



Picture of the Part (Showing Rev E. Current version is Rev F, described in pages 2 to 5)



Application

The WPANT40010-CF antenna is a high performance wrap-around antenna for Electric Meters that operates in both 900 MHz and 2.4 GHz ISM Bands. This particular Antenna was designed to work for Landis + Gyr SDS8RS & GE Kv2C meters. Standard cable is RG178 & connector is RA MMCX Plug.

WP Wireless can assist your engineers to optimize mounting positions for these antennas in your specific application and can further assist to trouble shoot system integration issues such as TRP/TIS and FCC requirements. Please contact sales@wp-wireless.com with your specific application requirements.

Electrical Properties

Parameter	Dual Band Antenna Performance	
	ISM 915 MHz	ISM 2.4 GHz
Operating Frequency [GHz]*	902 ~ 928MHz	2.40 ~ 2.50GHz
Recommended Impedance of the customer Radio Module[Ω]	50 Ohms	
VSWR installed in L&G Meter*	< 2.5:1	< 2.5:1
VSWR installed on GE meter*	< 3.2:1	<2.5:1
VSWR on a WPI Test Fixture	See Page #13	See Page #13
Peak Gain [dBi] (Typical)*	0 to 3 dBi	2 to 3.5 dBi
Efficiency (in %)*	30 to 60 %	40 to 65 %
Polarization	Linear	
Pattern	Near Omni-Directional	
Accepted Power [W] (Max)*	2 watts (+33dBm)	

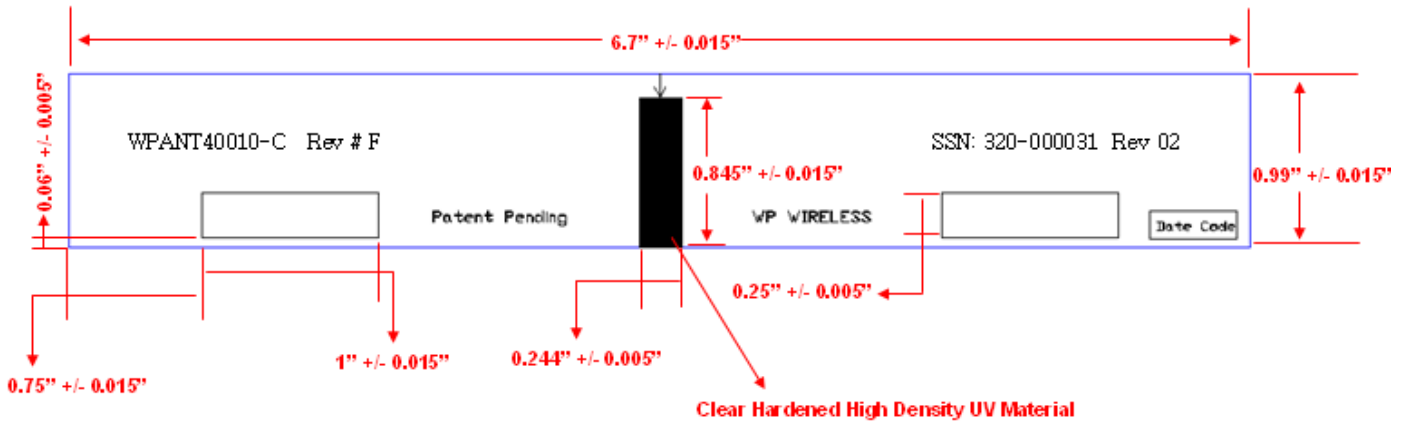
* **Note:** The above mentioned relevant performance metrics are recorded, with the Antenna in the meter that customer supplied to WP Wireless for R & D. Any modifications with regards to the application/use of this antenna (as defined in this specification) may change antenna performance characteristics. Performance will also vary based on the placement positions of the Antenna in the meter.



Mechanical/Environmental Properties

Item	Value
PCB Size	170mm X 25mm X 0.25mm
PCB	UL 94-V compliant
PCB Color	Blue
Operating / Storage Temperature	-40°C to +90°C
Humidity	<75% RH
Pull Strength	Max 1.5Kg/ft
Shock & Vibration	Complies with IEC61169-36 & MIL-STD-202
Environmental	Meets standards for UL 94V-0
Hazardous Materials	RoHS compliant

Drawings of the Antenna





Polycarbonate/Mylar piece + F9460PC tape

Polycarbonate/Mylar piece + F9460PC tape

8.5" +0.25 -0.06

1. RG178 Cable
2. Balun
3. 10 +/- 1 mils thick PCB
4. RA MMCX Connector
5. Heat Shrink Tubing
6. Clear Hardened High Density UV Material
7. Polycarbonate/mylar + F9460PC tape

- PCB Color: BLUE
- Silkscreen Color: WHITE
- Polycarbonate Pieces Color: CLEAR
- UV Material Color: CLEAR
- Cables Color: BLACK
- Cable Type: RG178
- Connector: Gold color Right Angle MMCX Plug

Note: UV Material will not contain any Carbon or Metallic content in it.

