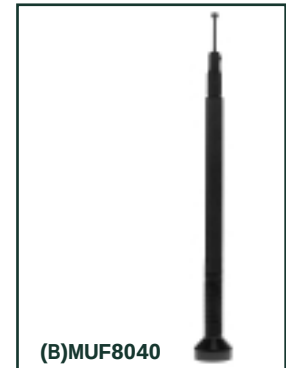


Elevated Feed Point, No Ground Plane Antennas

These elevated feed point antennas are engineered for vehicles without a ground plane. When trunk mounted, the antenna extends above the roofline to eliminate the "shadow effect" caused by the passenger compartment. Available with a straight rod (unity gain), our open phasing coil rod, or our "quiet" closed coil rod.

Features

- Excellent choice for trunk or mirror bracket mounting
- Factory tuned for SMR/Cellular and 900 MHz models
- Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts



Electrical Specifications

Maximum Power:

125 Watts

VSWR at Resonant Point:

<1.5:1

Nominal Impedance:

50 Ohms

Antenna Type:

700 MHz: Wideband Collinear

Unity: 1/4 Wave

3dB: 1/2 wave over a 1/4 wave

5dB: dual 1/2 wave over a 1/4 wave

Mechanical Specifications

Radiator Material:

.100" diameter stainless steel; bright or black finish

Spring:

Stainless steel; bright or black finish

Phasing Coil Housing:

Molded polymer jacket with copper, nickel and chrome plated brass bushings

Rod Ferrule:

5/16"-24 thread; bright or black chrome plated brass

Body:

Molded polymer

700 MHz Antenna Height: Approximately 23"**800 MHz Antenna Height:**

Unity: Approximately 12" at lowest frequency

3dB: Approximately 23" at lowest frequency

5dB: Approximately 33" at lowest frequency

900 MHz Antenna Height:

Unity: Approximately 11.5" at lowest frequency

3dB: Approximately 22.5" at lowest frequency

5dB: Approximately 32" at lowest frequency

Model #	Frequency Range	Factory Tuned Frequency	Rod/Coil Type	Gain	List Price	
					Chrome Models	Black Models
(B)MUF8040	806-866 MHz	815 MHz	Straight	Unity	\$62.70	\$69.20
(B)MUF8400	825-896 MHz	835 MHz	Straight	Unity	\$62.70	\$69.20
(B)MUF9040	896-940 MHz	898 MHz	Straight	Unity	\$62.70	\$69.20
(B)MUF7603	760-870 MHz	815 MHz	Collinear/Closed	3dB	\$76.50	\$84.00
(B)MUF8023	806-866 MHz	815 MHz	Collinear/Open	3dB	\$69.50	\$75.50
(B)MUF8073	806-866 MHz	815 MHz	Collinear/Closed	3dB	\$76.50	\$84.00
(B)MUF8043	825-896 MHz	835 MHz	Collinear/Open	3dB	\$69.50	\$75.50
(B)MUF8083	825-896 MHz	835 MHz	Collinear/Closed	3dB	\$76.50	\$84.00
(B)MUF9043	896-940 MHz	898 MHz	Collinear/Open	3dB	\$69.50	\$75.50
(B)MUF9083	896-940 MHz	898 MHz	Collinear/Closed	3dB	\$76.50	\$84.00
(B)MUF9113	870-950 MHz	898 MHz	Collinear/Open	3dB	\$69.50	\$75.50
(B)MUF8035	806-866 MHz	815 MHz	Trilinear/Open	5dB	\$76.72	\$83.64
(B)MUF8045	806-866 MHz	815 MHz	Trilinear/Closed	5dB	\$79.92	\$91.52
(B)MUF8405	825-896 MHz	835 MHz	Trilinear/Open	5dB	\$76.72	\$83.64
(B)MUF8455	825-896 MHz	835 MHz	Trilinear/Closed	5dB	\$79.92	\$91.52
(B)MUF9105	896-940 MHz	898 MHz	Trilinear/Open	5dB	\$76.72	\$83.64
(B)MUF9115	896-940 MHz	898 MHz	Trilinear/Closed	5dB	\$79.92	\$91.52

Prefix "B" indicates black. Spring included.

MAX Base Series

This series features a molded polymer base, plated spring-loaded contact pin, and a .100" diameter stainless steel whip for long-lasting, trouble-free service. It is available with either an open coil rod or our "quiet" closed coil rod.

