AN-225001-003
764-870 MHz Elevated Feed Antenna

Dual Band Elevated Feed Point Antenna - No Tune

The AN-225001-003 elevated feed point antenna provides 3 dBd gain performance with a low VSWR and no tuning required. It is designed to provide a one model solution for the most demanding mobile communications requirements. The elevated feed point antenna kit is designed for vehicles without a ground plane.

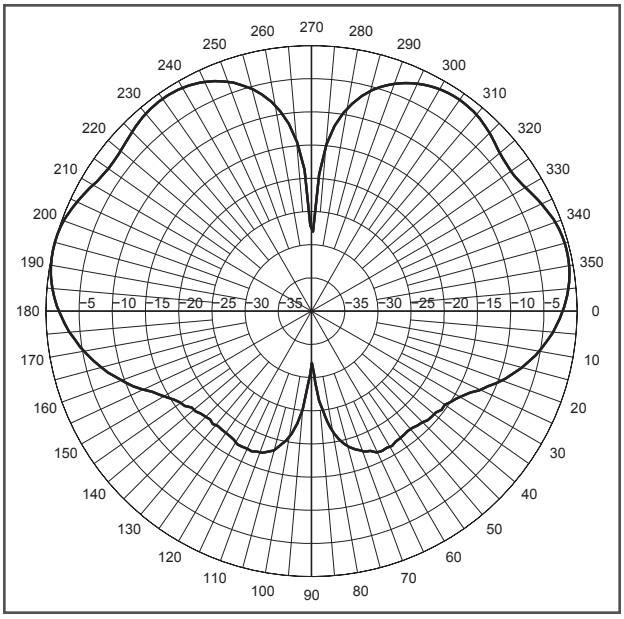
764-870 MHz

Electrical Specifications

Frequency Range:
764-870 MHz
Maximum Power:
125 Watts
Gain:
3 dBd typical
VSWR:
< 1.75:1
Nominal Impedance:
50 Ohms
Polarization:
Vertical, linear

Mechanical Specifications

Radiator Material:
.100” diameter, black closed coil stainless steel
Spring:
Black, stainless steel
Phasing Coil Housing:
Molded polymer jacket with copper, nickel and chrome brass bushing
Antenna Length:
Approximately 22 inches



Vertical Cut

New Product Data Sheet

Tyco Electronics
AN-125001-006

Standard Roof Mount low loss with GPS

- Low-Profile aesthetics for minimal visibility and high pressure car wash survivability
- UV Stabilized, High Impact Xenoy™ housing
- Rugged aluminum die cast base for high strength mechanical mounting and reliability
- Silicone Rubber gasket and dual O-ring seals for waterproof installation
- Premium low loss foam, 195 type cable

NMO Mount Electrical Specifications

Frequency Band	30 – 1000 MHz
VSWR [1]	1.5:1 typical
Impedance	50Ω
Cable Insertion Loss	2 dB, max
Power Rating	100 W

1. Antenna / Frequency Dependent

GPS (L1) LNA and Filter Specifications

Frequency Bandwidth (L1)	1575.42 ± 3 MHz
Input / Output VSWR	2.0:1 max
Impedance	50Ω
Gain	28 dB typical
Noise Figure (dB)	1.5 typical, 2.0 max
Operational Voltage (Vdc) Current Drain (Idc)	3.0 - 5.5 V 7.0 - 15.5 mA
Filter Type Filter Attenuation L1 ±50 MHz	SAW 30 dB min
Power Handling, Input	10 W
Passive Element	
Center Frequency Band	1575.42 MHz
Antenna VSWR	1.5:1 max
Impedance	50Ω
Polarization	RHCP

Mechanical Specifications

Height	0.88 in. (22.4 mm)	Color	Black
Width	2.2 in. (55.9 mm)	GPS Radiator	Ceramic, Silver
Length	4.5 in. (114.3 mm)	Operating Temperature	-40° to 85° C
Mounting Application	Bulkhead, ¾ in. Thru-Hole	Corrosion	Salt Fog
Low Loss Cable (NMO)	195 type; 17 ft. (5.1 m)	Humidity	95%
Cable GPS	RG-174/U; 17 ft. (5.1 m)		
Connector NMO	Sold Separately		
Connector GPS	SMA Plug		

