

## PCTEL Carrier Grade VHF/UHF Omnidirectional Base Station Antennas

The BOA VHF/UHF omnidirectional base station antenna series consist of a linear array, encapsulated in a heavy duty fiberglass radome with a thick walled 6061-T6 aluminum mounting base for reliable long term use. The rugged design allows the BOA series to withstand harsh environments and is ideal for Industrial Wireless applications. The series is DC grounded and is UPS shippable.

### Features

- UV Stable Light Gray Fiberglass Radome
- Hard-Coat Anodized Mounting Base
- Galvanized Mounting Hardware
- Removable Drain Plug for Upright or Inverted Mounting



BAM1005 mount (bottom left);  
MMK5 mount (bottom right)



### RF/Electrical Specifications

Model	Frequency Range	Nominal Gain	Return Loss	SWR	E-Plane Beamwidth
BOA2175	215-225 MHz	5 dBi/3 dBd	>10 dB	<2.0	18°
BOA2177	217-222 MHz	7.1 dBi/5 dBd	>10 dB	<2.0	18°
BOA4409	440-460 MHz	9.1 dBi/7 dBd	>12 dB	<1.7	11°
BOA4357	430-470MHz	7.1 dBi/5 dBd	>12 dB	<1.7	18°



### Mechanical Specifications

Model	Weight (Mass)	Height	Bending Moment at Rated Wind	Lateral Thrust at Rated Wind	Equivalent Flat Plate Area
BOA2175	10 lbs	122"	685 ft-lbs	74 lbs	1.7 ft <sup>2</sup>
BOA2177	12 lbs	151"	965 ft-lbs	88 lbs	2.10 ft <sup>2</sup>
BOA4409	12 lbs	151"	965 ft-lbs	88 lbs	2.10 ft <sup>2</sup>
BOA4357	7.0 lbs	83"	250 ft-lbs	45 lbs	1.125 ft <sup>2</sup>

### Technical Data

<b>Maximum Power:</b> 250 watts
<b>Nominal Impedance:</b> 50 ohms
<b>Radome Material:</b> Pultruded Fiberglass (2" Outside Diameter)
<b>ESD Protection:</b> DC grounded
<b>Rated Wind:</b> 125 mph
<b>Termination:</b> N female bulkhead
<b>Mounting Hardware:</b> BAM1005 or MMK5 (Included)



## PCTEL Carrier Grade 900MHz Omnidirectional Base Station Antennas

The BOA 900MHz omnidirectional base station antennas consist of a linear array, encapsulated in a heavy duty fiberglass radome with a thick walled 6061-T6 aluminum mounting base for reliable long term use. This rugged design allows the antennas to withstand harsh environments and is ideal for Industrial Wireless and SCADA applications. The BOA series is DC grounded and is UPS shippable.

### Features

- UV Stable Light Gray Fiberglass Radome
- Hard-Coat Anodized Mounting Base
- Galvanized Mounting Hardware
- Removable Drain Plug for Upright or Inverted Mounting

BAM1005 mount (bottom left);  
MMK5 mount (bottom right)



### RF/Electrical Specifications

Model	Frequency Range	Nominal Gain	Return Loss	SWR	E-Plane Beamwidth
BOA9025	902-928MHz	5.1 dBi/3 dBd	> 14 dB	< 1.5	25°
BOA9028	902-928MHz	8.1 dBi/6 dBd	> 14 dB	< 1.5	13°
BOA90211	902-928MHz	11.1 dBi/9 dBd	> 14 dB	< 1.5	6°



### Technical Data

<b>Maximum Power:</b> 250 watts
<b>Nominal Impedance:</b> 50 ohms
<b>Radome Material:</b> Pultruded fiberglass (2" outside diameter)
<b>ESD Protection:</b> DC grounded
<b>Rated Wind:</b> 125 mph
<b>Termination:</b> N female bulkhead
<b>Mounting Hardware:</b> BAM1005 or MMK5 (Included)

