

## Adjustable or Fixed Sector Panel Antennas

The MSP series sector panel covers the 2.4 GHz ISM band and provides field adjustable horizontal beamwidths of 45°, 60°, 90° or 120°. This unique design allows a system installer to stock a single antenna and field adjust it to the desired beamwidth, making it useful for wireless broadband applications where coverage of a geographical sector is desired. The panel can also be ordered with fixed beamwidths. This line also includes a compact 90° sector model that measures less than 8 inches long, for installations where space is very limited.

In many applications, sector panels are used to provide omnidirectional coverage by using, for example, three radios and three 120° sector antennas to provide 360° coverage. This results in a stronger and more focused signal than that of a single omnidirectional antenna. It also provides a more robust design. The MSP24013MB features industry leading front-to-back ratios of more than 42 dB at 45°, 60° and 90° and over 32 dB at 120° with excellent cross pole discrimination.

### Features

- Adjustable multiple beamwidth sectors. A single antenna can be utilized to cover several geographical sectors.
- Three sectors with three data radios can be installed as an array for omnidirectional coverage. Provides a stronger, more focused signal than that of a standard omnidirectional antenna.
- Industry leading front-to-back ratios. Ensures that the radiated energy is focused towards its target, and not to the back or sides of the antenna.

# MAXRAD

### Technical Data

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| General Specifications: 2.4 GHz sector panel antennas  |
| Maximum Power Input: 50 watts  |
| Polarization: Vertical   |
| Nominal Impedance: 50 ohms   |
| VSWR: < 1.5:1  |
| Radome Material: Off white ASA plastic with UV resistance  |
| Lighting Protection: DC grounded   |
| Connector Options: Type N, female. Other connector options available   |
| Mounting Method:<br>Adjustable stainless steel bracket, +/- 11° of uptilt or downtilt<br>Pipe diameter: 0.75 thru 2.4" OD (19-60 mm) |

For detailed specifications, visit <http://antenna.pctel.com>.



The MSP24013MB allows horizontal beamwidth adjustments without having to replace the antenna. Its overall design is one of the most compact currently available on the market.



MSP24013MB



Sector panel on adjustable bracket

### Antenna Electrical Specifications

| Model        | Frequency Range | Nominal Gain   | Horizontal Plane Beamwidth | E-Plane Beamwidth | Front-to-Back Ratio   | Typical Cross Poll Discrimination   |
|--------------|-----------------|--|----------------------------|-------------------|---|---|
| MSP24013MB   | 2400-2500 MHz   | 13 dB @ 120°<br>14 dBi @ 90°<br>16 dBi @ 60°<br>17 dBi @ 45° | 120°, 90°, 60°<br>and 45°  | 16°               | > 32 dB @ 120°<br>> 42 dB @ 90°<br>> 42 dB @ 60°<br>> 42 dB @ 45° | 270°-0°, 0°-90° = -20 dB<br>235°-270°, 90°-135° = -28 dB<br>180°-235°, 135°-180° = -32 dB |
| MSP24013-120 | 2400-2500 MHz   | 13 dBi   | 120°                       | 16°               | > 32 dB   | (all models)<br>270°-0°, 0°-90° = -20 dB  |
| MSP24014-90  | 2400-2500 MHz   | 14 dBi   | 90°                        | 16°               | > 42 dB   | 235°-270°, 90°-135° = -28 dB  |
| MSP24016-60  | 2400-2500 MHz   | 16 dBi   | 60°                        | 16°               | > 42 dB   | 180°-235°, 135°-180° = -32 dB   |

### Mechanical Specifications

| Model        | Dimensions   | Weight (Mass)     | Temperature Range | Rated Wind Velocity   | Lateral Thrust at Rated Wind |
|--------------|--|-------------------|-------------------|-----------------------|------------------------------|
| MSP24013MB   | 21.5" L x 6.5" W x 2.8" D<br>(546 x 16.5 x 7.2 mm) | 4 lbs<br>(1.8 kg) | -30° C to +75° C  | 125 mph<br>(200 km/h) | 43 lbs (19.5 kg)             |
| MSP24013-120 | 21.5" L x 6.5" W x 2.8" D<br>(546 x 16.5 x 7.2 mm) | 4 lbs<br>(1.8 kg) | -30° C to +75° C  | 125 mph<br>(200 km/h) | 43 lbs (19.5 kg)             |
| MSP24014-90  | 21.5" L x 6.5" W x 2.8" D<br>(546 x 16.5 x 7.2 mm) | 4 lbs<br>(1.8 kg) | -30° C to +75° C  | 125 mph<br>(200 km/h) | 43 lbs (19.5 kg)             |
| MSP24016-60  | 21.5" L x 6.5" W x 2.8" D<br>(546 x 16.5 x 7.2 mm) | 4 lbs<br>(1.8 kg) | -30° C to +75° C  | 125 mph<br>(200 km/h) | 43 lbs (19.5 kg)             |