REVISIONS					
REV.	DESCRIPTION	DATE	DRAWN	CHK'ED	APPRV
A	INITIAL RELEASE	11/5/2013	MSL	JCT	JFG

TITLE LINE 1	SENSOR, RF ANTENNA, LINX TECHNOLOGIES INC
TITLE LINE 2	P/N: ANT-2.4-CW-HW-SMA
GOV. OR COMMERCIAL SPEC. #	N/A
SUPPLIER PART #	ANT-2.4-CW-HW-SMA-ND
SUPPLIER CAGE CODE	2S894
PREFERRED SUPPLIER	DIGI-KEY
SUPPLIER ADDRESS	701 BROOKS AVENUE SOUTH THIEF RIVER FALLS, MN 56701 USA
SUPPLIER TELEPHONE	1-800-344-4539
SUPPLIER WEBSITE	☑ MANUFACTURER WEBSITE ☐ MANUFACTURER CATALOG
REFERENCE DATA SOURCE	
SPEC. SHEET LINK	https://www.linxtechnologies.com/resources/data-g
CATALOG ID	N/A

MANUF. PART #	ANT-2.4-CW-HW-SMA
MANUF. CAGE CODE	351T2
MANUFACTURER	LINX TECHNOLOGIES INC
MANUF. ADDRESS	575 SE ASHLEY PL GRANTS PASS, OR 97526
MANUF. TELEPHONE	1-541-471-6256
MANUF. WEBSITE	https://www.linxtechnologies.com/en/home

QinetiQ North America Technology Solutions Group

DRAWN:	SEE RB	SEE RB	SENSOR, RF ANTENNA, LINX TECHNOLOGIES INC P/N: ANT-2.4-CW-HW-SMA				
CHK'ED:	SEE RB	SEE RB					
APPRV:	SEE RB	SEE RB	C000216				REV
	SIZE	CAGE					A
	B	5B2G7	SHEET:	1	OF	2	

QNATSG1303 Form Rev C

ANT-2.4-CW-HW

Data Sheet

AntennaFactor by Linx

Product Description

HW Series ½-wave center-fed dipole antennas deliver outstanding performance in a rugged and cosmetically attractive package. The antenna contains a straight whip element and internal counterpoise which eliminates external ground plane dependence and maximizes performance. HW Series antennas attach via a standard SMA or Part 15 compliant RP-SMA connector. Custom colors and connectors are available for volume OEM customers.

Features

- Very low cost
- Internal counterpoise
- Excellent performance
- Omni-directional pattern
- Outstanding VSWR
- Rugged & damage-resistant
- Standard SMA or Part 15 compliant RP-SMA connector
- Internal O-ring seal on connector

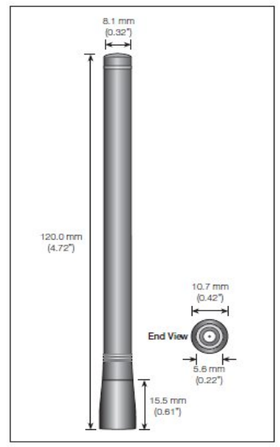
Electrical Specifications

Center Frequency:	2.45GHz
Recmd. Freq. Range:	2.3–2.6GHz
Wavelength:	½-wave
VSWR:	≤ 2.0 typical at center
Peak gain:	1dBi
Impedance:	50-ohms
Connection:	SMA or RP-SMA
Oper. Temp. Range:	–20°C to 70°C

Electrical specifications and plots measured with a 4.00" x 4.00" reference ground plane.

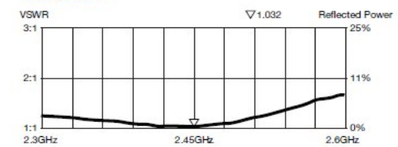
Ordering Information

ANT-2.4-CW-HW (with RP-SMA connector)
ANT-2.4-CW-HW-SMA (with SMA connector)



Revised 10/14/13

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.

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