

## Overview

The Southwest Antennas GPS Passive L1 Antenna is a high-performance and ruggedized product designed for GPS receivers, manpack, hand-held, and small form factor radio systems.

Key features include a quadrifilar helical antenna design, excellent axial ratio, compact size, and light weight. These features make the antenna capable of receiving a clear GPS signal even in very congested and noisy RF environments.

Southwest Antennas part # 1027-003 features a SMA(m) non-rotating RF connector, and is IP67 rated.

## Features:

- GPS L1 frequency  $\pm 10.23$  MHz bandwidth
- Small form factor
- Ultra light-weight design
- Ruggedized design
- Ground plane independent
- Recessed SMA male interface
- Exceptional pattern bandwidth
- Waterproof to 20 meters (65.6 ft.)

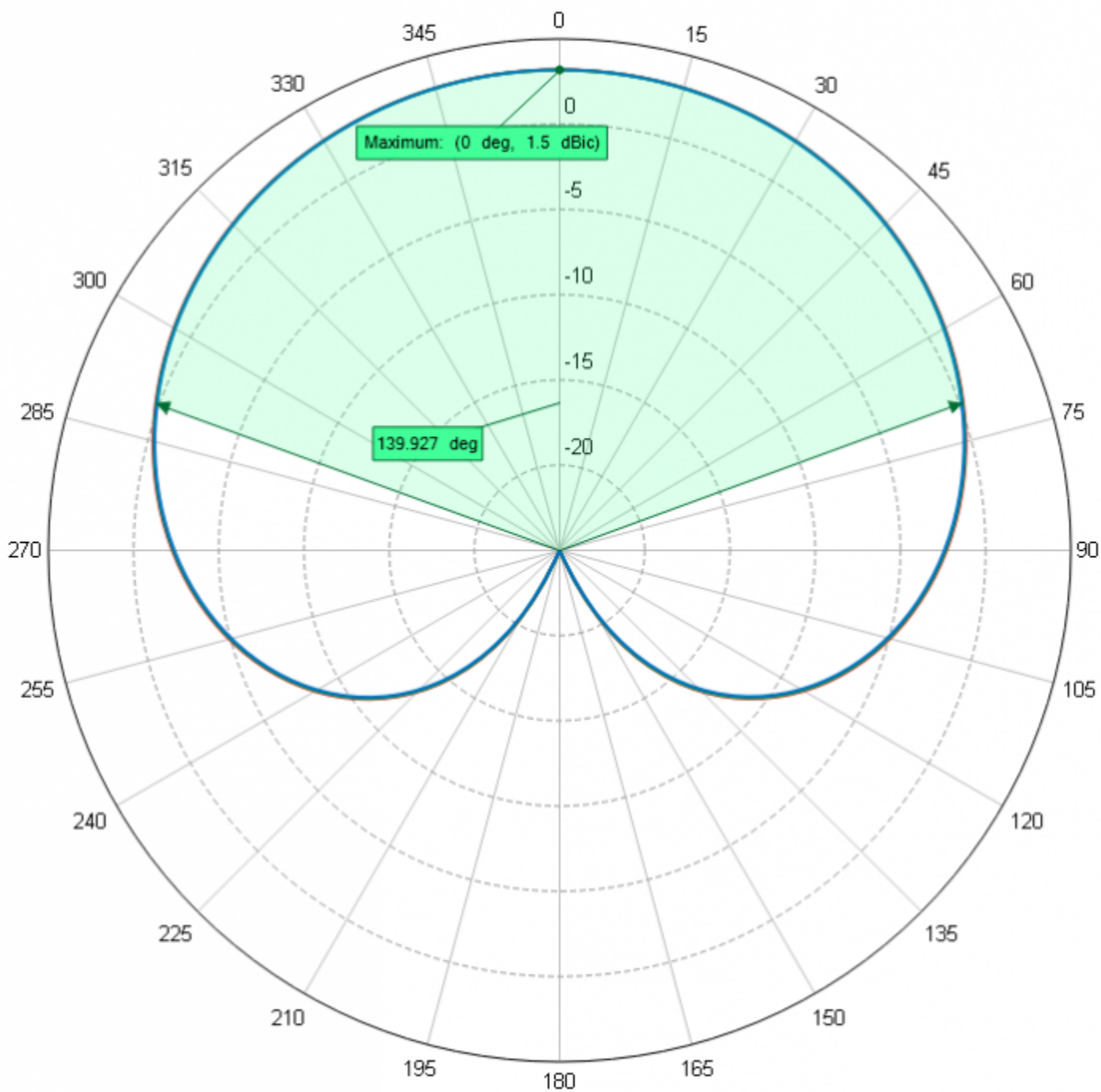
## Applications

- Navigation systems
- Military and security
- Manpack radios
- Handheld radios
- Small form factor radios
- Low profile vehicle mounts
- Unattended/ Intelligent Munitions Systems
- Dismounted soldier-level communications
- Unmanned ground vehicles
- I.E.D. recognition & destruction jamming systems
- Asset tracking
- Precision timing
- LBS & M2M applications
- Oil & gas industries
- Law enforcement
- Mobile computing
- UAV systems



