR chamber validation method per CISPR 16 standard.

Low VSWR : The typical VSWR for the model 3183B is less than 2: 1.

## Specifications

### Physical Specifications

Width: 10.80 cm (4.25 in)

Length: 37.70 cm (14.86 in) S

Stinger Length: 25.10 cm (9.88 in)

Weight: 1.45 kg (3.20 lb)

### Electrical Specifications

Frequency Minimum: 1 GHz

Maximum Continuous Power: 20 W

Impedance (Nominal): 50

VSWR (Average): 2:1

Connector: SMA (Female)

Pattern Type: Directional

Polarization: Linear

## Product Options

ETS-Lindgren Offers Several Non-metallic, Non-reflective Tripods

## Product Configuration

- Antenna
- Mounting Fixture for 1/4 in x 20 Threads
- Individually The calibration results will be radiation pattern graphs with Pass/Fail criteria.
- Manual

# 3184 Broadband Mini-Bicon Antenna



## Key Features

- 1 GHz to 18 GHz Frequency Range
- Omnidirectional Radiation Pattern Ideal for:
  - Broadband Spectrum Monitoring
  - Harmonics Level Measurement IEC 61000-4-3 Weatherizing Kit

ETS-Lindgren's Model 3184 Broadband Mini-Bicon Antenna is a radome-protected, broadband antenna with a frequency range of 1 GHz to 18 GHz. Its omnidirectional pattern and broadband frequency range make it ideal for surveying or spectrum monitoring, when used with a portable spectrum analyzer.

## Product Features

### Frequency Range

The model 3184 is designed to have the lowest possible VSWR across its range of operation. The antenna exhibits an average 2: 1 VSWR.

### Radiation Pattern

The radiation pattern of the model 3184 is omnidirectional in the H-plane. This means the antenna can receive signals from every direction around its axis.

### Spectrum Monitoring

The model 3184 can be used for EM Field surveying and spectrum monitoring. The low weight design allows use as a field surveying tool, in conjunction with a portable spectrum analyzer. IEC-61000-4-3 Because of its small size, the antenna can also be used for amplifier harmonic measurements per the IEC 61000-4-3 Radiated Immunity Test.

## Specifications

### Physical Specifications

Length: 36.2 cm (14.25 in)

Width: 15.25 cm (6.00 in)

Stinger Length: 17.8 cm (7.01 in)

Weight: .7 kg (1.54 lb)

### Electrical Specifications

Frequency Minimum: 1 GHz

Frequency Maximum: 18 GHz

VSWR Ratio (Average): 2:1

Maximum Continuous Power: 50 watts @ 1 GHz; 25 watts @ 18 GHz

Impedance (Nominal): 50

Connectors: SMA (F)

