

## Internal Mercury™

Part Number (P/N):

### 3V AMPS, PCS & GPS Telematics Antenna

**CAF94246**    **CAF94286**  
**CAF94401**    **CAF94395**  
**CAF94457**

#### Features:

- High gain solution maximizes coverage area
- Small size and low profile allow for stealth (covert) in-vehicle automotive applications such as fleet management, asset tracking and anti-theft systems
- Sleek durable housing for longer lifespan and easier transfer between vehicles.



#### Electrical Specifications:

	AMPS Specifications	PCS Specifications	GPS Specifications
<b>Element Type</b>	Microstrip	Microstrip	Dielectrically Loaded Patch
<b>Frequency Ranges</b>	824 - 896 MHz	1850 -1990 MHz	1575.42 MHz
<b>Gain</b>	3 dBi Nominal	3 dBi Nominal	30 dBi Nominal
<b>Polarization</b>	Linear	Linear	RHCP
<b>Impedance</b>	50 ohms	50 ohms	50 ohms
<b>Input Power (max)</b>	10 watts	10 watts	
<b>Axial Ratio</b>			3 dB maximum
<b>VSWR (min performance)</b>	2:1 MAX	2:1 MAX	2:1 MAX
<b>LNA * Gain</b>	-	-	31 dBi
<b>LNA * Noise Figure</b>	-	-	1.5 dB MAX (23 <sup>0</sup> C)
<b>LNA * Supply Voltage</b>	-	-	2.7 – 3.3 VDC
<b>LNA * Current Consumption</b>	-	-	18 mA typical 25mA MAX @ 3 VDC
<b>Dimensions (L x W x H)</b>	5.12" x 2.59" x .51"		
<b>Radome Material</b>	Cyclogy		

\* LNA – Low Noise Amplifier

#### Environmental Specifications:

<b>Shock/Drop/Vibration</b>	50 g shocks 10x 3 axes, 1 meter drops 6 axes; 10 – 1000 Hz vibration 1 hour 3 axes
<b>Temperature</b>	Thermal shock -40 <sup>0</sup> to +70 <sup>0</sup> C < 2 minutes Thermal soak 100 hours 85 <sup>0</sup> C
<b>Operating Temperature</b>	-40 <sup>0</sup> to +70 <sup>0</sup> C
<b>Storage Temperature</b>	-40 <sup>0</sup> to +85 <sup>0</sup> C
<b>Solvents</b>	Resists washer solvents, gasoline, engine coolant
<b>Humidity</b>	Operation 95% RH at 65 <sup>0</sup> C
<b>Corrosion</b>	Resists limited exposure to salt fog

#### Cables & Connectors:

Antenna P/N	Patch Connector	GPS Connector	Cable Length
<b>CAF94246</b>	SMA – Male	SMC- Male	*5 m
<b>CAF94286</b>	SMA – Male	SMA – Male	*5'
<b>CAF94401</b>	SMC – Male	SMA – Male	*15'
<b>CAF94395</b>	SMA – Male	MMCX-Male straight	*15'
<b>CAF94457</b>	SMC – Male	SMA – Male	*5'

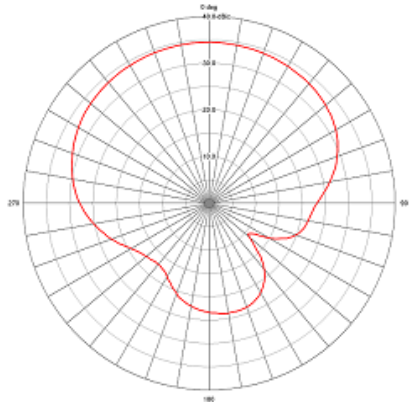
\*Supplied with black low-loss RG-174 coax

Specifications subject to change without notice.

