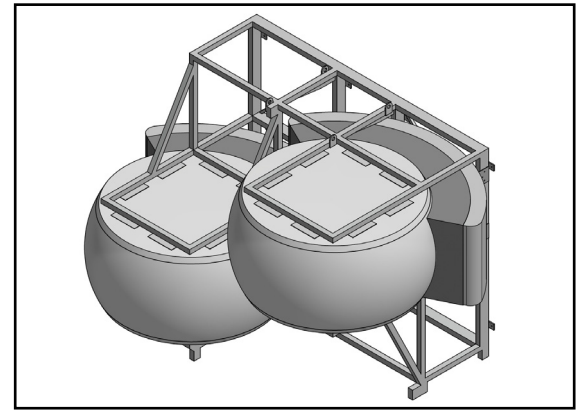


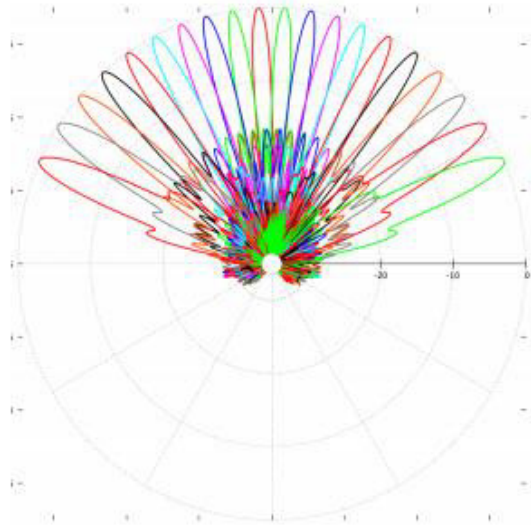
## MS-20.10DBA180

**Multi-Beam Dual Band Spherical Lens Antenna: 10 independent low frequency (698-960MHz) cross-polarized beams and 20 independent high-frequency (1695-2690MHz) cross-polarized beams.**

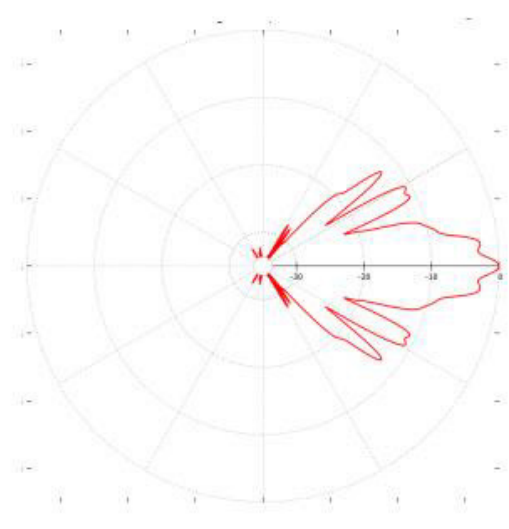


### PATTERN RESULTS:

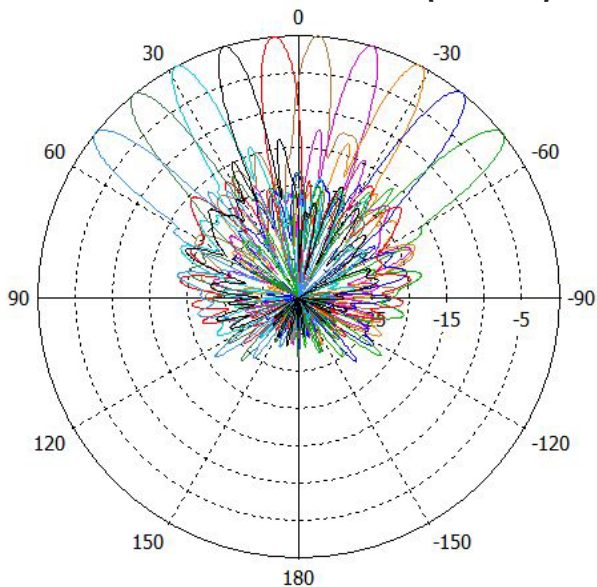
**High-Band Horizontal Pattern (1950MHz)**



