

Overview

Southwest Antennas Part # 1065-029 is a left hand circularly polarized (LHCP) directional patch antenna that is designed to be light weight and easily worn and hidden in tactical clothing such as vests or MOLLE gear. This body worn antenna is ideal for use in multi-antenna MIMO / MANET radio applications such as handheld and small form factor body worn tactical radios.

The antenna's directional LHCP radiation pattern and axial ratio below 3 dB offers robust network connections, and allows radios to connect even when not directly facing one another or within clear line-of-site. With an operating frequency range covering 2.1 - 2.5 GHz the design offers excellent performance in DHS/DOJ licensed radio spectrum while also offering excellent performance in the 2.4 GHz ISM band. Extensive field testing has shown that these antennas provides superior RF performance, ensure long range radio communication links, and provide high data rate throughput when used with MANET / MIMO self-forming, self-healing radio networks, or SISO radio systems.

Weighing only 1.3 ounces, #1065-029 features a high performance black chrome SMA(f) RF connector and waterproof, UV stable radome that can withstand immersion in 20-meters (65.6 ft.) of salt water for two hours if the RF connector is mated or sealed with a protective end cap.

In addition to body-worn applications, the free space performance of this antenna makes it ideal for many field applications in point-to-point or multi-antenna mesh configurations, including fixed site infrastructure and mobile antenna applications.

This product is considered "Dual Use" (Non-ITAR) by the US State Department and falls outside of Code of Federal Regulations title 22 (CFR) parts 120-130.

Features

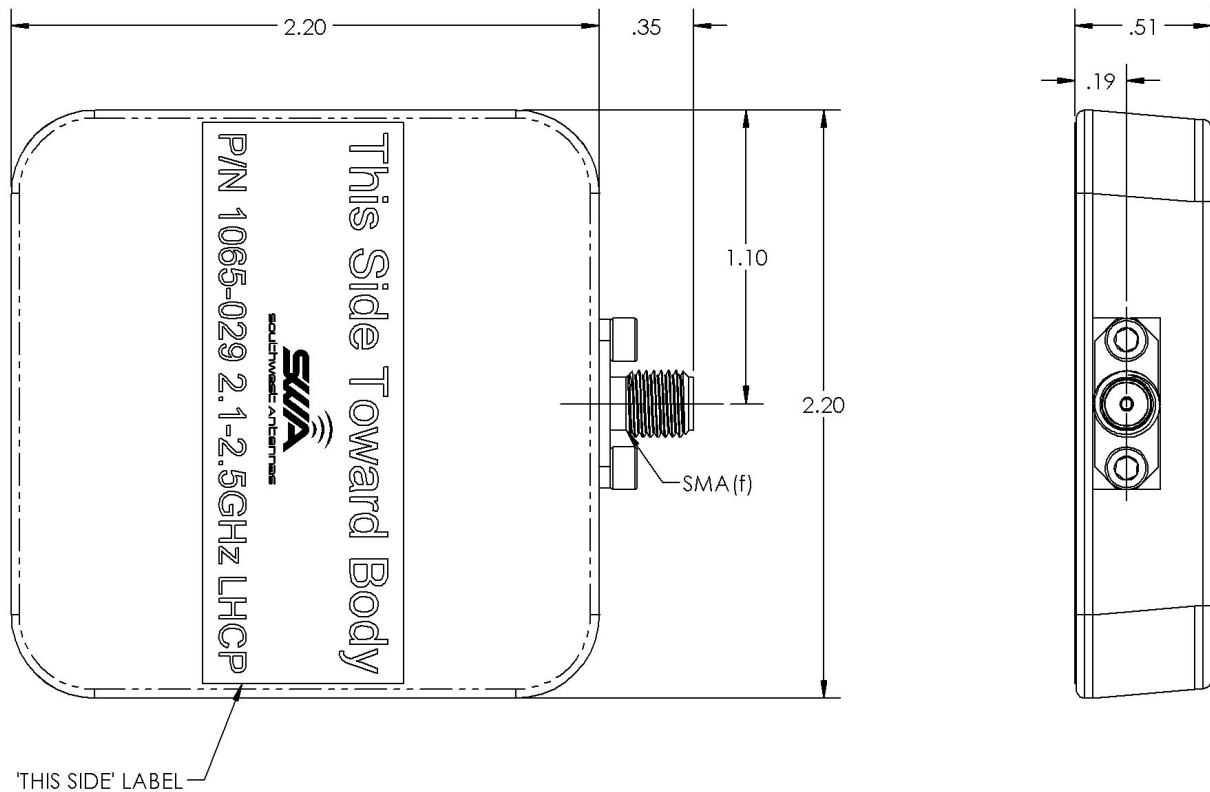
- 2,100 - 2,500 MHz
- Left Hand Circular Polarization
- Light Weight
- Designed Specifically for Use Against the Body Inside of Tactical Gear
 - 2.2 Inches L x H and Only 0.5 Inches Thick
- Rugged Design, UV Stable Housing
- Water Proof to 20 Meters for Two Hours (When RF Connector is mated)
- Black Chrome RF Connector
- Markets and Applications include:
 - Military / Defense
 - Law Enforcement
 - Security
 - Body Worn Radios & Systems
 - Ideal for DHS / DOJ licensed bands or unlicensed 2.4 GHz ISM Band



Product Specifications

Parameter	Value	Units	Tolerance
Frequency Band	S		
Impedance	50		
Minimum Frequency	2.1 / 2,100	GHz / MHz	
Maximum Frequency	2.5 / 2,500	GHz / MHz	
Frequency Bandwidth	0.4 / 400	GHz / MHz	
Maximum VSWR	2.5:1	Ratio	
Maximum Gain	4.20	dBic	On Body Measurement (4.5 dBic in Free-Space)
Polarization	LHCP		
Color	Black		
Axial Ratio	3	dB	Maximum at Center Frequency
Maximum RF Input Power	10	Watts	
Horizontal AZ Beamwidth	104	Degrees	On Body Measurement (110 Degrees in Free-Space)
Vertical EL Beamwidth	88	Degrees	On Body Measurement (90 Degrees in Free-Space)
Antenna Labeling	Back Side with Part # and Frequency Range		
Radome Material	Lexan Plastic		
Ground Plane Required	No		
Mount Style	On-Body		
Immersion	20 meters in salt water for 2 hours (mated)		
RF Connector Type	SMA(f)		

Parameter	Value	Units	Tolerance
RF Connector Finish	Black Chrome		
Operating Temperature Range	-40 to +85	Celsius	
ESD Protection	IEC 61000-4-2, Level 4 ± 8 kV contact discharge and ± 15 kV air gap		
Product Length	2.2 / 55.9	inches / mm	
Product Width	2.2 / 55.9	inches / mm	
Product Height	.51 / 12.95	inches / mm	
Product Weight	1.30 / 36.85	oz / g	



Engineering Drawing

All dimensions are in inches