ELECTRO-MAGWAVE, INC.
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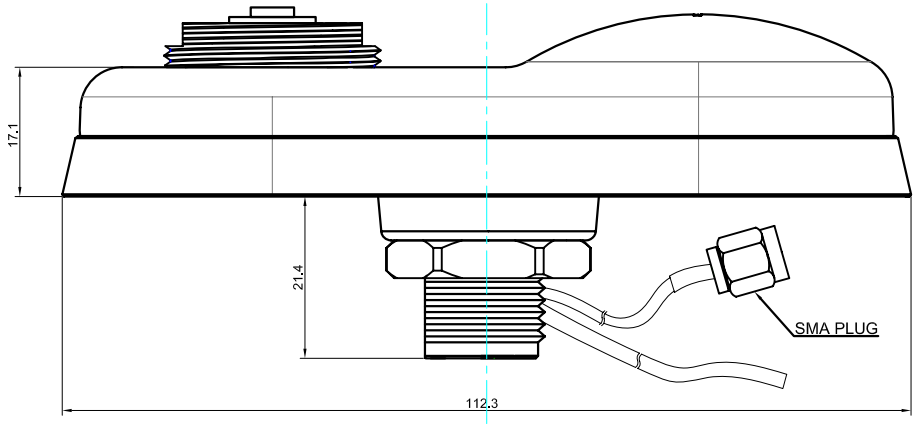
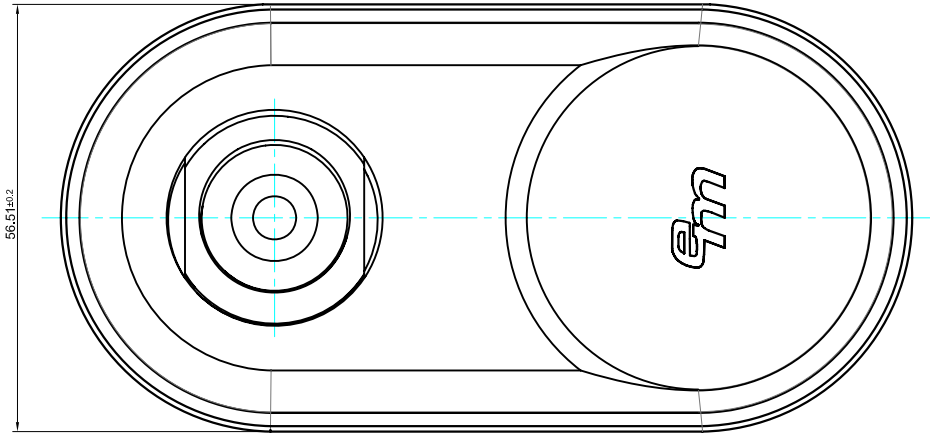
REVISIONS		
REV	ECN	DATE MM/DD/YY

NOTES

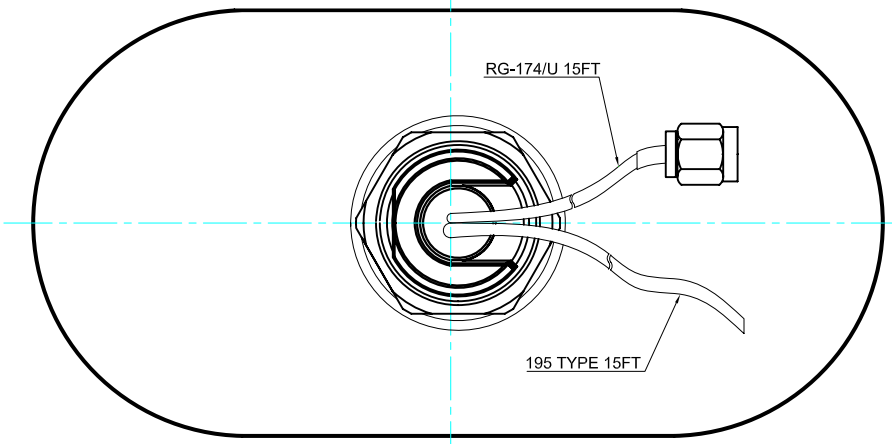
SEE SPECIFICATION SHEET 2



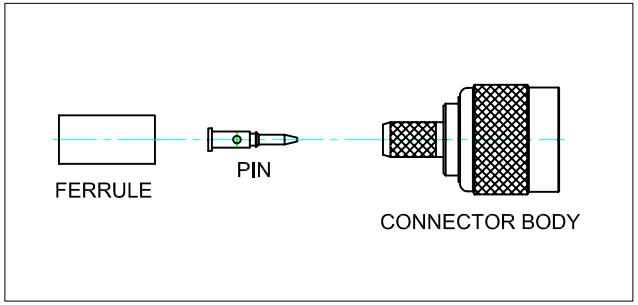
SIDE VIEW



TOP VIEW



BOTTOM VIEW



TNC PLUG

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STANDARD ROOF MOUNT LOW LOSS WITH GPS

SCALE	DRAWN BY	DATE	SHEET
1:1	AM	09/15/09	1 OF 2

TOLERANCE	SIZE	DRAWING NO.	REVISION
.xx = .25 .xxx = .127 Angle = ±1°	A	AN-125001-006	A

