

ANT-2.4-CW-RCT-xx

Data Sheet

Product Description

The RCT Series $\frac{1}{2}$ -wave antenna delivers outstanding performance with an innovative articulating base that allows it to tilt 90° and rotate 360° for optimum orientation. The antenna's internal counterpoise eliminates external ground plane dependence and maximizes performance. The RCT attaches via a standard SMA or Part 15 compliant RP-SMA connector

Features

- Internal counterpoise
- Tilts and rotates
- Excellent performance
- Omni-directional pattern
- Very low VSWR
- Fully weatherized
- Rugged and damage-resistant
- Standard SMA or Part 15 compliant RP-SMA connector

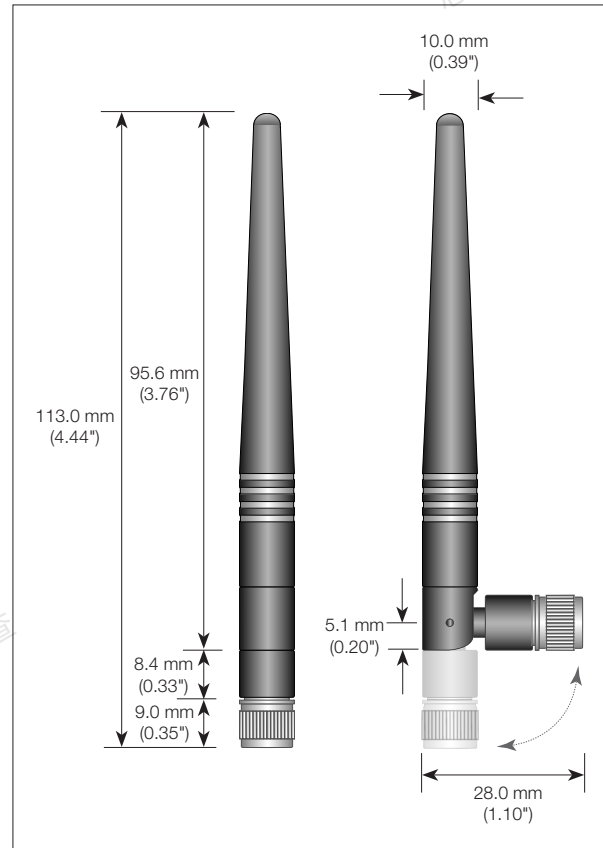
Electrical Specifications

Center Frequency:	2.45GHz
Recom. Freq. Range:	2.40–2.50GHz
Wavelength:	$\frac{1}{2}$ -wave
VSWR:	≤ 1.9 typical at center
Peak Gain:	2.2dBi
Impedance:	50-ohms
Connector:	RP-SMA
Oper. Temp. Range:	-40°C to $+90^\circ\text{C}$

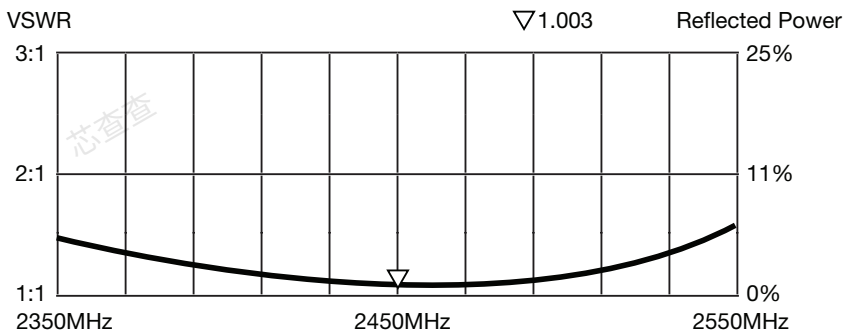
Electrical specifications and plots measured on 10.16 cm x 10.16 cm (4.00" x 4.00") reference ground plane

Ordering Information

ANT-2.4-CW-RCT-RP (with RP-SMA connector)
ANT-2.4-CW-RCT-SS (with SMA connector)



VSWR Graph



What is VSWR?

The Voltage Standing Wave Ratio (VSWR) is a measurement of how well an antenna is matched to a source impedance, typically 50-ohms. It is calculated by measuring the voltage wave that is headed toward the load versus the voltage wave that is reflected back from the load. A perfect match will have a VSWR of 1:1. The higher the first number, the worse the match, and the more inefficient the system. Since a perfect match cannot ever be obtained, some benchmark for performance needs to be set. In the case of antenna VSWR, this is usually 2:1. At this point, 88.9% of the energy sent to the antenna by the transmitter is radiated into free space and 11.1% is either reflected back into the source or lost as heat on the structure of the antenna. In the other direction, 88.9% of the energy recovered by the antenna is transferred into the receiver. As a side note, since the “:1” is always implied, many data sheets will remove it and just display the first number.

How to Read a VSWR Graph

VSWR is usually displayed graphically versus frequency. The lowest point on the graph is the antenna’s operational center frequency. In most cases, this will be different than the designed center frequency due to fabrication tolerances. The VSWR at that point denotes how close to 50-ohms the antenna gets. Linx specifies the recommended bandwidth as the range where the typical antenna VSWR is less than 2:1.