

Overview

Southwest Antennas Part # 1027-010 is a high-performance, ruggedized GPS Passive L1 Antenna designed for GPS receivers, manpack, hand-held, and small form factor radio systems. This antenna features an integrated 3.42 inch RF coaxial gooseneck assembly that allows for flexible antenna positioning. The gooseneck is sealed with Polyolefin heat shrink providing a waterproof seal to 20 meters / 65.6 ft.

Key product 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

Features:

- GPS L1 frequency ± 10.23 MHz bandwidth
- Small form factor
- Ultra light-weight design
- Exceptional pattern bandwidth
- Ground plane independent
- Ruggedized design
- Non-rotating black chrome SMA(m) RF connector
- Integrated RF coaxial gooseneck assembly with Polyolefin heat shrink seal
- Waterproof to 20 meters (65.6 ft.)

Applications

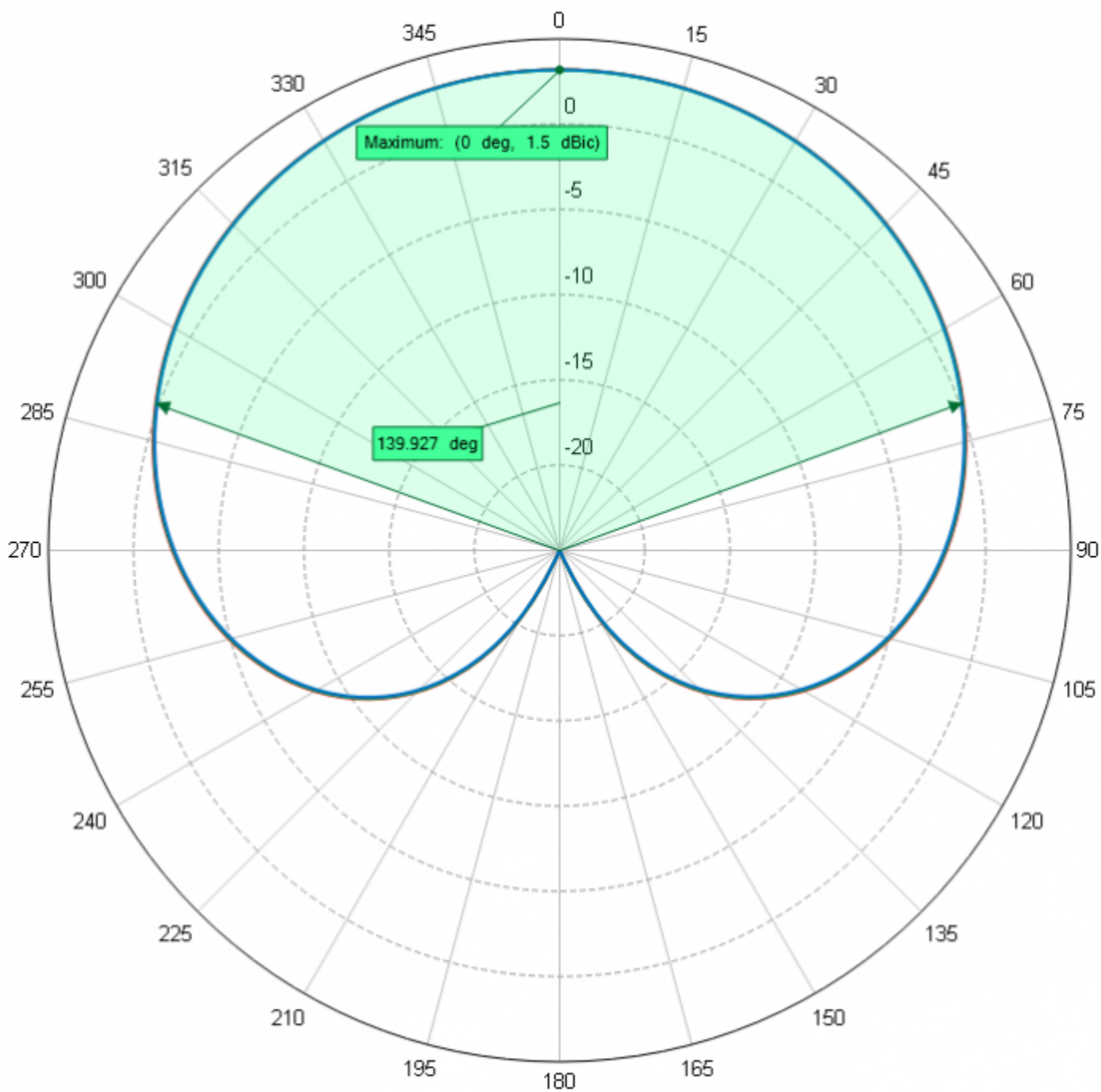
- Navigation systems
- Military and security
- Manpack radios
- Handheld radios
- Small form factor radios
- Low profile vehicle mounts
- Unattended/ Intelligent Munitions Systems
- Dismounted soldier-level communications
- Unmanned ground vehicles
- I.E.D. recognition & destruction jamming systems
-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



