

Overview

Southwest Antennas Part # 1065-039 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 4.4 - 5.0 GHz the design offers excellent performance for radios operating in DoD and federal law enforcement licensed bands. 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 ounce, #1065-039 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:

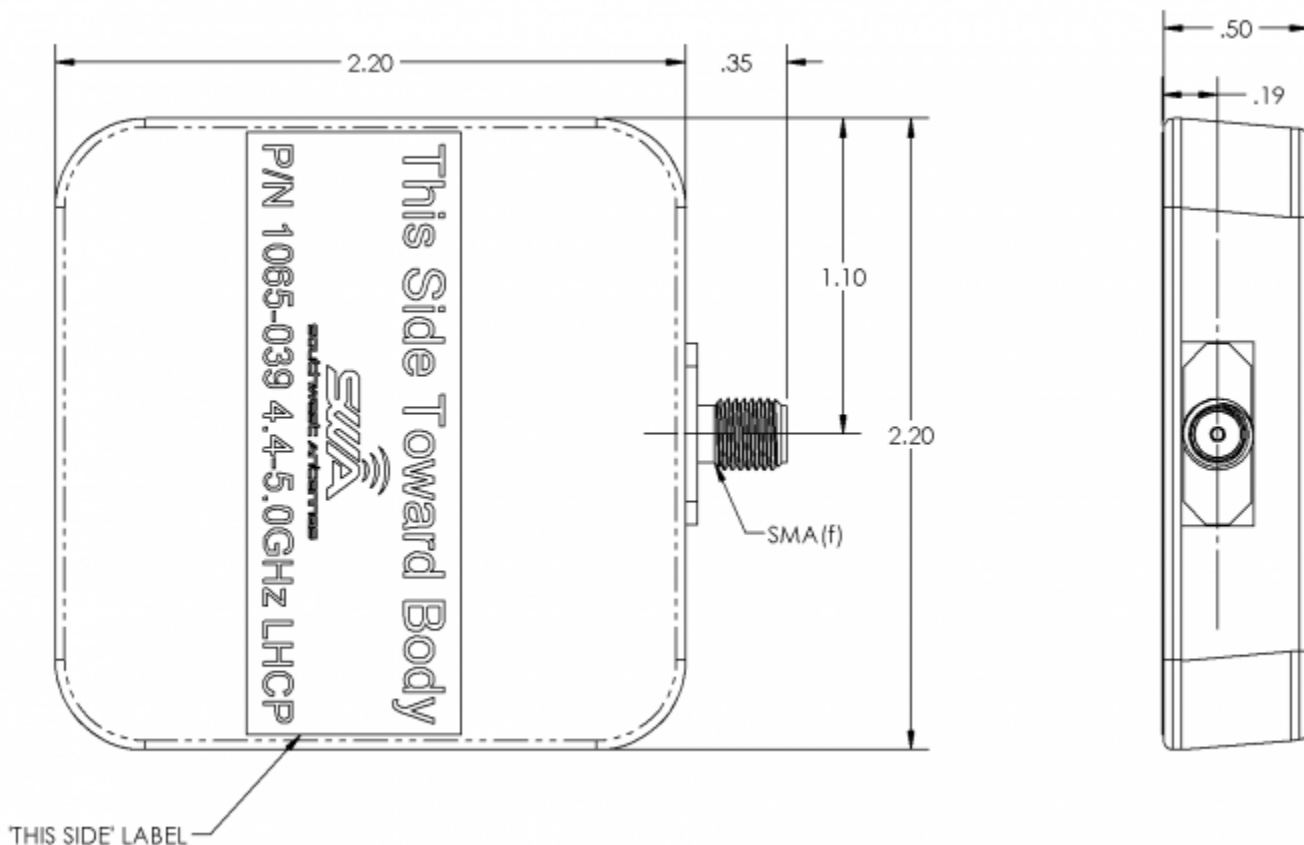
- 4,400 - 5,000 MHz
- Left Hand Circular Polarization
- Light Weight
- Designed Specifically for Use Against the Body Inside of Tactical Gear
 - 2.2 Inches L x W and Only 0.5 Inches H
- Rugged Design, UV Stable Housing
- Water Proof to 20 Meters for Two Hours (When RF Connector is mated)
- Black Chrome RF Connector
- Markets and Applications include:
 - Military / Defense
 - Law Enforcement
 - Security
 - Body Worn Radios & Systems
 - Ideal for use with DoD / federal law enforcement licensed bands



Antenna Specifications

Parameter	Value	Units	Tolerance
Antenna Pattern	Directional Antenna		
Frequency Band	C		
Impedance	50	Ohms	
Minimum Frequency	4.4 / 4,400	GHz / MHz	
Maximum Frequency	5.0 / 5,000	GHz / MHz	
Frequency Bandwidth	0.6 / 600	GHz / MHz	
Maximum VSWR	2:1	Ratio	
Maximum Gain	4.20	dBic	On Body Measurement (4.5 dBic in Free-Space)
Axial Ratio	3	dB	Maximum at Center Frequency
Polarization	LHCP		
Maximum RF Input Power	10	Watts	
ESD Protection	IEC 61000-4-2, Level 4 ±8kV contact discharge and ±15kV air gap		
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)
Ground Plane Required	No		
Antenna Labeling	Back Side with Part # and Frequency Range		
Radome Material	Lexan Plastic		
Color	Black		
Mount Style	On-Body		
Immersion	20 meters in salt water for 2 hours (mated)		

Parameter	Value	Units	Tolerance
RF Connector Type	SMA(f)		
RF Connector Features	Black Chrome		
Operating Temperature Range	-40 to +85	Celsius	
Product Length	2.20 / 55.88	inches / mm	
Product Width	2.20 / 55.88	inches / mm	
Product Height	0.50 / 12.70	inches / mm	
Product Weight	1.0 / 28.3	oz / grams	



Engineering Drawing

All dimensions are in inches