Features

- Available in bright chrome or our black finish
- Antenna is ready to install; no rod cutting is required
- Mates with all 1-1/8"-18 thread mounts, including 3/4" mounts



Electrical Specifications

Maximum Power:

150 Watts

VSWR at Resonant Point:

<1.5:1

Nominal Impedance:

50 Ohms

Antenna Type:

700 MHz Model:

Wideband collinear

800 MHz Models:

3dB: 5/8 wave over a 1/4 wave

5dB: Dual 1/2 wave over a 1/4 wave

900 MHz Models:

3dB: 5/8 wave over a 1/4 wave

5dB: Dual 1/2 wave over a 1/4 wave

Mechanical Specifications

Radiator Material:

.100" diameter stainless steel; bright or black finish

Optional Spring:

Stainless steel; bright or black finish

Phasing Coil Housing:

Molded polymer jacket with copper, nickel and chrome plated brass bushings

Rod Ferrule:

5/16" -24 thread; bright or black chrome plated brass

Base Coil Housing:

Molded polymer with a plated brass insert ring and a spring-loaded brass contact pin

700 MHz Antenna Height: Approximately 14"

800 MHz Antenna Height:

3dB: Approximately 13" at lowest frequency

5dB: Approximately 24" at lowest frequency

900 MHz Antenna Height:

3dB: Approximately 11" at lowest frequency

5dB: Approximately 23" at lowest frequency

Model #	Frequency Range	Factory Tuned Frequency	Rod/Coil Type	Gain	List Price Chrome Models	List Price Chrome Models with Spring	List Price Black Models	List Price Black Models with Spring
(B)MAX7603S	760-870 MHz	815 MHz	Collinear/Open	3dB	N/A	\$29.93	N/A	\$34.71
(B)MAX8053(S)	806-896 MHz	835 MHz	Collinear/Open	3dB	\$21.43	\$29.93	\$25.71	\$34.71
(B)MAX8033(S)	806-896 MHz	835 MHz	Collinear/Closed	3dB	\$25.71	\$34.21	\$28.86	\$37.86
(B)MAX9053(S)	896-940 MHz	896 MHz	Collinear/Open	3dB	\$21.43	\$29.93	\$25.71	\$34.71
(B)MAX9033(S)	896-940 MHz	896 MHz	Collinear/Closed	3dB	\$25.71	\$34.21	\$28.86	\$37.86
(B)MAX9103(S)	870-950 MHz	898 MHz	Collinear/Closed	3dB	\$25.71	\$34.21	\$28.86	\$37.86
(B)MAX8135(S)	806-866 MHz	815 MHz	Trilinear/Open	5dB	\$29.14	\$37.64	\$34.29	\$43.29
(B)MAX8055(S)	806-866 MHz	815 MHz	Trilinear/Closed	5dB	\$31.98	\$40.48	\$38.80	\$47.80
(B)MAX8355(S)	825-896 MHz	835 MHz	Trilinear/Open	5dB	\$29.14	\$37.64	\$34.29	\$43.29
(B)MAX8375(S)	825-896 MHz	835 MHz	Trilinear/Closed	5dB	\$31.98	\$40.48	\$38.80	\$47.80
(B)MAX9075(S)	896-940 MHz	896 MHz	Trilinear/Open	5dB	\$29.14	\$37.64	\$34.29	\$43.29
(B)MAX9085(S)	896-940 MHz	896 MHz	Trilinear/Closed	5dB	\$31.98	\$40.48	\$38.80	\$47.80
(B)MAX9105(S)	870-950 MHz	898 MHz	Trilinear/Closed	5dB	\$31.98	\$40.48	\$38.80	\$47.80

Prefix "B" indicates black. Suffix "S" indicates spring.

Low Profile Vertical Antennas

The MLPV antennas provide superior pattern coverage for all mobile and fixed applications using UHF frequencies from 380-512 MHz, 700/800/900 MHz frequencies from 760 to 960 MHz, and PCS/ISM frequencies from 1700 to 2500 MHz. Their low profile design provides industry leading wideband performance and reliability, with minimum loss and no tuning required. Dual band versions (MLPVDB series) are also available. The MLPV and MLPVDB antennas feature an attractive, compact package and are ideal for indoor or outdoor applications requiring minimum visibility. Color options are black/chrome, white/chrome or black/black. Dual band models are also available in a "short" housing for minimum visibility.

