DATA SHEET

Six-Beam Special Events Antenna

MBA6F-V2A

- Two foot (0.6 m) tall, single band, twelve port multibeam array. Containing Six Independent LTE Optimized Beams covering 2300-2690 MHz frequencies
- Beam spacing in 2300-2690 spectrum specifically optimized to allow for Carrier Aggregation with a corresponding CCI Six-Beam antenna model MBA6F-9F-E-H3 using the 1800/1900 spectrum
- Twelve High Band Dual-Pol +45°/-45°ports (two ports per beam) covering 2300-2690 MHz in a single antenna
- Full Spectrum Compliance for 2300-2690 MHz Frequencies
- LTE Optimized Beams for improved LTE data throughput by minimizing beam crossover, providing for an efficient use of valuable radio capacity and frequency spectrum
- LTE Optimized FBR, USLS and Co-Pol Beam Isolation Performance. Essential for today's LTE Data Driven Networks
- Exceeds minimum PIM performance requirements

Overview

This CCI Six-Beam Antenna contains Six Independent LTE Optimized Beams, specifically for Carrier Aggregation. This Six-Beam Antenna is intended for use at data hotspots and other congested locals, where social media and the ability to share photos and videos and other high demand applications require high capacity and high data rates. This Six-Beam antenna enables maximum spectrum re-use by sectorization, greatly increasing network capacity. Our LTE Optimized Beam Design approach provides fast roll off between beams, minimizing interference between sectors thus increasing the carrier to interference plus noise (CINR) ratio and lowering soft handover losses in LTE networks. Such an approach enhances data transfer rates within LTE network sectors and addresses "hotspots" in mobile wireless operator networks.

The single panel design of the CCI Six-Beam Special Event Antenna offers the opportunity to reduce antenna count and directly replaces multiple narrow beam antennas. The antenna minimizes the need for optimization as each beam is spaced optimally for maximum throughput thus providing significant CAPEX and OPEX cost savings.

CCI antennas are designed and produced to ISO 9001 certification standards for reliability and quality in our state-of-the-art manufacturing facilities.

Applications

- Upgrade of data-throughput or capacity constrained sites
- Antenna intended for use where data throughput and capacity needs are paramount

SPECIFICATIONS

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Electrical

Ports	12 x High Band Ports for 2300-2690 MHz	
Frequency Range	2300-2400 MHz	2496-2690 MHz
Gain	21.2 dBi	21.9 dBi
Azimuth Beamwidth (-3dB)	11.9°	10.5°
Azimuth Beam Crossover	10.7°	10.7°
Elevation Beamwidth (-3dB)	12.1°	10.9°
Electrical Downtilt	4°	4°
Elevation Sidelobes (1st Upper)	< -20 dB	< -20 dB
Front-to-Back Ratio @180°	> 35 dB	> 35 dB
Cross-Polar Port-to-Port Isolation	> 25 dB	> 25 dB
Interbeam Co-Pol Isolation (Non-Adjacent Beams, Worst Case)	> 10 dB	> 10 dB
Voltage Standing Wave Ratio (VSWR)	< 1.5:1	< 1.5:1
Passive Intermodulation (2x20W)	≤ -153 dBc	≤ -153 dBc
Input Power Continuous Wave (CW)	200 watts	200 watts
Polarization	Dual Pol 45°	Dual Pol 45°
Input Impedance	50 ohms	50 ohms
Lightning Protection	DC Ground	DC Ground

Mechanical

Dimensions (LxWxD)	24.6x31.3x6.5 in (625x794x165 mm)
Survival Wind Speed	> 150 mph (> 241 kph)
Front Wind Load	164 lbs (730 N) @ 100 mph (161 kph)
Side Wind Load	36 lbs (159 N) @ 100 mph (161 kph)
Equivalent Flat Plate Area	6.4 ft^2 (0.6 m^2)
Weight*	45.6 lbs (20.7 kg)
Connector	12 x 7-16 DIN female long neck or 4.3-10 female
Mounting Poles	2 to 5 in (5 to 12 cm)

