

Antenna Information

List of Antenna to be used with Transmitter

Manufacturer	Pulse
Part#	W3008C
Peak Gain	2.2 dBi
Antenna Description	See Manufacturer datasheet attached

1. The Antenna is soldered to PCB and is not user accessible or changeable.
2. The PCB guideline for antenna layout referenced in the document "Pules W3008C Guidelines.pdf".

W3008 Datasheet version 2.7. Bluetooth / WLAN / WiFi ceramic antenna. (01/10)

Bluetooth / WLAN / WiFi Ceramic Chip Antenna

Ground cleared under antenna, clearance area 4.00 x 4.25/6.25 mm. Pulse Part Number W3008, W3008C



Features

- Omni directional radiation
- Low profile
- Compact size W x L x H (3.2 x 1.6 x 1.1 mm)
- Low weight (33 mg)
- Fully SMD compatible
- Lead free soldering compatible
- Tape and reel packing
- RoHS Compliant Product

Applications

- Bluetooth, WLAN, WiFi
- IEEE 802.11b/g
- ZigBee IEEE 802.15.4
- 2.4 GHz WLAN
- 2.4 GHz ISM Band Systems

Electrical specifications @ +25 °C

Note: Electrical characteristics depend on test board (GP) size and antenna positioning on GP and Ground Clearance area size.

Bluetooth, W3008

Typical performance (test board size 80x37 mm, PWB ground clearance area 4.00 x 4.25 mm)

Frequency Range [MHz]	Linear Max Gain [dBi]	Efficiency [%] / [dB]	Return loss min. [dB]	Impedance [Ω]	Operating Temperature [°C]
2400–2483.5	1.7 (Peak) 0.7 (Band edges)	70 / -1.6 (Peak) 55 / -2.6 (Band edges)	-8	50	-40 to +85

Bluetooth / WLAN / WiFi, W3008C

Typical performance (test board size 80x37 mm, PWB ground clearance area 4.00 x 6.25 mm)

Frequency Range [MHz]	Linear Max Gain [dBi]	Efficiency [%] / [dB]	Return loss min. [dB]	Impedance [Ω]	Operating Temperature [°C]
2400–2483.5	2.2 (Peak) 1.9 (Band edges)	75 / -1.3 (Peak) 70 / -1.6 (Band edges)	-11	50	-40 to +85

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www.pulseeng.com/antennas



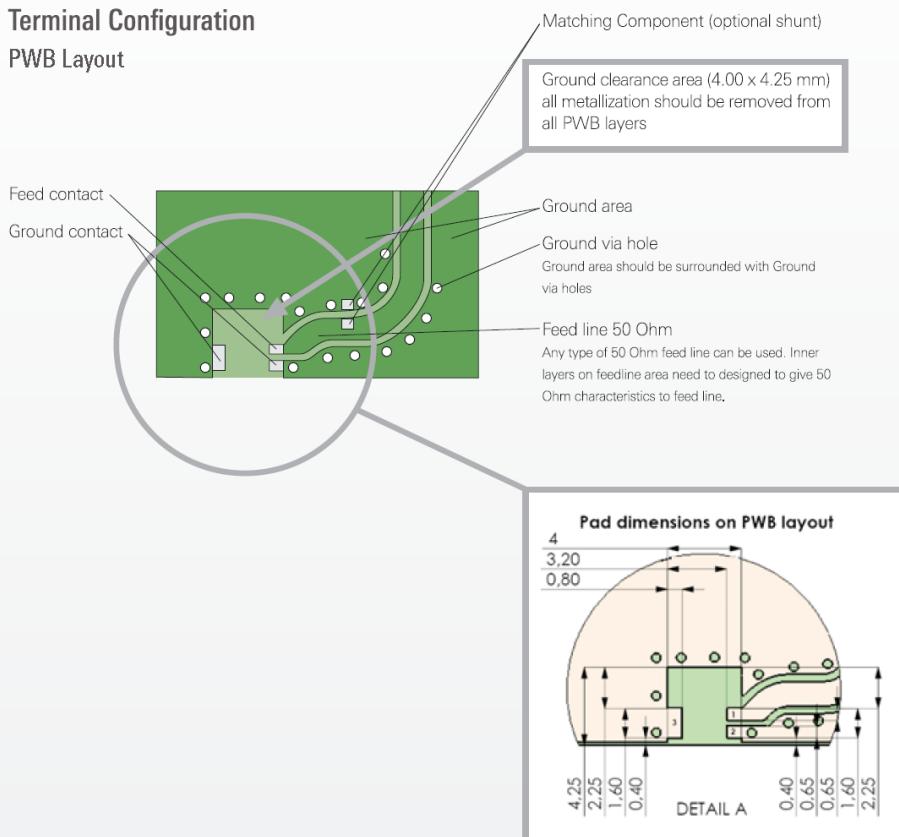
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Bluetooth / WLAN / WiFi Ceramic Chip Antenna