Features

- Attractive, low profile design is available in three color finishes.
- Wideband performance. Only three models are required to cover all 700 MHz, 800 MHz, 900 MHz, PCS and 2.4 GHz frequencies. Three models cover all UHF frequencies.
- Quad band coverage. A single model covers cellular and GSM, ISM, DCS and PCS frequencies. Dual band 902 MHz and 2.4 GHz version also available.
- BMLPV800HD heavy duty model available for 800/900 MHz frequencies. Designed to withstand the toughest operating conditions (black finish only).
- Excellent pattern coverage for mobile and base station applications.
- Compatible with all 3/4" hole mounts for easier installation.
- No tuning required. Allows faster, more reliable installations.



Multiple Bands

Electrical Specifications

Maximum Power:

- 150 Watts (all models, except UHF)
- 100 Watts (UHF models)

VSWR:

- Less than 1.5:1
- Less than 1.5:1/2:1 (dual band models)

Nominal Impedance:

- 50 Ohms

Antenna Type:

- Low profile vertical

Mechanical Specifications

Radiator Material:

- Solid brass

Antenna Dimensions:

- MLPV1700 (all colors): 1.79" H x 1.5" OD
- MLPV800 and MLPV700 (all colors): 2.4" H X 1.5" OD
- BMLPV800HD, BMLPV800/1900HD: 2.4" H x 1.5" W x 1.7" D (at the base)
- MLPV406 and MLPV380 (all colors): 3.38" H X 1.5" OD
- MLPV430 (all colors): 3.38" H X 1.5" OD
- MLPV450 (all colors): 3.38" H X 1.5" OD
- MLPVDB800/1900 (all colors): 2.4" H X 1.5" OD
- MLPVDB902/2400 (all colors): 2.4" H X 1.5" OD
- MLPVDB800/1900S (all colors): 1.79" H x 1.5" OD
- MLPVDB902/2400S (all colors): 1.79" H x 1.5" OD
- BMLPVDB800/1900SHD: 1.79" H x 1.5" W x 1.7" D (at the base)

Low Profile Vertical Antennas

Model #	Frequency Range	Bandwidth	Gain	Color	List Price
MLPV450	450-512 MHz	62 MHz	Unity	Black over chrome	\$38.00
MLPV430	430-480 MHz	50 MHz	Unity	Black over chrome	\$38.00
MLPV406	406-440 MHz	34 MHz	Unity	Black over chrome	\$38.00
MLPV380	380-410 MHz	30 MHz	Unity	Black over chrome	\$38.00
BMLPV450	450-512 MHz	62 MHz	Unity	Black over black	\$38.00
BMLPV430	430-480 MHz	50 MHz	Unity	Black over black	\$38.00
BMLPV406	406-440 MHz	34 MHz	Unity	Black over black	\$38.00
BMLPV380	380-410 MHz	30 MHz	Unity	Black over black	\$38.00
WMLPV450	450-512 MHz	62 MHz	Unity	White over chrome	\$38.00
WMLPV430	430-480 MHz	50 MHz	Unity	White over chrome	\$38.00
WMLPV406	406-440 MHz	34 MHz	Unity	White over chrome	\$38.00
WMLPV380	380-410 MHz	30 MHz	Unity	White over chrome	\$38.00
MLPV700	760-870 MHz	110 MHz	Ground plane and frequency dependent. Average gain value is 4 dBi.	Black over chrome	\$35.00
BMLPV700	760-870 MHz	110 MHz		Black over black	\$35.00
WMLPV700	760-870 MHz	110 MHz		White over chrome	\$35.00
MLPV800	806-960 MHz	154 MHz	Ground plane and frequency dependent. Average gain value is 3 dBi.	Black over chrome	\$35.00
BMLPV800	806-960 MHz	154 MHz		Black over black	\$35.00
WMLPV800	806-960 MHz	154 MHz		White over chrome	\$35.00
BMLPV800HD	806-960 MHz	154 MHz		Black over black	\$42.95
MLPV1700	1700-2500 MHz	800 MHz	Ground plane and frequency dependent. Average gain value is 4 dBi.	Black over chrome	\$40.00
BMLPV1700	1700-2500 MHz	800 MHz		Black over black	\$40.00
WMLPV1700	1700-2500 MHz	800 MHz		White over chrome	\$40.00
MLPVDB800/1900	806-960 MHz and 1710-1990 MHz	154 MHz and 280 MHz	3 dBi	Black over chrome	\$45.00
MLPVDB902/2400	902-928 MHz and 2400-2500 MHz	26 MHz and 100 MHz	3 dBi	Black over chrome	\$45.00
BMLPVDB800/1900	806-960 MHz and 1710-1990 MHz	154 MHz and 280 MHz	3 dBi	Black over black	\$45.00
BMLPVDB902/2400	902-928 MHz and 2400-2500 MHz	26 MHz and 100 MHz	3 dBi	Black over black	\$45.00
WMLPVDB800/1900	806-960 MHz and 1710-1990 MHz	154 MHz and 280 MHz	3 dBi	White over chrome	\$45.00
WMLPVDB902/2400	902-928 MHz and 2400-2500 MHz	26 MHz and 100 MHz	3 dBi	White over chrome	\$45.00
MLPVDB800/1900S	806-960 MHz and 1710-1990 MHz	154 MHz and 280 MHz	3 dBi	Black over chrome	\$45.00
MLPVDB902/2400S	902-928 MHz and 2400-2500 MHz	26 MHz and 100 MHz	3 dBi	Black over chrome	\$45.00
BMLPVDB800/1900S	806-960 MHz and 1710-1990 MHz	154 MHz and 280 MHz	3 dBi	Black over black	\$45.00
BMLPVDB902/2400S	902-928 MHz and 2400-2500 MHz	26 MHz and 100 MHz	3 dBi	Black over black	\$45.00
WMLPVDB800/1900S	806-960 MHz and 1710-1990 MHz	154 MHz and 280 MHz	3 dBi	White over chrome	\$45.00
WMLPVDB902/2400S	902-928 MHz and 2400-2500 MHz	26 MHz and 100 MHz	3 dBi	White over chrome	\$45.00
BMLPVDB800/1900HD	806-960 MHz and 1710-1990 MHz	154 MHz and 280 MHz	3 dBi	Black over black	\$52.95
BMLPVDB800/1900SHD	806-960 MHz and 1710-1990 MHz	154 MHz and 280 MHz	3 dBi	Black over black	\$52.95