Product Specifications

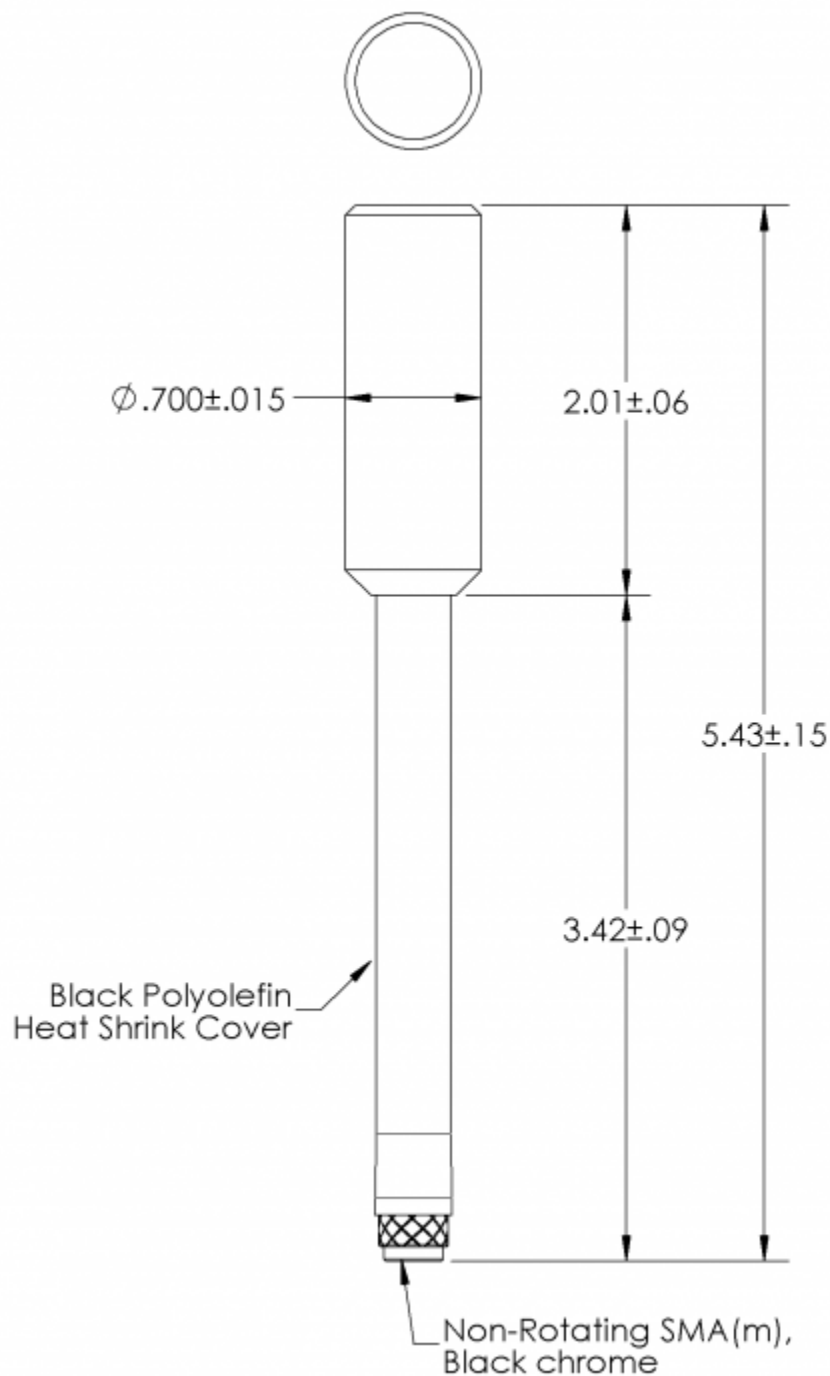
Parameter	Value	Units	Tolerance
Antenna Pattern	Hemispherical Antenna		
Frequency Band	GPS L1		
Impedance	50	Ohms	
Minimum Frequency	1.565 / 1,565	GHz / MHz	
Maximum Frequency	1.585 / 1,585	GHz / MHz	
Frequency Bandwidth	0.02 / 20	GHz / MHz	
Maximum VSWR	2.0:1	ratio	
Maximum Gain	1.50	dBic	±0.5 dB
Axial Ratio	1.0	dB	
Polarization	RHCP		
Horizontal (AZ) Beamwidth	140	degrees	
Vertical (EL) Beamwidth	140	degrees	
Radome Material	Delrin 527 UV stable		
Color	Black		
Spring or Gooseneck	Gooseneck		
Gooseneck Length	3.42 / 86.87	inches / mm	±.09" (including RF connector)
Immersion	Waterproof to 20 meters / 65.6 ft		
RF Connector Type	SMA(m) Non-Rotating		
RF Connector Features	Black Chrome		
IP Rating	IP67 (mated and unmated)		
Product Height	5.43 / 137.92	inches / mm	±.15"

Parameter	Value	Units	Tolerance
Product Diameter	0.70 / 17.78	inches / mm	±.015"
Product Weight	1.5 / 42.5	oz / grams	



Elevation Pattern

RHCP Gain referenced to +5 dBic



Engineering Drawing

All dimensions are in inches