Terminal Configuration

PWB Layout



PWB features

No.	Terminal name	Terminal Dimensions
1	Feed	0.8 x 0.65 mm
2	GND	0.8 x 0.65 mm
3	GND	0.8 x 1.60 mm

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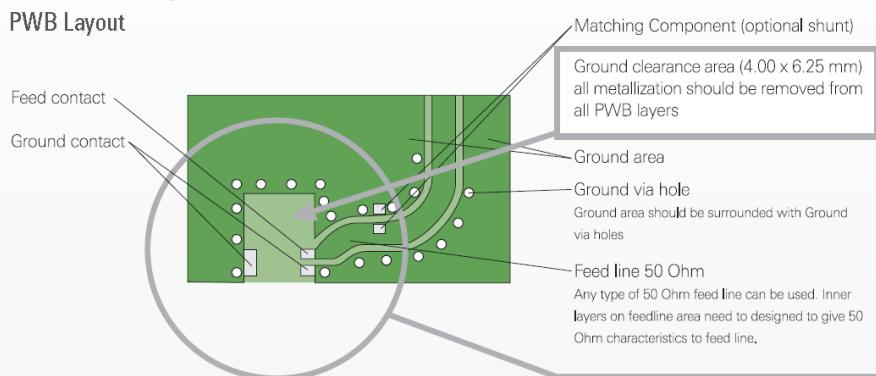
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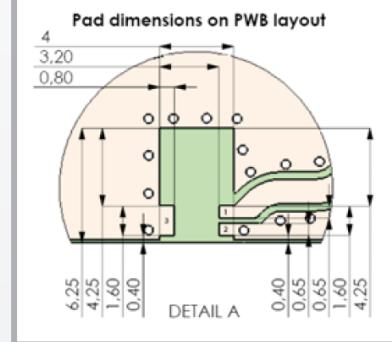
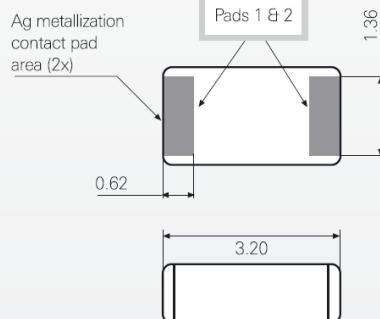
Bluetooth / WLAN / WiFi Ceramic Chip Antenna

Terminal Configuration

PWB Layout



Antenna



Antenna features

No.	Terminal name	Terminal Dimensions
1	Feed / GND	0.62 x 1.36 mm
2	Feed / GND	0.62 x 1.36 mm

Antenna is symmetrical.

Either of terminals 1 or 2 can be feed / GND

PWB features

No	Terminal name	Terminal Dimensions
1	Feed	0.8 x 0.65 mm
2	GND	0.8 x 0.65 mm
3	GND	0.8 x 1.60 mm

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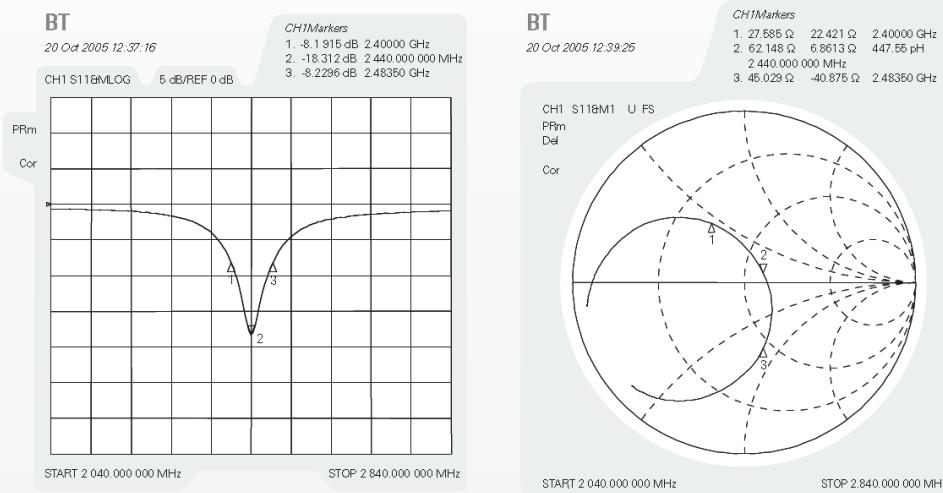
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Bluetooth / WLAN / WiFi Ceramic Chip Antenna