Model Number: MAMROTBD
NPFR: L239R-A

Description: Dual Mode GPS/800 MHz, 3 dBd Ground Plane Dependent, Roof Mount Mobile Fixed Antenna (Closed Coil Whip)

Eng. Approval:

P.M. Approval:

Revision: 1

EWO: L239F

Product Code:

ELECTRICAL SPECIFICATIONS

3 dB Cellular Whip

Frequency Range: 764-870 MHz

Bandwidth: 106 MHz

VSWR: 1.3:1 Typ.
1.75:1 Max. at cable end

Power Rating (CW): 25 Watts

Input Impedance: 50 Ohms

Polarization: Vertical

Gain: 3 dBd (Typ.)

E-Plane HPBW: 35 Degrees

H-Plane HPBW: Omnidirectional

Cable: RG-58/AU Type (stranded center conductor)

Cable Length: 16.4 Feet (4.9 m)

Connector:
Mini-UHF (supplied loose)
TNC male (optional)

Roof Mount with GPS

Frequency: 1575.42 MHz

Bandwidth: 10 MHz

VSWR: 2.0:1 MAX.

Power Handling: 1 Watt

Input Impedance: 50 Ohms

Polarization: RHCP

Amplifier

Gain: 27 dB, Typical

Noise Figure: 1.2 dB

Output VSWR: 2:1

DC Bias: 3.0 or 5.0 V

Current: 15 mA

Filter Attenuation

1575.42 +/- 35 MHz: 8.0 dB Min.

1575.42 +/- 50 MHz: 15.0 dB Min.

1575.42 +/- 100 MHz: 30.0 dB Min.

Cable: RG-174/U

Cable Length: 16.4 Feet (4.9 m)

Connector: SMA male (attached)

MECHANICAL SPECIFICATIONS

Combination

Mounting Dimensions:

4.1 inch x 1.9 inch (104 mm x 48 mm)

Mount Type: 3/4 inch (19.05 mm) Hole Mount

Whip Length: 14.5 inch (368 mm)

Whip Material: 302 Stainless Steel, Typical

Whip Diameter: .090 inch (2.2 mm)

Whip Overmold Material: Thermoplastic Polyurethane

Weather Seal: Ultrasonic Weld and O-Ring

Radome Material: Black ABS

Shipping Data**Shipping Weight: 27 lbs. (12.25 kg) approx.****Packaging: 25 per carton****SHIPPING DIMENSIONS (Box):****11.5 in. x 17 in. x 10 in.****292.1 mm x 431.8 mm x 254 mm****FEATURES:**

1. Over molded closed-coil whip..
2. GPS Radome with spherical surface to resist water droplet retention.
3. Foam Neoprene perimeter pad.
4. O-Ring seal at mount interface
5. Installs through standard 3/4" new or existing roof/hole mount.