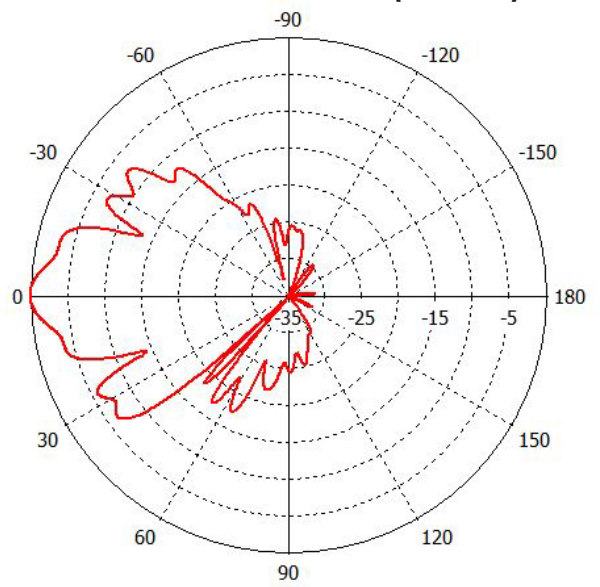
**High-Band Vertical pattern (1950MHz)**



**Low-Band Horizontal Pattern (850MHz)**



**Low-Band Vertical Pattern (850MHz)**



## TECHNICAL SPECIFICATIONS PER BEAM

| Frequency                             | 698-960 MHz               | 1695-2690 MHz             |
|---------------------------------------|---------------------------|---------------------------|
| Gain                                  | 18dBi                     | 26dBi                     |
| VSWR                                  | <1.5:1                    | <1.5:1                    |
| Polarization                          | Dual Slant $\pm 45^\circ$ | Dual Slant $\pm 45^\circ$ |
| Horizontal Coverage                   | 100°                      | 100°                      |
| Horizontal Beamwidth (10dB level)     | 10°                       | 5°                        |
| Horizontal Beamwidth (3dB level)      | 6°                        | 3°                        |
| Vertical Beamwidth (10dB level)       | 40°                       | 16°                       |
| Vertical Beamwidth (3dB level)        | 25°                       | 9°                        |
| Beam Cross-over                       | 10dB typical              | 10dB typical              |
| Total Number of Beams                 | 10                        | 20                        |
| Tilt                                  | 0°                        | 0°                        |
| First Sidelobe Level                  | <-15dB                    | <-15dB                    |
| Front to Back Ratio                   | >28dB                     | >28dB                     |
| Isolation Port to Port - Polarization | >28dB                     | >28dB                     |
| Isolation Port to Port - Beam         | >28dB                     | >26dB                     |
| Power Rating                          | 200W per port             | 200W per port             |
| Intermodulation                       | <-153dBc                  | <-153dBc                  |
| Impedance                             | 50 ohm                    | 50 ohm                    |
| Connector Quantity and Type           | 20 X 4.3-10 female        | 40 X 4.3-10 female        |

## MECHANICAL DATA

|                        |                                                                                                                                          |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Dimensions (H x W x D) | Two Truncated Lenses:<br>Spherical Lens diameter:<br>180cm/70inch<br><br>Antenna dimensions:<br>220 x 392 x 221 cm<br>87 x 154 x 87 inch |
| Antenna Weight         | 522kg<br>1150lbs                                                                                                                         |
| Radome Material        | Fiber Glass                                                                                                                              |
| Mounting               | 4 position pipe mount<br><br>Compatible pipe diameter:<br>6.1 – 11.4 cm<br>2.4 – 4.5 inch                                                |

## ENVIRONMENTAL RATINGS

|             |                |
|-------------|----------------|
| Humidity    | 95% RH @ +30°C |
| Temperature | -40°C to +70°C |
| Wind load:  | @ 160km/hr     |
| Front       | 5868N/1319lbf  |
| Side        | 4760N/1070lbf  |
| Back        | 6547N/1471lbf  |

## SAMPLE CONNECTOR LAYOUT:

