

# ANT-2.4-CW-QW

## Data Sheet



### Product Description

CW Series 1/2-wave antennas deliver outstanding performance in a rugged and cosmetically attractive package. The internal ground reference reduces dependence on an external ground plane. These antennas are available with standard SMA or FCC Part 15 compliant RP-SMA connectors. RP-SMA connectors allow for easy field replacement while complying with FCC requirements. A wide variety of matching connectors permit numerous mounting options.

### Features

- Low cost
- Excellent performance
- Omni-directional pattern
- Wide bandwidth
- Very low VSWR
- Fully weatherized
- Flexible main shaft
- Rugged & damage-resistant
- SMA or Part 15 compliant RP-SMA connector
- Use with plastic or metal enclosures

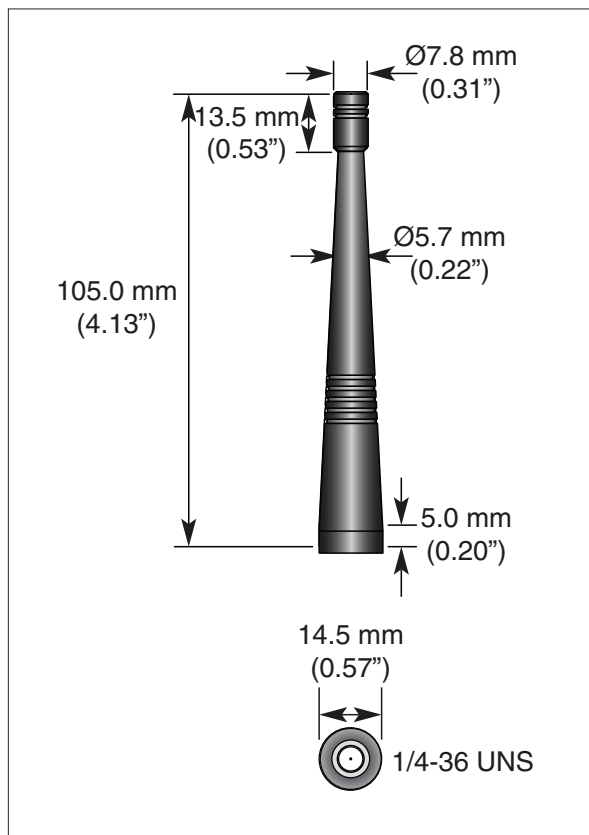
### Electrical Specifications

Center Frequency:	2.45GHz
Recom. Freq. Range:	2.35–2.60GHz
Wavelength:	1/2-wave
Peak Gain:	1.1dBi
VSWR:	<1.9 typ. at center
Impedance:	50-ohms
Connector:	RP-SMA or SMA
Oper. Temp. Range:	–40°C to +90°C

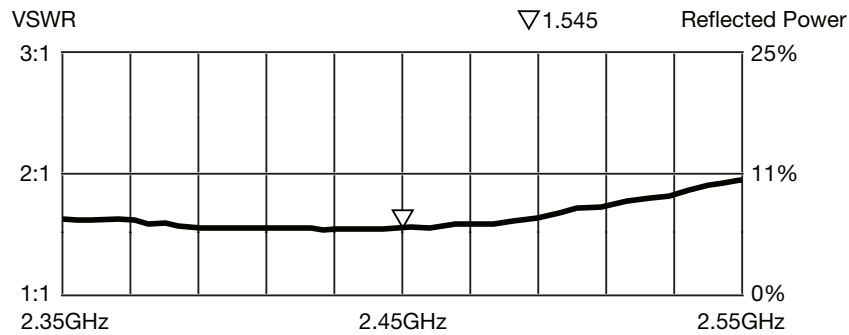
Electrical specifications and plots measured on 10.16 cm x 10.16 cm (4.00" x 4.00") reference ground plane

### Ordering Information

ANT-2.4-CW-QW-RPS (with RP-SMA connector)  
ANT-2.4-CW-QW-SMA (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.