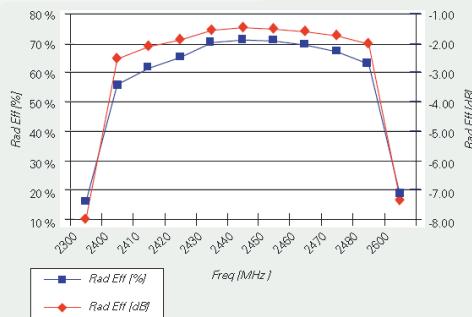
Typical Electrical Characteristics (T=25 °C), W3008

Typical Return Loss S11/ impedance, measured on the test board

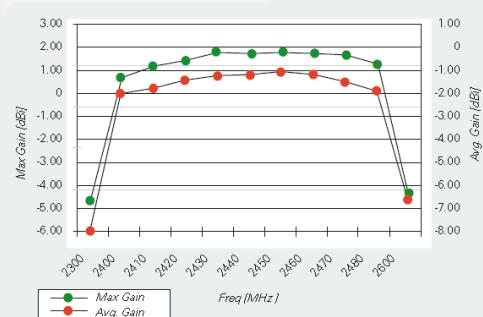


Free space efficiency and maximum gain / PWB ground clearance area 4.00 x 4.25 mm

BT GC 3.2 x 1.6 x 1.1 mm



BT GC 3.2 x 1.6 x 1.1 mm



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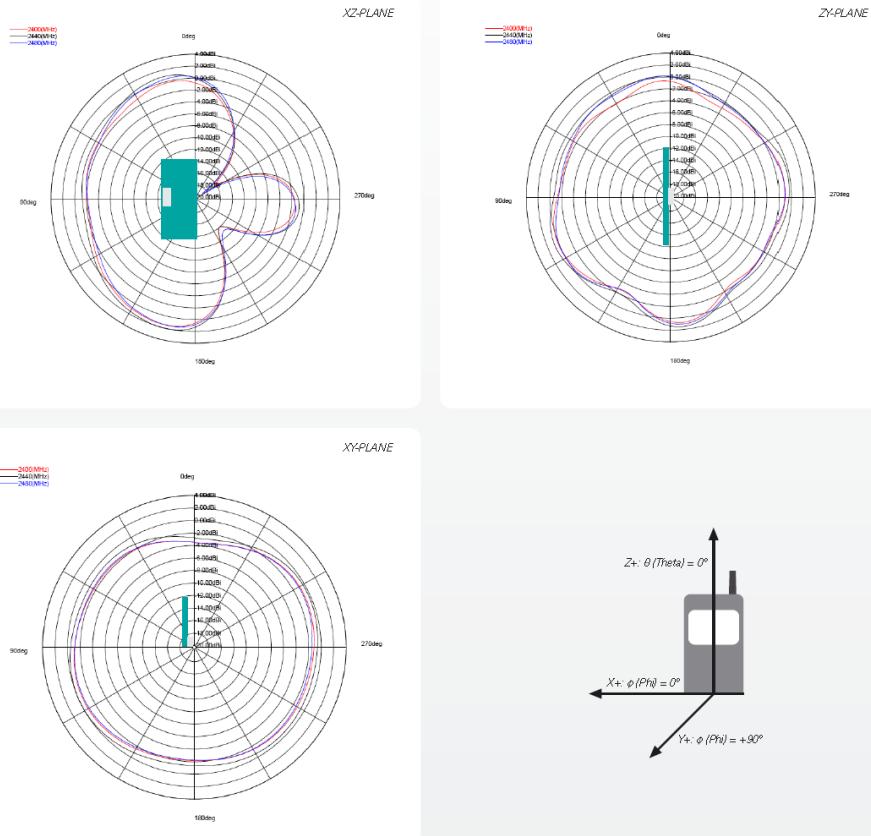