Pattern Type: Omnidirectional

Polarization: Linear

## Product Options

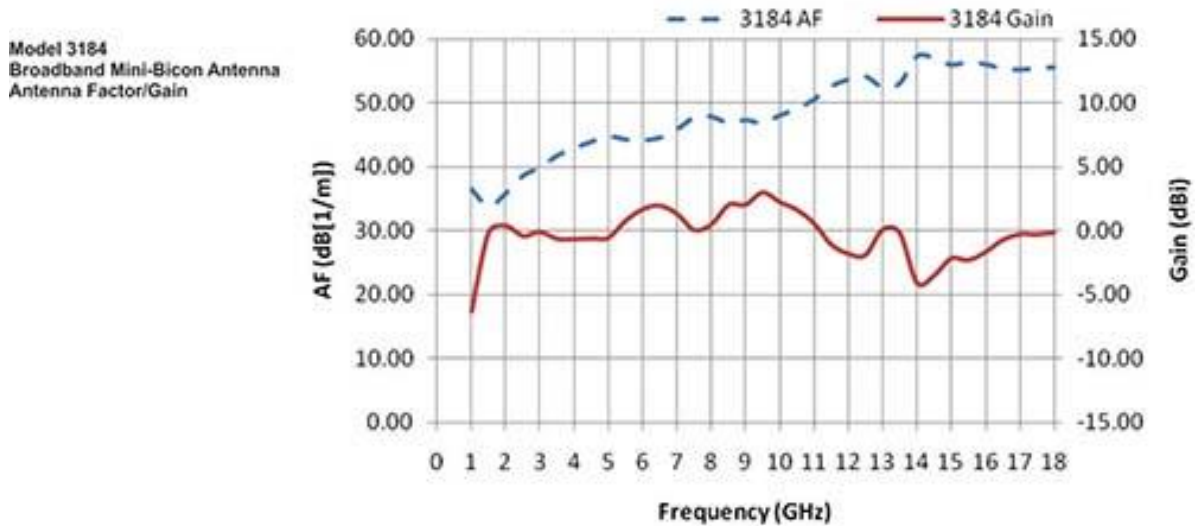
- Carrying Cases

- ETS-Lindgren Offers Several Non-metallic, Non-Reflective Tripods

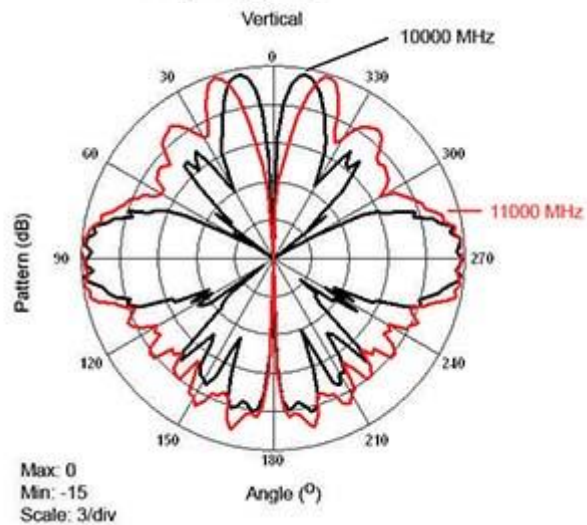
## Product Configuration

- Antenna
- Antenna Mount for Tripod Mounting
- Weatherized
- Individually Calibrated at 1 m per SAE ARP 958 at our A2LA Accredited Lab
- Actual Antenna Factors and a Signed Certificate of Calibration Conformance Included with Manual
- Manual