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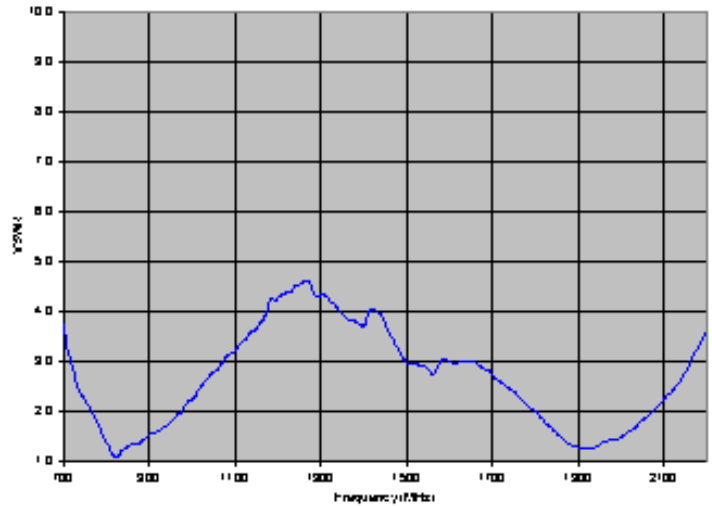
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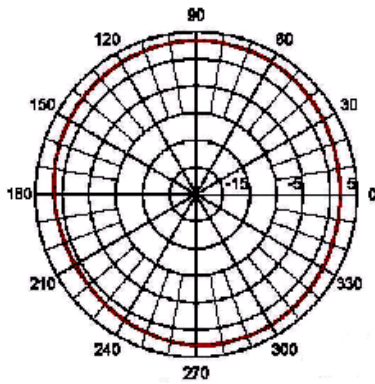


Typical GPS Elevation Pattern

### Typical VSWR performance AMPS/PCS

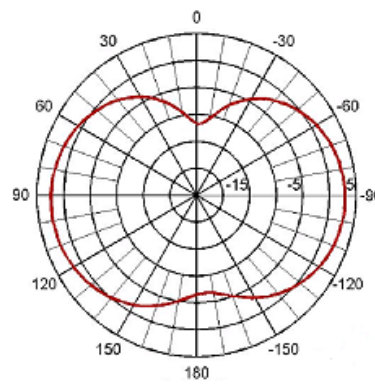


AMPS



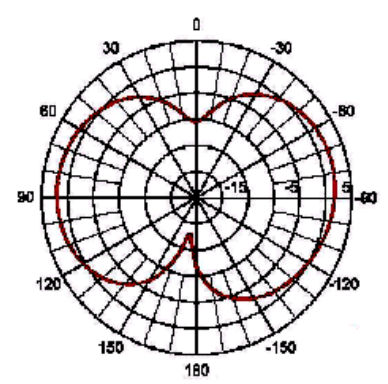
**Azimuth, 861 MHz**

Azimuth perpendicular to antenna, parallel to cable



**Elevation Phi=0, 861 MHz**

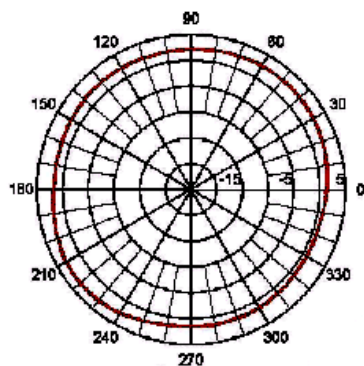
Elevation perpendicular to antenna, parallel to cable



**Elevation Phi=90, 861 MHz**

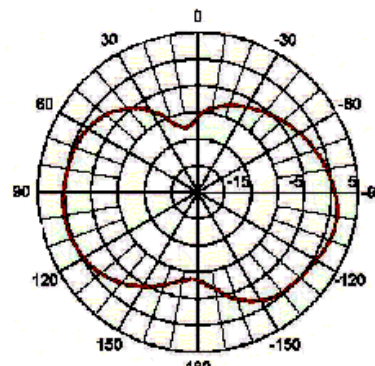
Elevation parallel to antenna, parallel to cable

PCS



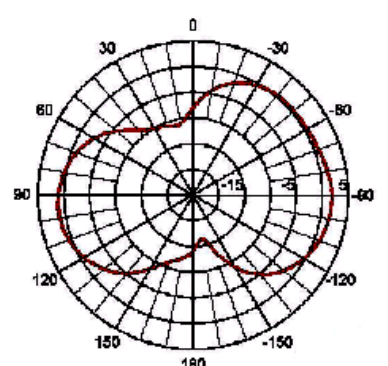
**Azimuth, 1920 MHz**

Azimuth perpendicular to antenna, parallel to cable



**Elevation Phi=0, 1920 MHz**

Elevation perpendicular to antenna, parallel to cable



**Elevation Phi=90, 1920 MHz**

Elevation parallel to antenna, parallel to cable

Specifications subject to change without notice.

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