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Typical Free Space Radiation Patterns, W3008



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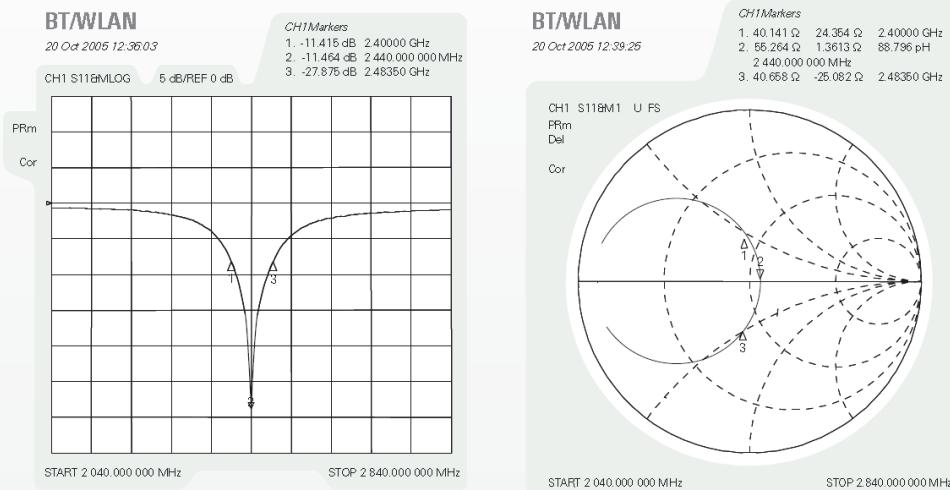
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Bluetooth / WLAN / WiFi Ceramic Chip Antenna

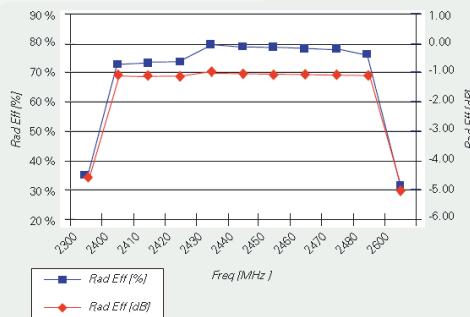
Typical Electrical Characteristics (T=25 °C), W3008C

Typical Return Loss S11/ impedance, measured on the test board

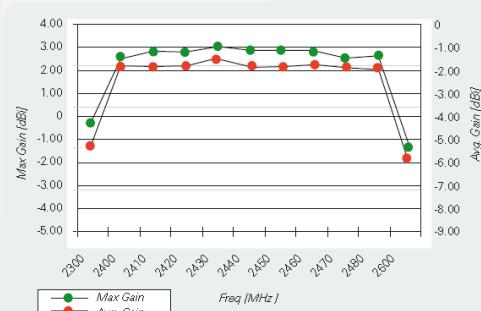


Free space efficiency and maximum gain / PWB ground clearance area 4.00 x 6.25 mm