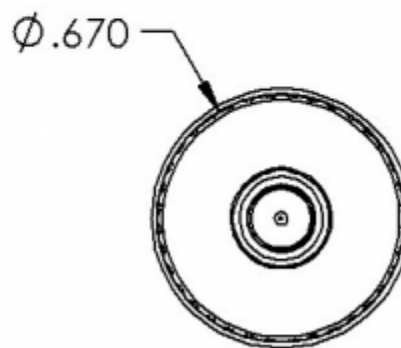
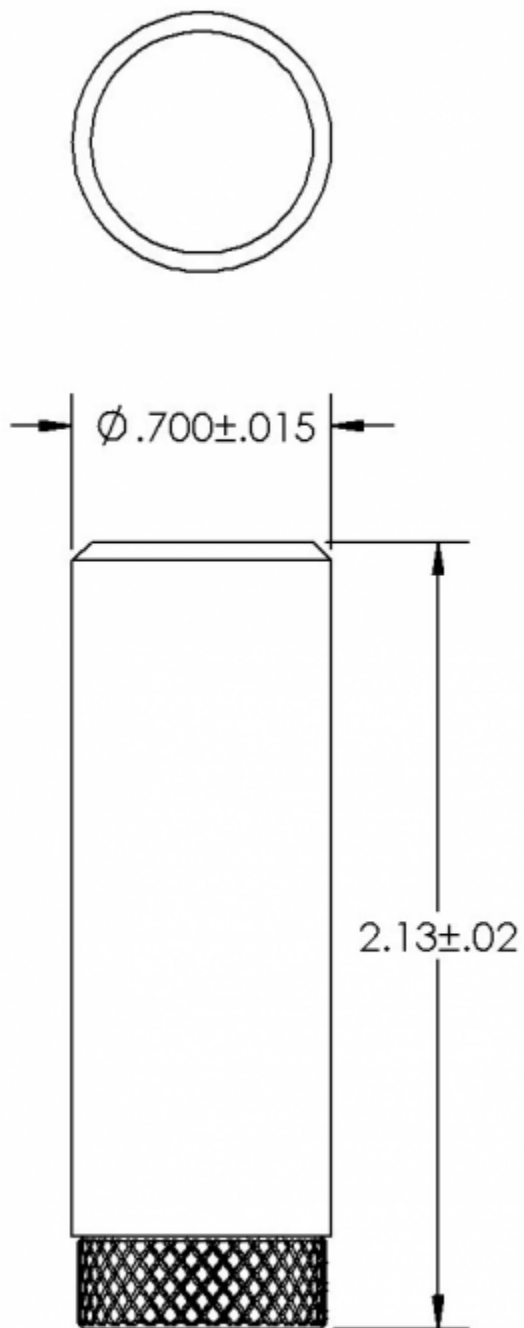
## Product Specifications

Parameter	Value	Units	Tolerance
Antenna Pattern	Hemispherical Antenna		
Frequency Band	GPS L1		
Impedance	50	Ohms	
Minimum Frequency	1.565 / 1,565	GHz / MHz	
Maximum Frequency	1.585 / 1,585	GHz / MHz	
Frequency Bandwidth	0.02 / 20	GHz / MHz	
Maximum VSWR	2.0:1	ratio	
Maximum Gain	1.50	dBic	±0.5 dB
Axial Ratio	1.0	dB	
Polarization	RHCP		
Horizontal (AZ) Beamwidth	140	degrees	
Vertical (EL) Beamwidth	140	degrees	
Radome Material	Delrin 527 UV stable		
Color	Black		
RF Connector Type	SMA(m)		
IP Rating	IP67 (mated and unmated)		
Product Height	2.13 / 54.10	inches / mm	± .02
Product Diameter	0.70 / 17.78	inches / mm	
Product Weight	1.1 / 31.2	oz / grams	



**Elevation Pattern**

RHCP Gain referenced to +5 dBic



BOTTOM VIEW

**Engineering Drawing**

All dimensions are in inches