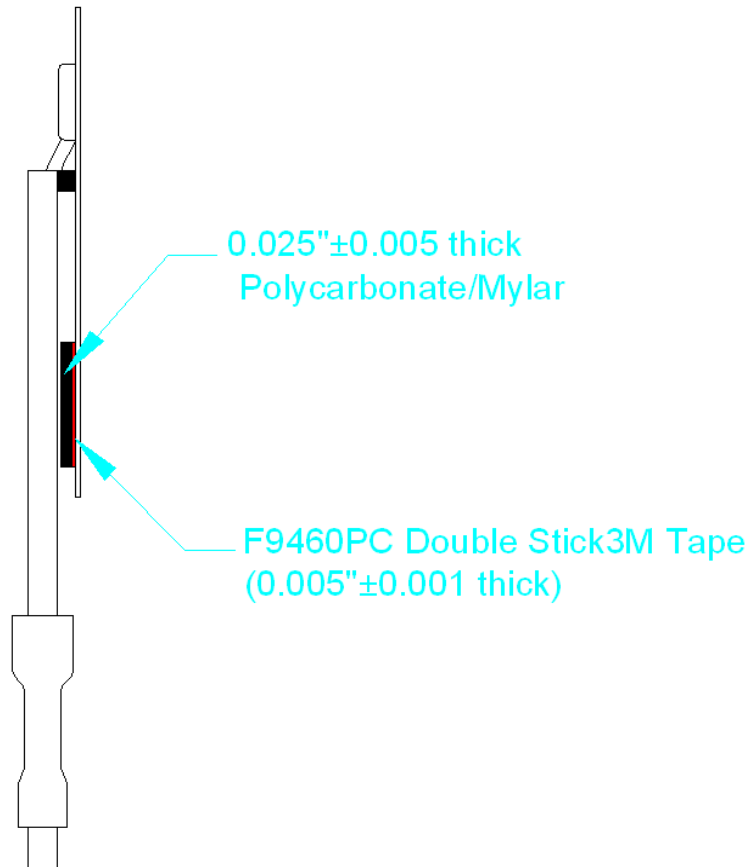


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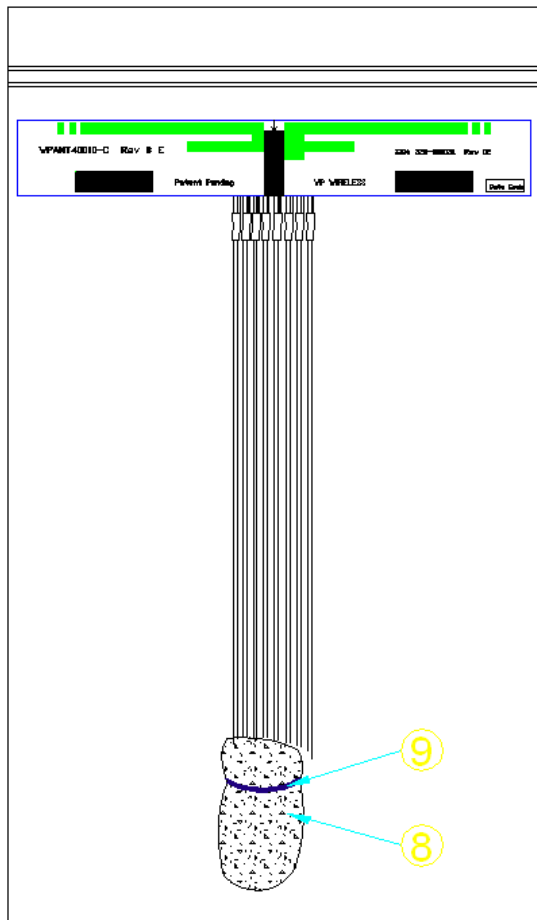
WPANT40010-CF

Dual Band ISM Wrap-Around AMI Antenna





Packaging



⑩	PE BAG	230*200*T0.05mm	1/20PCS
⑨	RUBBER BAND	COLOR:WHITE	1/20PCS
⑧	PEARL COTTON BAG	100*100*1.0mm COLOR:WHITE	1/20PCS



Recommended Antenna Mounting Position for L+G SDS8RS meter

Recommended Locations are between **2'O Clock & 4'O Clock** or between **8'O Clock & 10'O Clock** positions on the L&G meter as shown below. The Antenna is held in place by a Retainer.





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Dual Band ISM Wrap-Around AMI Antenna





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Recommended Antenna Mounting Position for the GE Kv2C meter

Recommended Locations are between **9'O Clock & 12'O Clock** or between **12'O Clock & 3'O Clock** positions on the GE Kv2C meter as shown below. The Antenna is held in place by a Retainer.