BT GC 3.2 x 1.6 x 1.1 mm



BT GC 3.2 x 1.6 x 1.1 mm



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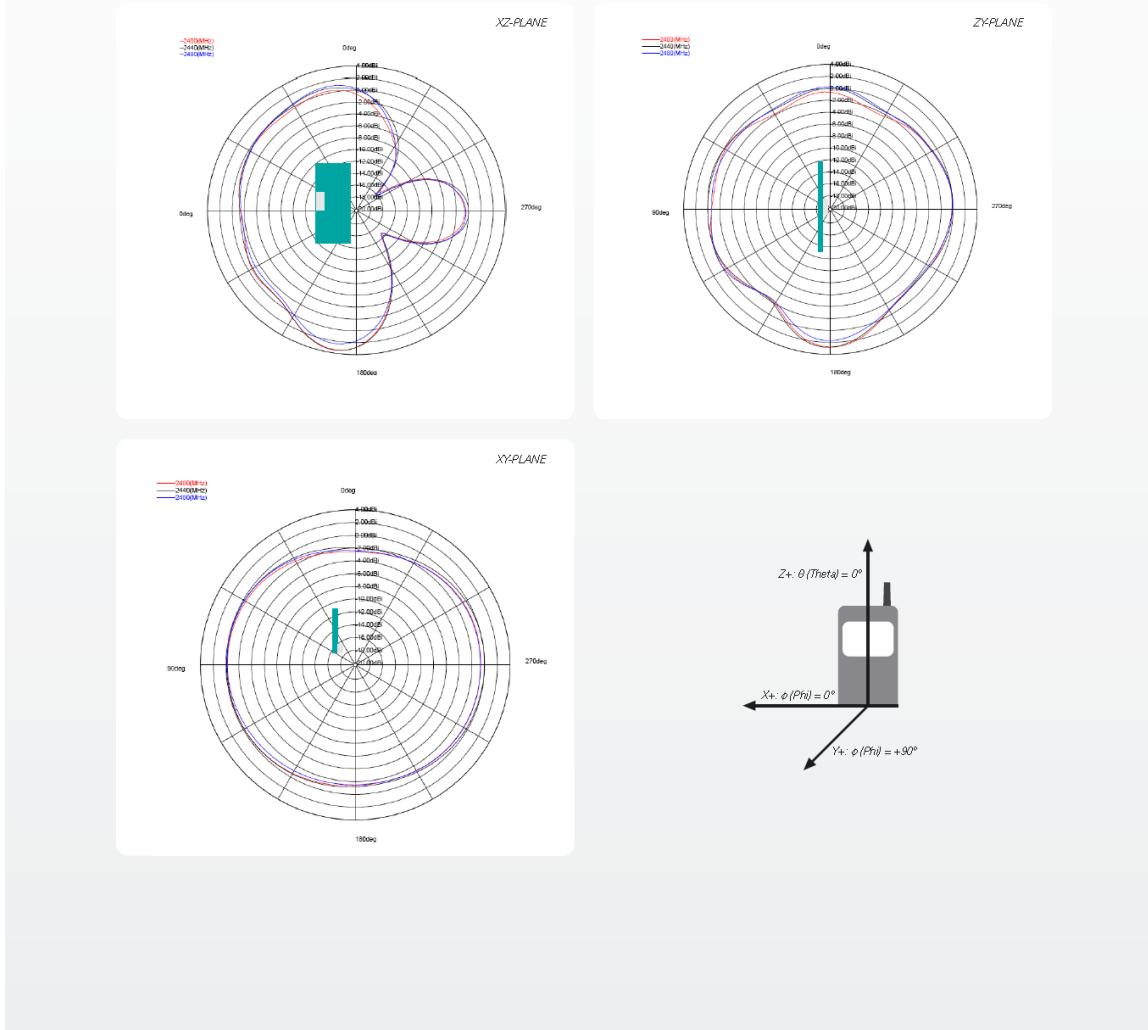
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Typical Free Space Radiation Patterns , W3008C



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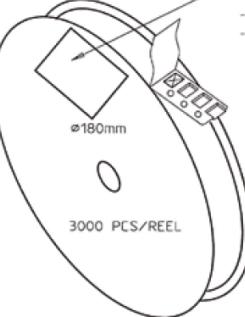
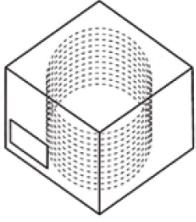


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Packing Form

		REEL LABEL INFORMATION: - TRACEABILITY - QUANTITY - PRODUCT CODE									
		CARRIER TAPE H85-00125 width=8,00 depth=1,22 COVER TAPE H85-00126 width=5,60									
		LENGTH OF TAPE: - Leader section: 50 empty cavities before component section - Trailer section: 25 empty cavities after component section.									
		Empty part cavities at leader and trailer section of the tape must be sealed with top cover tape.									
		BOX H85-00128 (182x182x132) 1 pcs - LABEL 1 pcs/BOX									
		REEL H85-00127 (D180,W12) 10 pcs - REEL LABEL 1 pcs/REEL									
MATERIAL HANDLING <table border="1"> <tr> <td></td> <td>  </td> <td> RATIO DRWN 010305 PeHa H DGNER G CHKD F APPRD E APPRD BY D C B A </td> </tr> <tr> <td> PRODUCT H90-OY116-F01P01 </td> <td></td> <td></td> </tr> <tr> <td> DENOMINATION PACKING FORM </td> <td></td> <td> VERSION MOD/DATE/NAME </td> </tr> </table>					RATIO DRWN 010305 PeHa H DGNER G CHKD F APPRD E APPRD BY D C B A	PRODUCT H90-OY116-F01P01			DENOMINATION PACKING FORM		VERSION MOD/DATE/NAME
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