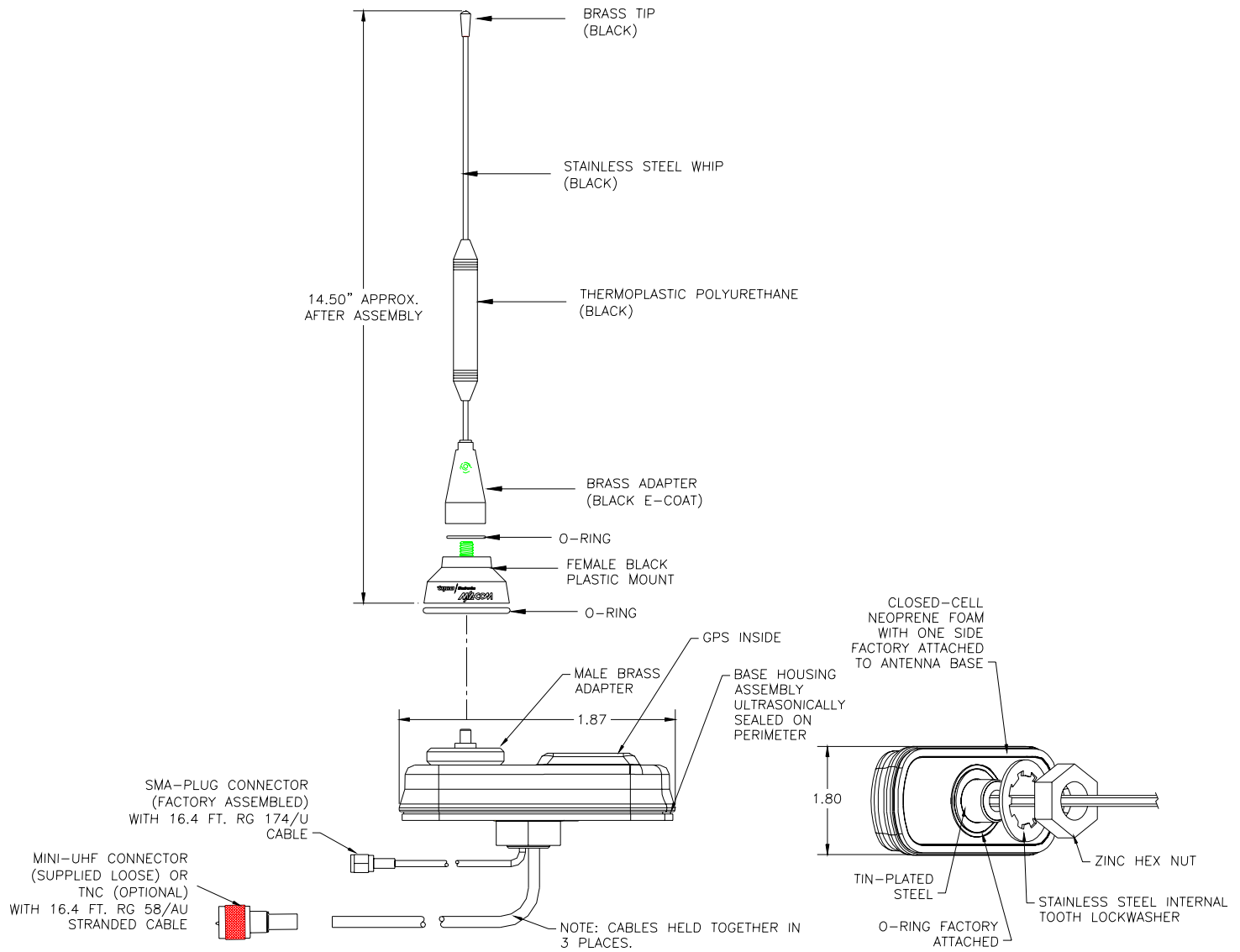
OPERATING PRINCIPLES:

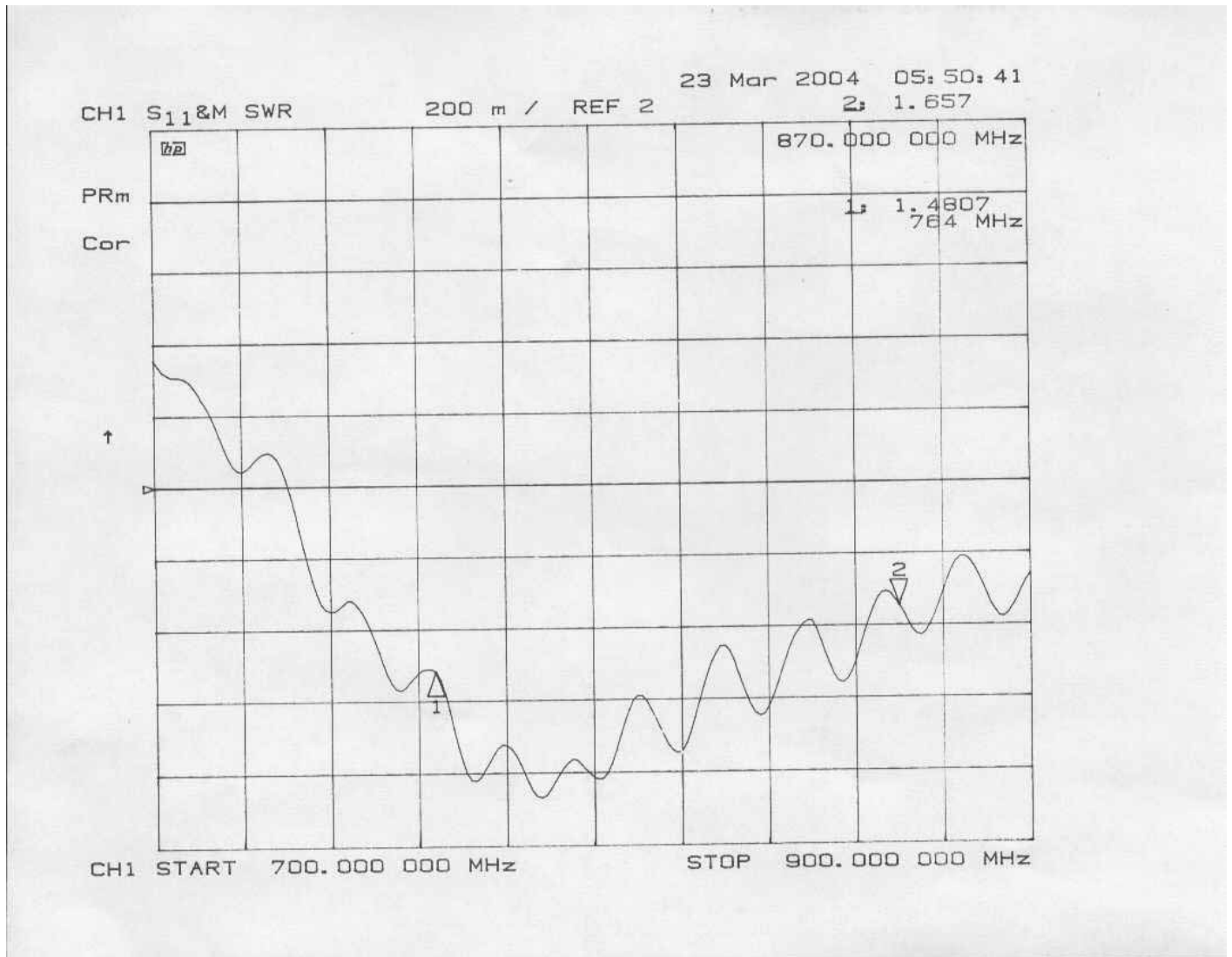
1. 3 dB Collinear antenna for optimal cellular performance.
2. 5/8 over 1/4 wave vertical collinear radiators. Requires 12" x 12" ground plane.
3. High dielectric microstrip GPS patch.