** Weight excludes mounting*

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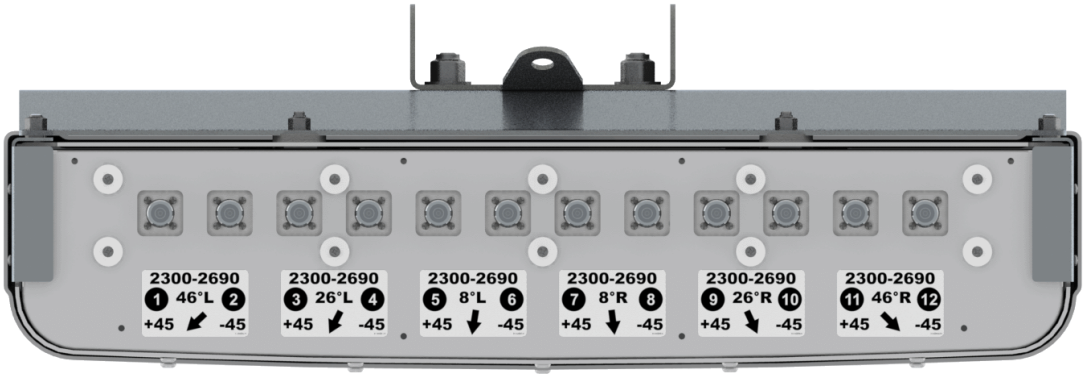
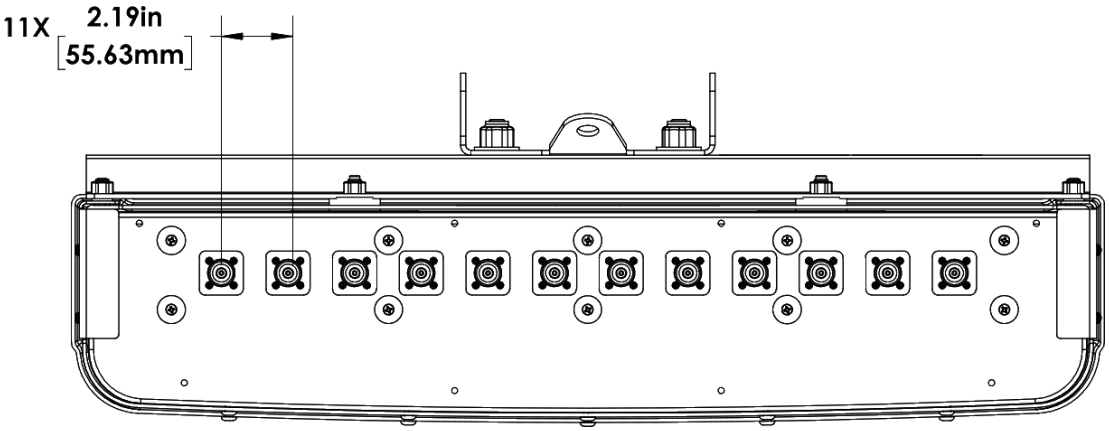
Mechanical

Bottom View



Connector Spacing



SPECIFICATIONS

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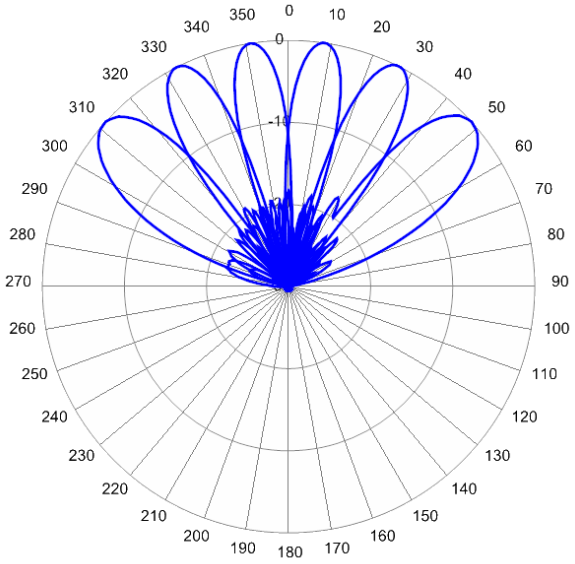
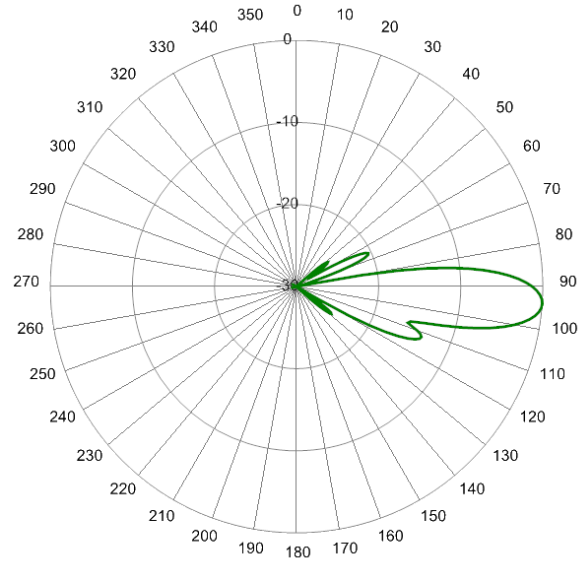
Typical Antenna Patterns