### Mechanical Specifications

Model	Weight	Height	Bending Moment at Rated Wind	Lateral Thrust at Rated Wind	Equivalent Flat Plate Area
BOA9025	5.0 lbs	55"	106 ft-lbs	29 lbs	0.77 ft <sup>2</sup>
BOA9028	6.0 lbs	68"	178 ft-lbs	38 lbs	0.95 ft <sup>2</sup>
BOA90211	10.0 lbs	122"	685 ft-lbs	74 lbs	1.7 ft <sup>2</sup>

## 800/900 MHz MAXRAD Fiberglass Base Station (MFB) Omnidirectional Antennas

The MFB 900/800 MHz series are base matched half wave antennas encapsulated in heavy duty fiberglass radomes with a thick walled aluminum mounting base for reliable long term use. All models are DC grounded and UPS shippable.

### Features

- White ultra-violet resistant pultruded fiberglass radome
- Thick walled aluminum mounting base
- Unity/3 dB/5 dB/7 dB models
- UPS shippable
- Factory tuned



MFB9155



### Technical Data

<b>Maximum Power:</b> 150 watts
<b>Normal Impedance:</b> 50 ohms
<b>Radome Material:</b> 1.0" OD pultruded white fiberglass
<b>Radiator Material:</b> Coated steel wire
<b>ESD Protection:</b> DC grounded
<b>Wind Survival:</b> 100 mph
<b>Termination:</b> Unity and 3 dB models, N Female
<b>Mounting Base Diameter:</b> 1-5/16"
<b>Mounting Method:</b> Mast or wall mounted. Mounting hardware is sold separately. MMK1: light duty mast mount for antennas under 30" MMK3: light duty mast mount for antennas over 30" MMK4: heavy duty mast mount MMK9: Aluminum mast mount for 1-5/16" OD antennas MBSWM: wall mounting bracket for antennas over 30" (two are required) MMK12: heavy duty mount bracket



MMK3



MMK1



MMK4



MMK9



MBSWM



MMK12

# INFRASTRUCTURE ANTENNAS

## Omnidirectional MFB Series

### RF/Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain	Bandwidth @ 1.5:1 VSWR	Vertical Beamwidth @ 1/2 Power
MFB8133	806-866 MHz	813 MHz	3 dB	30 MHz	40°
MFB8135	806-866 MHz	813 MHz	5 dB	20 MHz	22°
MFB8583	806-866 MHz	858 MHz	3 dB	30 MHz	40°
MFB8585	806-866 MHz	858 MHz	5 dB	20 MHz	22°
MFB8353	824-896 MHz	835 MHz	3 dB	30 MHz	40°
MFBW8903	890-960 MHz	N/A	3 dB	70 MHz	40°
MFBW8905	890-960 MHz	N/A	5 dB	70 MHz	22°
MFB8963	896-940 MHz	898 MHz	3 dB	30 MHz	40°
MFB8965(NF)	896-940 MHz	898 MHz	5 dB	20 MHz	22°
MFB9387	896-940 MHz	938 MHz	7 dB	20 MHz	17°
MFB8967(NF)	896-940 MHz	898 MHz	7 dB	20 MHz	17°
MFB9153	902-928 MHz	915 MHz	3 dB	20 MHz	40°
MFB9155(NF)	902-928 MHz	915 MHz	5 dB	20 MHz	22°
MFB9155RPC	902-928 MHz	915 MHz	5 dB	20 MHz	22°
MFB9157(NF)*	902-928 MHz	915 MHz	7 dB	20 MHz	17°