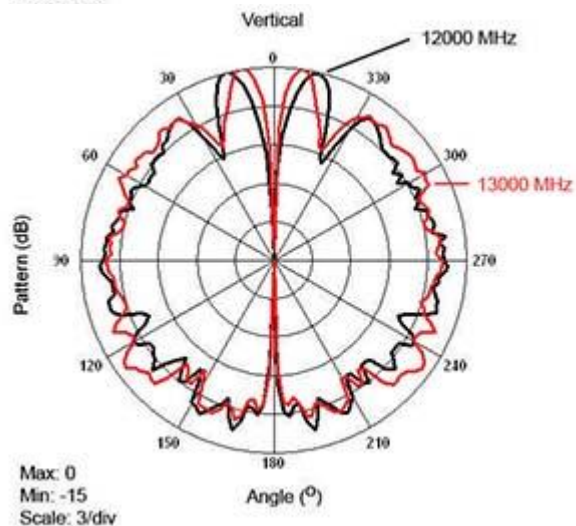
## Charts



**Model 3184**  
Broadband Mini-Bicon Antenna  
Typical E-Plane Pattern  
10 GHz to 11 GHz

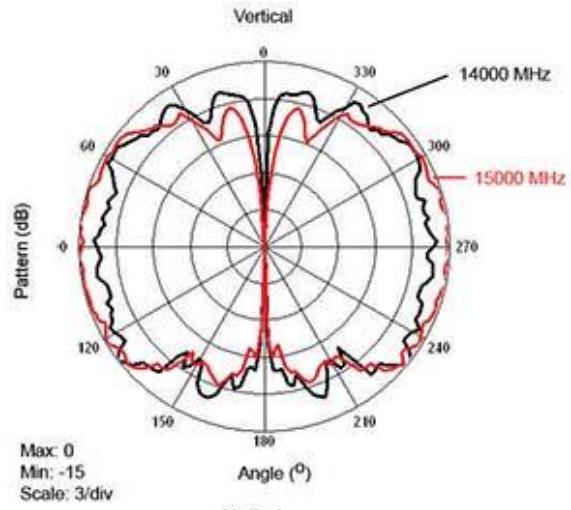


**Model 3184**  
Broadband Mini-Bicon Antenna  
Typical E-Plane Pattern  
12 GHz to 13 GHz

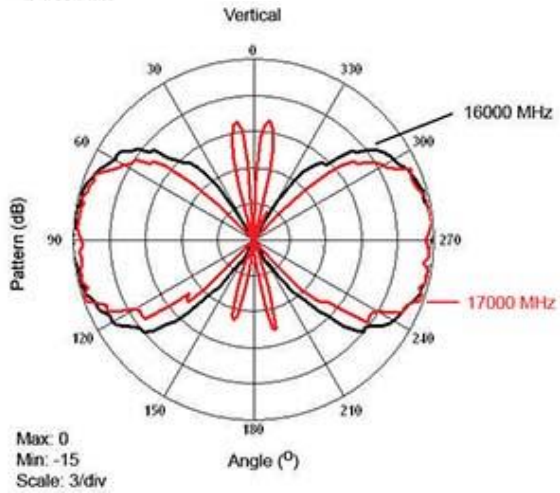




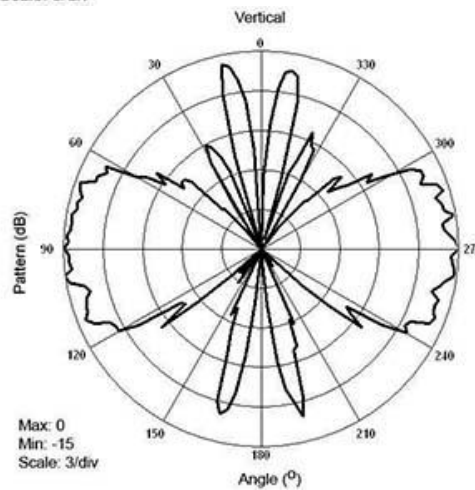
**Model 3184**  
**Broadband Mini-Bicon Antenna**  
**Typical E-Plane Pattern**  
**14 GHz to 15 GHz**



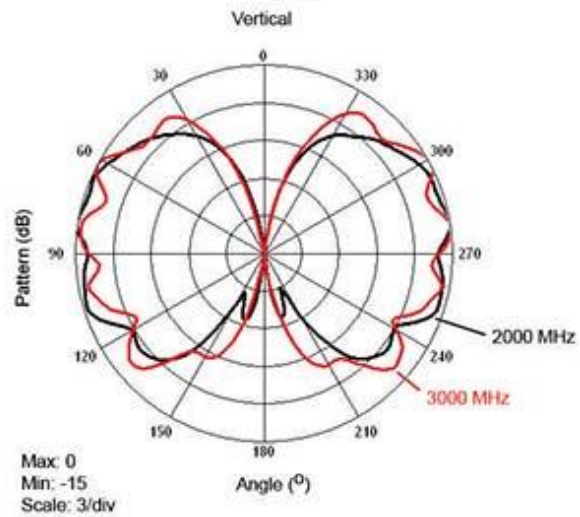
**Model 3184**  
**Broadband Mini-Bicon Antenna**  
**Typical E-Plane Pattern**  
**16 GHz to 17 GHz**



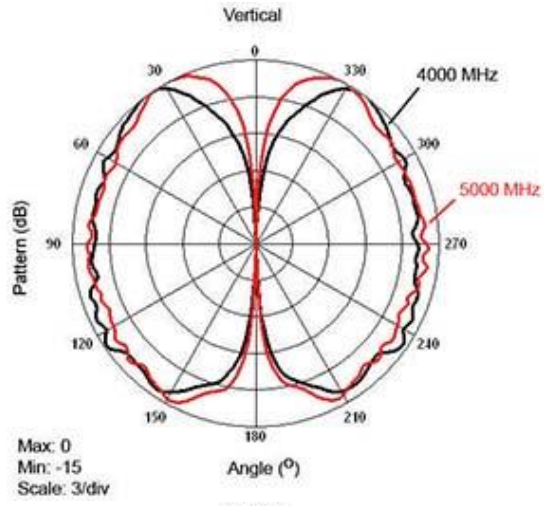
**Model 3184**  
**Broadband Mini-Bicon Antenna**  
**Typical E-Plane Pattern**  
**18 GHz**