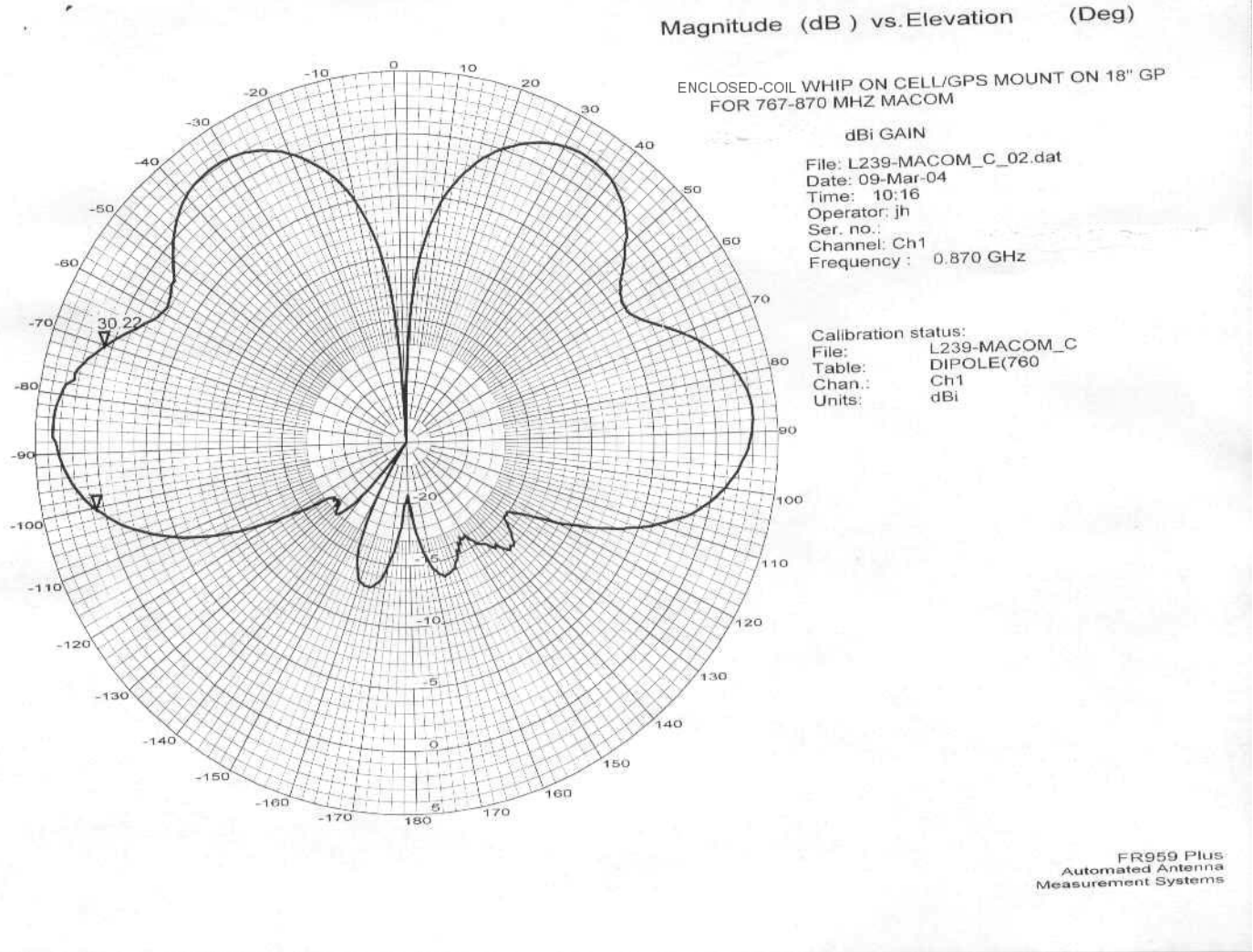
NOTES:

1. O-Ring located in place with vacuum grease or similar lubricant to augment ease of installation.
2. Coaxial feed cables to be tied together in three (3) places.

Status: PRELIMINARY







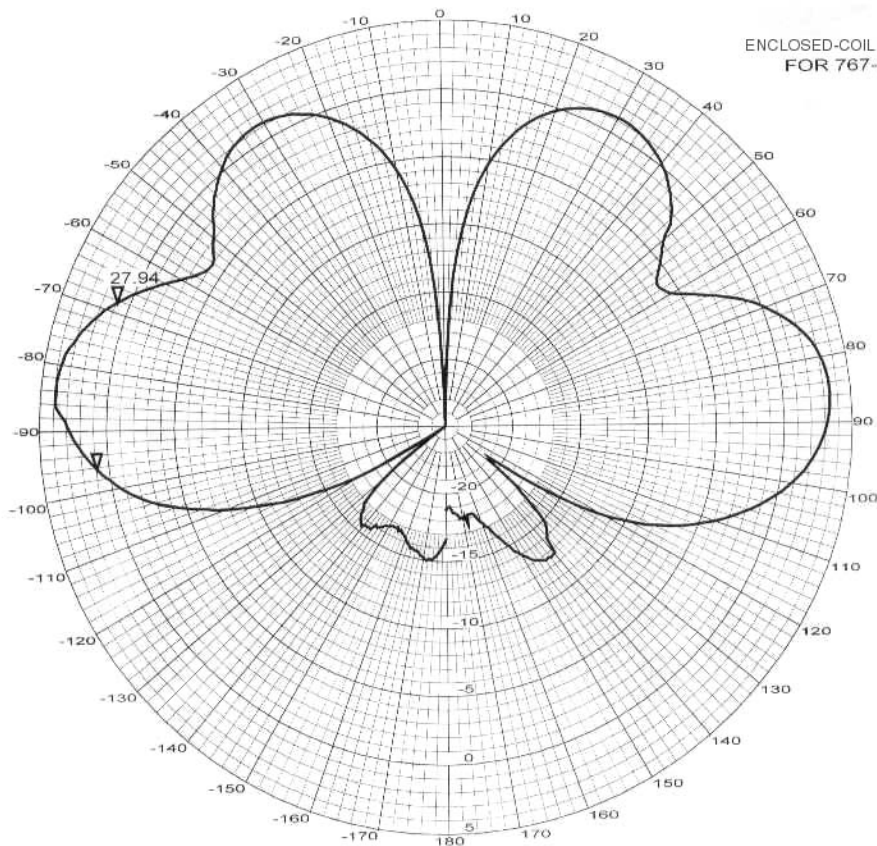
Magnitude (dB) vs. Elevation (Deg)