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Dual Band ISM Wrap-Around AMI Antenna





Factory Test Fixture & Test Method

Test #1: VSWR Test

The Factory will perform VSWR tests of the Antennas on a standard WPI test fixture. The VSWR curve & the Test Limits for passing the VSWR test are stated on Page 13.

- Test 25 Antennas for a PO of 4999pcs or less
- Test 50 Antennas for a PO between 5000pcs & 9999pcs
- Test 100 Antennas for a PO of 10,000pcs or more

Note: If 1 piece fails, then the factory will test additional 2 sample lots for possible failures. If additional failures are detected in these 2 sample lots, then the full lot will be 100% tested.





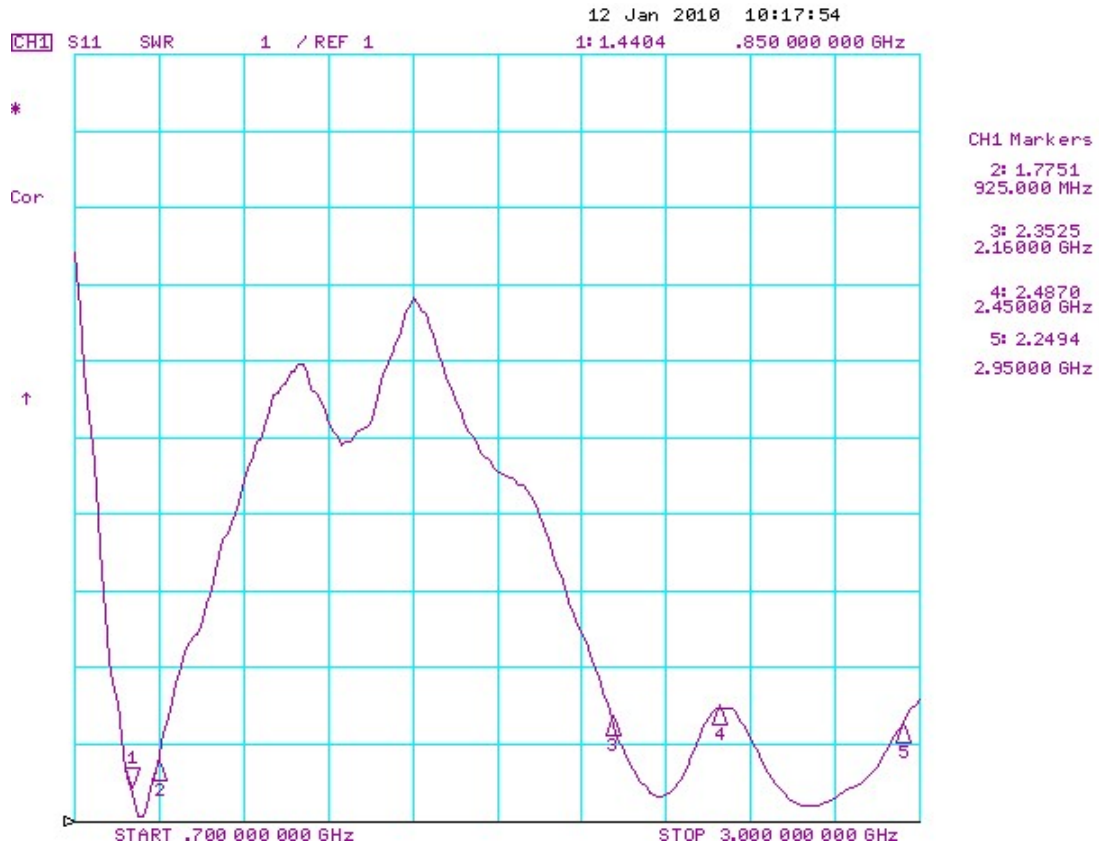
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Frequency	Typical Value	Upper Test Limit
850 MHz	1.45	2.0
925 MHz	1.75	2.0
2.16 GHz	2.35	3.0
2.45 GHz	2.50	3.0
2.95 GHz	2.25	3.0



Test #2: Conductivity Test

The Conductivity Test is different from the VSWR Test. It's a quick Go-No Go test to find out whether the Antenna is dead or alive. The Antenna will be placed flat on a Styrofoam piece, the connector will be plugged to a VNA and the VSWR response will be observed. The antenna will be flexed at different locations while observing the VSWR response. If the response looks smooth & normal (as expected) then it's a PASS. If there is no response or if it's Jittery/abnormal then it's a FAILURE & the Antenna will be rejected.

- 100% of the Antennas will be subjected to the Conductivity Test



Client: Silverspring Networks

Client P/N : 320-000031 Rev 02

WP Wireless P/N : WPANT40010-CF

Customer Approval Signature: _____

Customer Name: _____

Title: _____

Approval Date: _____

WP Wireless Engineering Approval: Brad Podduturi

Date Approved: 02/02/10