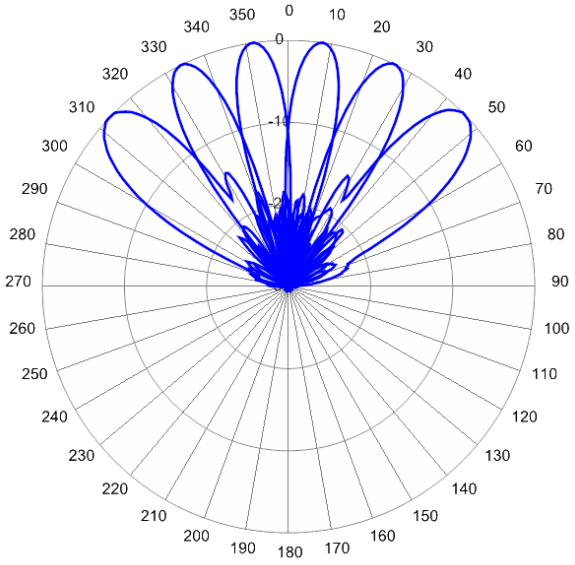
For detailed information on additional antenna patterns, contact customer support at support@cciproducts.com



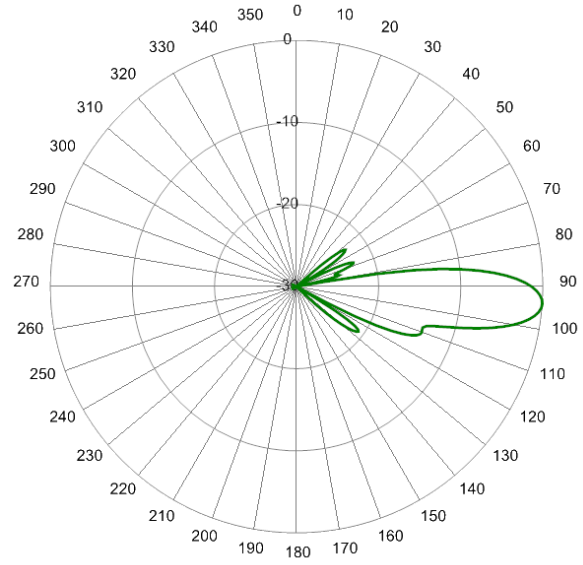
2360 MHz Azimuths



2360 MHz Elevation 4°



2640 MHz Azimuths



2640 MHz Elevation 4°

ORDERING

Six-Beam Special Events Antenna

MBA6F-V2A

Parts & Accessories

MBA6F-V2AA-K	2 foot (0.6 m) Special Events 6-Beam Antenna with fixed electrical tilt, 7-16 DIN connectors and MBK-03 mounting bracket.
MBA6F-V2AB-K	2 foot (0.6 m) Special Events 9-Beam Antenna with fixed electrical tilt, 4.3-10 connectors and MBK-03 mounting bracket.
MBK-03	Mounting bracket kit (top and bottom) with 0° to 12° mechanical tilt adjustment

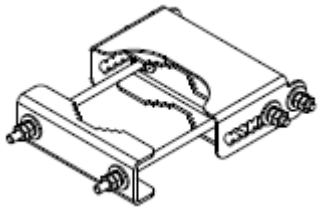
ACCESSORIES

Mounting Bracket Kit

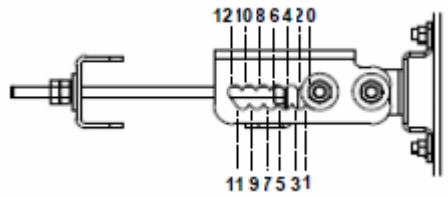
MBK-03

Mechanical

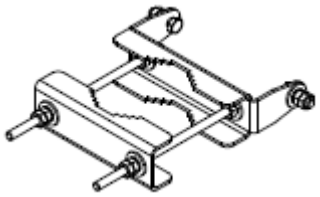
Weight	9.8 lbs (4.4 kg)
Hinge Pitch	13 in (330 mm)
Mounting Pole Dimension	2 to 5 in (5 to 12 cm)
Fastener Size	M10
Installation Torque	15 ft·lbs (20 Nm)
Mechanical Tilt Adjustment	0° - 12°



MBK-03 Top Adjustable Bracket



MBK-03 Top Adjustable Bracket Side View



MBK-03 Bottom Fixed Bracket

STANDARDS & CERTIFICATIONS

Standards & Compliance

Environmental	IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-5, IEC 60068-2-6, IEC-60068-2-11, IEC 60068-2-14, IEC 60068-2-18, IEC 60068-2-27, IEC 60068-2-29, IEC 60068-02-30, IEC 60068-2-52, IEC 60068-2-64, GR-63-CORE 4.3.1, EN 60529, IP 24

Certifications

Federal Communication Commission (FCC) Part 15 Class B, ISO 9001