### Mechanical Specifications

Model	Height	Weight (Mass)	Bending Moment at Rated Wind	Lateral Thrust at Rated Wind	Equivalent Flat Plate Area
MFB8133	26"	1.25 lbs	4.7 ft-lbs	4.3 lbs	.12 sq ft
MFB8135*	48"	1.75 lbs	14.2 ft-lbs	8.0 lbs	.22 sq ft
MFB8583	26"	1.25 lbs	4.7 ft-lbs	4.3 lbs	.12 sq ft
MFB8585*	48"	1.75 lbs	14.2 ft-lbs	8.0 lbs	.22 sq ft
MFB8353	26"	1.25 lbs	4.7 ft-lbs	4.3 lbs	.12 sq ft
MFBW8903	23"	1.25 lbs	4.7 ft-lbs	4.3 lbs	.12 sq ft
MFBW8905	48"	1.75 lbs	14.2 ft-lbs	8.0 lbs	.22 sq ft
MFB8963	26"	1.25 lbs	4.7 ft-lbs	4.3 lbs	.12 sq ft
MFB8965*	48"	1.75 lbs	14.2 ft-lbs	8.0 lbs	.22 sq ft
MFB9387*	96"	4.00 lbs	62.5 ft-lbs	15.8 lbs	.44 sq ft
MFB8967*	96"	4.00 lbs	62.5 ft-lbs	15.8 lbs	.44 sq ft
MFB9153	23.25"	1.25 lbs	4.7 ft-lbs	4.3 lbs	.12 sq ft
MFB9155(NF)**	48"	1.75 lbs	14.2 ft-lbs	8.0 lbs	.22 sq ft
MFB9155RPC	48"	1.75 lbs	14.2 ft-lbs	8.0 lbs	.22 sq ft
MFB9157 (NF)*	96"	4.00 lbs	62.5 ft-lbs	15.8 lbs	.44 sq ft

## 746-869 MHz, 3 dB Gain MAXRAD Fiberglass Base Station (MFB) Omnidirectional Antennas

This is an omnidirectional base station antenna that provides 3 dB gain within the specified frequency. It is designed for mast mounting.

### Features

- N female connector
- Thick walled aluminum mounting base
- White fiberglass radome

### RF/Electrical Specifications

Model	Frequency Range	Nominal Gain	Vertical Beamwidth at Half Power	Horizontal Beamwidth at Half Power
MFBW7463	746-869 MHz	3 dB	40°	360°



### Mechanical Specifications

Model	Antenna Length	Weight (Mass)	Temperature Range
MFBW7463	27"	1.5 lbs	-40°C to +70°C

Model	Lateral Thrust at Rated Wind with 1/2" of Ice	Equivalent Flat Plate Area with 1/2" of Ice	Wind Survival with 1/2" of Ice
MFBW7463	20 lbf	.22 ft <sup>2</sup>	125 mph



### Technical Data

<b>General Specifications:</b> 746-869 MHz omnidirectional antenna
<b>Maximum Power:</b> 50 watts
<b>Normal Impedance:</b> 50 ohms
<b>Polarization:</b> Vertical
<b>VSWR:</b> < 1.8:1
<b>Termination:</b> N female

## VHF/UHF White MAXRAD Fiberglass Base Station (MFB) Omnidirectional Antennas

The white fiberglass antenna series consists of base matched half wave antennas encapsulated in a heavy duty fiberglass radomes with a thick walled aluminum mounting base for reliable long term use. All models are DC grounded and UPS shippable.

### Features

- Effective “J” pole design requires no radials or ground plane
- White ultra-violet resistant pultruded fiberglass radome
- Thick-walled aluminum mounting base
- Unity, 3 dB models and 5 dB models
- UPS shippable



### Technical Data

Maximum Power: 250 watts
Normal Impedance: 50 ohms
VSWR: < 1.5:1 VSWR
Radome Material: Pultruded white fiberglass
Radiator Material: Coated steel wire
ESD Protection: DC grounded
Wind Survival: 100 mph
Termination: N male with 16” jumper
Mounting Base Diameter: 1-5/16”
Mounting Options (Sold separately): MMK3: light duty mast mounting MMK4: heavy duty mast mounting MMK9: Aluminum mast mount for 1-5/16” OD antennas (two required with the 10” sleeve antenna models) MMK12: heavy duty mount bracket MBSWM: wall mounting bracket (2 required)