ENCLOSED-COIL WHIP ON CELL/GPS MOUNT ON 18" GP
FOR 767-870 MHz MACOM

dBi GAIN

File: L239-MACOM_C_02.dat
Date: 09-Mar-04
Time: 10:16
Operator: jh
Ser. no.:
Channel: Ch1
Frequency: 0.830 GHz

Calibration status:
File: L239-MACOM_C
Table: DIPOLE(760
Chan.: Ch1
Units: dBi



FR959 Plus
Automated Antenna
Measurement Systems

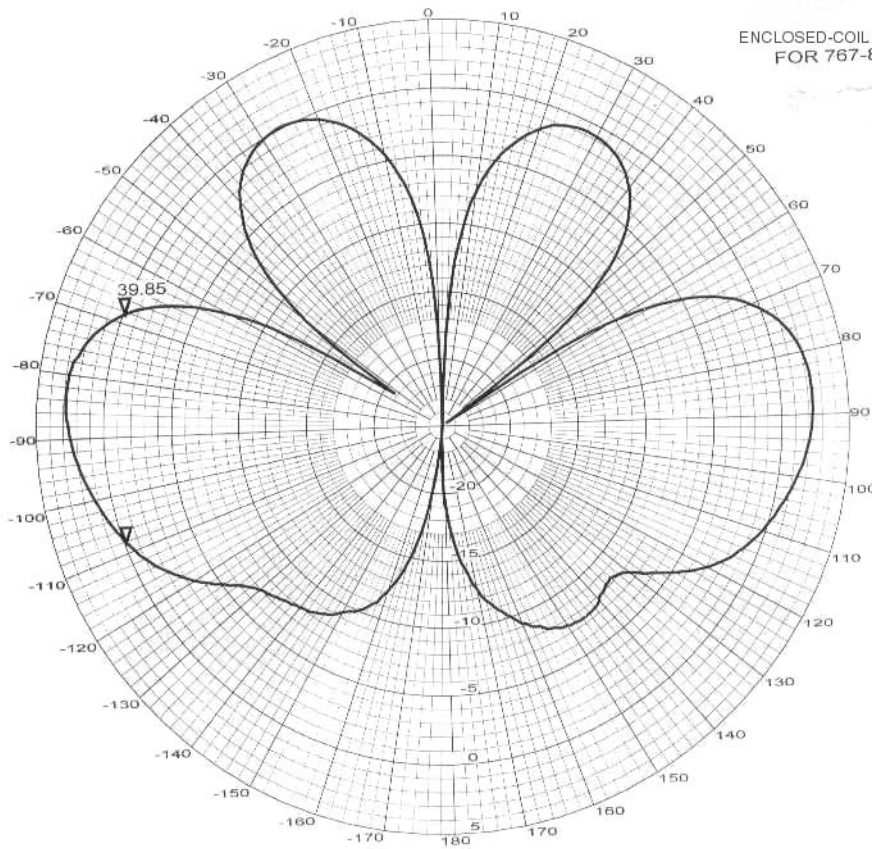
Magnitude (dB) vs.Elevation (Deg)

ENCLOSED-COIL WHIP ON CELL/GPS MOUNT ON 18" GP
FOR 767-870 MHZ MACOM

dBi GAIN

File: L239-MACOM_C_02.dat
Date: 09-Mar-04
Time: 10:16
Operator: jh
Ser. no.:
Channel: Ch1
Frequency: 0.764 GHz

Calibration status:
File: L239-MACOM_C
Table: DIPOLE(760
Chan.: Ch1
Units: dBi



FR959 Plus
Automated Antenna
Measurement Systems