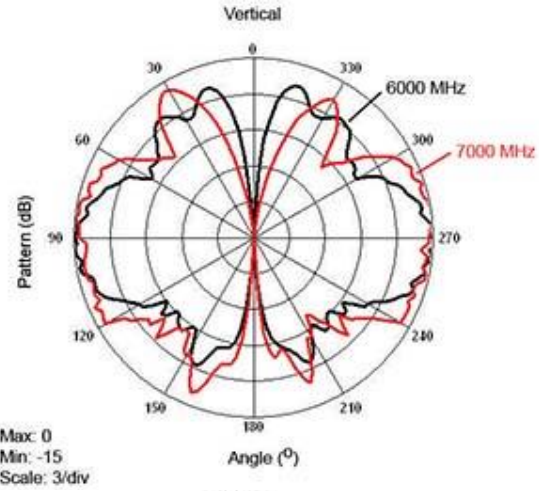
**Model 3184**  
**Broadband Mini-Bicon Antenna**  
**Typical E-Plane Pattern**  
**2 GHz to 3 GHz**



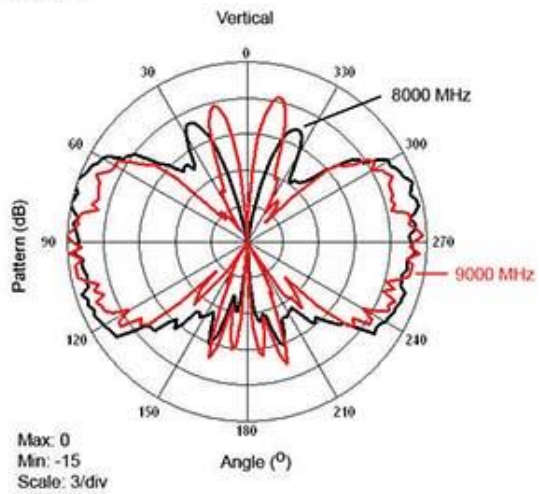
**Model 3184**  
**Broadband Mini-Bicon Antenna**  
**Typical E-Plane Pattern**  
**4 GHz to 5 GHz**



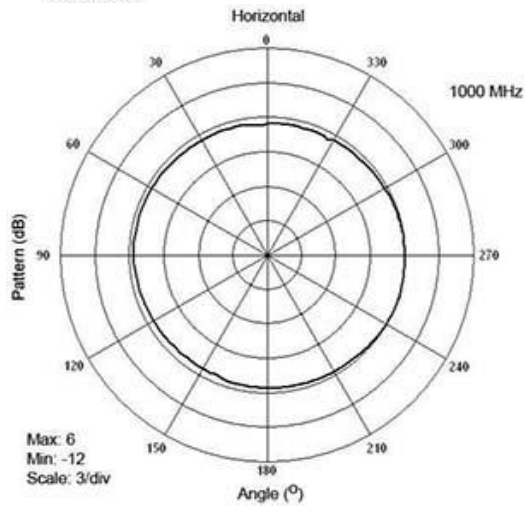
**Model 3184**  
**Broadband Mini-Bicon Antenna**  
**Typical E-Plane Pattern**  
**6 GHz to 7 GHz**



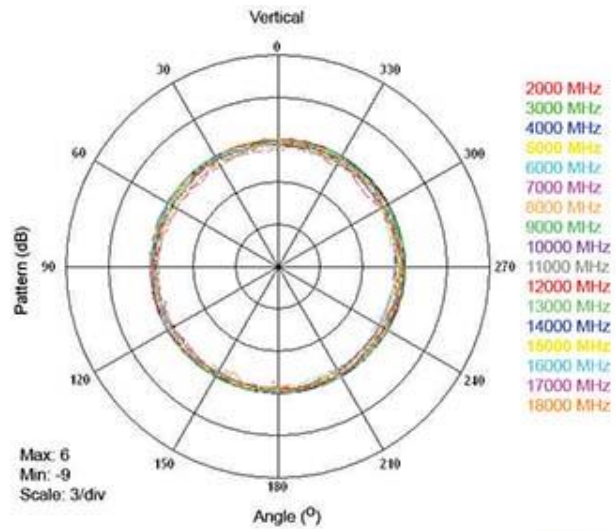
**Model 3184**  
**Broadband Mini-Bicon Antenna**  
**Typical E-Plane Pattern**  
**8 GHz to 9 GHz**



**Model 3184**  
**Broadband Mini-Bicon Antenna**  
**Typical H-Plane Pattern**  
**1 GHz**



Model 3184  
 Broadband Mini-Bicon Antenna  
 Typical H-Plane Pattern  
 2 GHz to 18 GHz



Model 3184  
 Broadband Mini-Bicon Antenna  
 VSWR