MFB4505



MFB VHF Unity  
Model 3 dB  
version  
includes  
exposed whip



MMK3



MMK4



MMK9



MBSWM



MMK12

### RF/Electrical Specifications

Model	Frequency Range	Factory Tuned Frequency	Gain	Bandwidth @ 1.5:1 VSWR	Vertical Beamwidth @ 1/2 Power
MFB1443	144-150 MHz	144 MHz	3 dB*	3.5 MHz	29°
MFB1500	150-156 MHz	153 MHz	Unity	3.0 MHz	80°
MFB1503	150-156 MHz	150 MHz	3 dB*	3.5 MHz	29°
MFB1560	156-162 MHz	159 MHz	Unity	3.0 MHz	80°
MFB1563	156-162 MHz	156 MHz	3 dB*	3.5 MHz	29°
MFB1683	168-174 MHz	168 MHz	3 dB*	3.5 MHz	29°
MFB4065	406-416 MHz	411 MHz	5 dB	10 MHz	27°
MFB4500	450-460 MHz	455 MHz	Unity	10 MHz	90°
MFB4503	450-460 MHz	455 MHz	3 dB	10 MHz	38°
MFB4505	450-460 MHz	455 MHz	5 dB	10 MHz	27°
MFB4600	460-470 MHz	465 MHz	Unity	10 MHz	90°
MFB4603	460-470 MHz	465 MHz	3 dB	10 MHz	38°
MFB4605(NF)	460-470 MHz	465 MHz	5 dB	10 MHz	27°
MFB4705	470-480 MHz	475 MHz	5 dB	10 MHz	27°

### Mechanical Specifications

Model	Height	Weight (Mass)	Bending Moment at Rated Wind	Lateral Thrust at Rated Wind	Equivalent Flat Plate Area
MFB1443	129"	4 lbs	62.5 ft-lbs	15.8 lbs	.44 ft <sup>2</sup>
MFB1500	71"	3 lbs	29.2 ft-lbs	10.8 lbs	.30 ft <sup>2</sup>
MFB1503	129"	4 lbs	62.5 ft-lbs	15.8 lbs	.44 ft <sup>2</sup>
MFB1560	71"	3 lbs	29.2 ft-lbs	10.8 lbs	.30 ft <sup>2</sup>
MFB1563	129"	4 lbs	62.5 ft-lbs	15.8 lbs	.44 ft <sup>2</sup>
MFB1683	129"	4 lbs	62.5 ft-lbs	15.8 lbs	.44 ft <sup>2</sup>
MFB4065	77"	4.5 lbs	40.4 ft-lbs	12.6 lbs	.35 ft <sup>2</sup>
MFB4500	30"	1.0 lbs	5.2 ft-lb	5 lbs	.11 sq ft
MFB4503	71"	4.0 lbs	29.0 ft-lb	10.8 lbs	.30 sq ft
MFB4505	77"	4.5 lbs	40.4 ft-lb	12.6 lbs	.35 sq ft
MFB4600	30"	1.0 lbs	5.2 ft-lb	5 lbs	.11 sq ft
MFB4603	71"	4.0 lbs	29.0 ft-lb	10.8 lbs	.30 sq ft
MFB4605(NF)	77"	4.5 lbs	40.4 ft-lb	12.6 lbs	.35 sq ft
MFB4705	77"	4.5 lbs	40.4 ft-lb	12.6 lbs	.35 sq ft

\*Note: 3 dB gain antennas are factory tuned to the lowest side of the frequency range. Field tuning to the desired frequency is required. Mount sold separately. For SO-239 connector, please add \$27.00; for N female connector, please add \$10.00.