REVISIONS		
REV	ECN	DATE MM/DD/YY

NOTES

Specifications Comply with AN-125001-00 6 Rev P1, Section 13.0

13.1 Electrical Specifications - GPS Antenna

13.1.1	Frequency:	1575.42 (L1) ± 1 MHz
13.1.2	LNA Gain:	22-28 dB (typ)
13.1.3	Power Handling:	No Damage from NMO Antenna at Rated Power
13.1.4	VSWR (end of cable):	2:1 (max)
13.1.5	Impedance:	50Ω (nom)
13.1.6	Noise Figure:	1.5 dB (typ); 2 dB (max)
13.1.7	Axial Ratio:	1 dB (typ); 3 dB (max)
13.1.8	DC Bias:	2.7-3.3 and 4.8 - 5.5 VDC (source regulated)
13.1.9	DC Current:	16 mA (max)
13.1.10	Polarization:	RHCP
13.1.11	Filter Attenuation:	20 dB (min) @ L1 ± 50 MHz
13.1.12	Interference:	Shielded to resist de-sense and performance degradation while transmitting in VHF, UHF, 700/800/900 MHz Bands
13.1.13	FCC Requirement:	Complies with Part 15

13.2 Mechanical Specifications

13.2.1 General Specifications

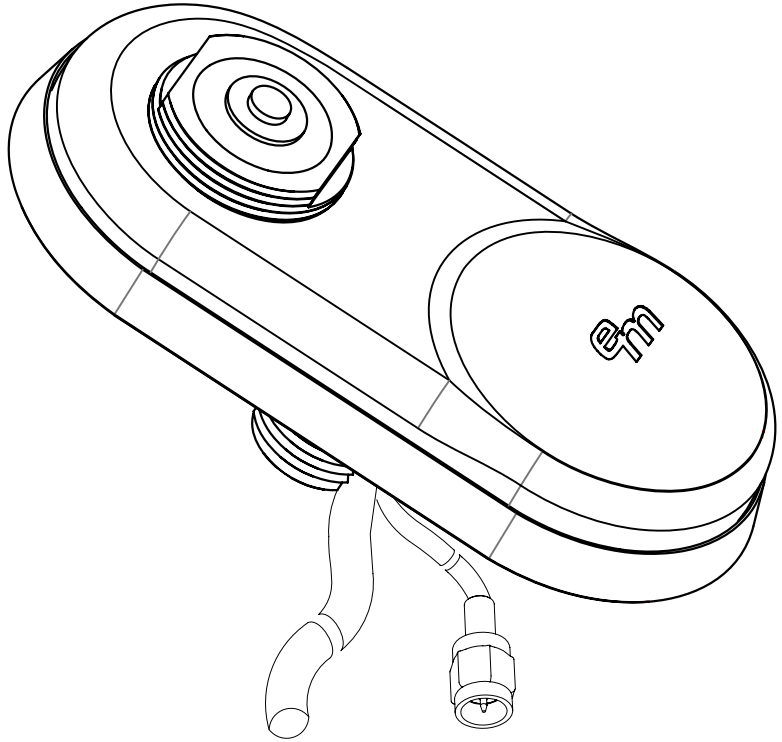
13.2.1.1	Construction:	
	Radome:	XENOY™
	Base Mount:	Aluminum Die-Cast
13.2.1.2	Finish:	Non-Corrosive, Rugged, Weather Resistant Materials
13.2.1.3	Color:	Black, Light Texture, Matte Finish
13.2.1.4	Weather Sealing:	Integrated O-Ring and Base Pad, Silicone Rubber
13.2.1.5	Coaxial Cable:	195 type (NMO); RG-174/U (GPS) Length (both): 15 ft. (4.57m) (min)
13.2.1.6	Mounting Hardware:	Brass Mounting Nut, Nickel Finish Steel Washer, Nickel Finish
13.2.1.7	Antenna-Base Interface:	NMO Type

13.2.2 Roof Mounting Requirements

13.2.2.1	Mounting Hole:	3/4 in. (19.05mm) dia.
13.2.2.2	Mounting Thickness:	3/16 in. (4.76mm) (min)
13.2.2.3	Cable Exit:	Cables exit directly from bottom of mounting base and to within 1.25 in. (31.8mm) from top mounting surface

13.3 Connectors

13.3.1	NMO Connector:	TNC (male plug), loose
13.3.2	GPS Connector:	SMA (male plug), attached, solder type



ISOMETRIC VIEW

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TOLERANCE .xx = .25 .xxx = .127 Angle = ±1°

STANDARD ROOF MOUNT
LOW LOSS WITH GPS

SCALE	DRAWN BY	DATE	SHEET
1:1	AM	09/15/09	2 OF 2

SIZE	DRAWING NO.	REVISION
A	AN-125001-006	A