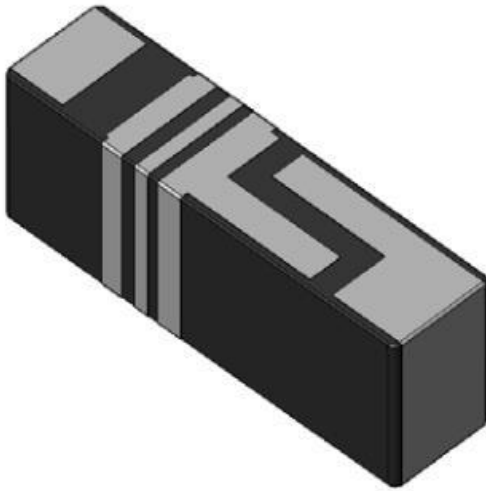


GPS/BT Dual Feed Ceramic Chip Antenna

Pulse Part Number CW3059



Features

- High isolation (>27dB) between GPS/BT terminals
- Low profile
- Compact size W x L x H (12 x 3 x 4 mm)
- Low weight (700 mg)
- Lead free materials
- Fully SMD compatible
- Lead free soldering compatible
- Tape and reel packing
- RoHS Compliant Product

Applications

- GPS L1 band (1.575 GHz)
- Bluetooth, WLAN, WIFI (2.4 – 2.48GHz)

Electrical specifications @ +25 ° C

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

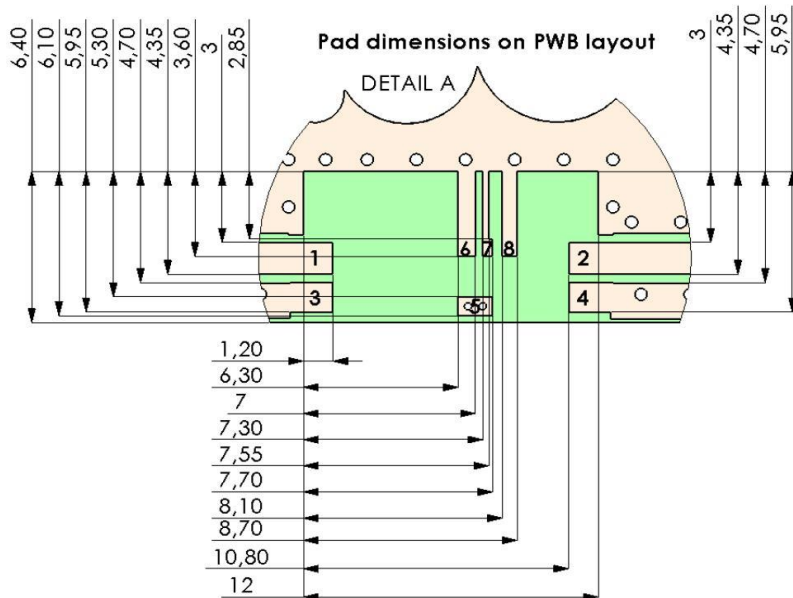
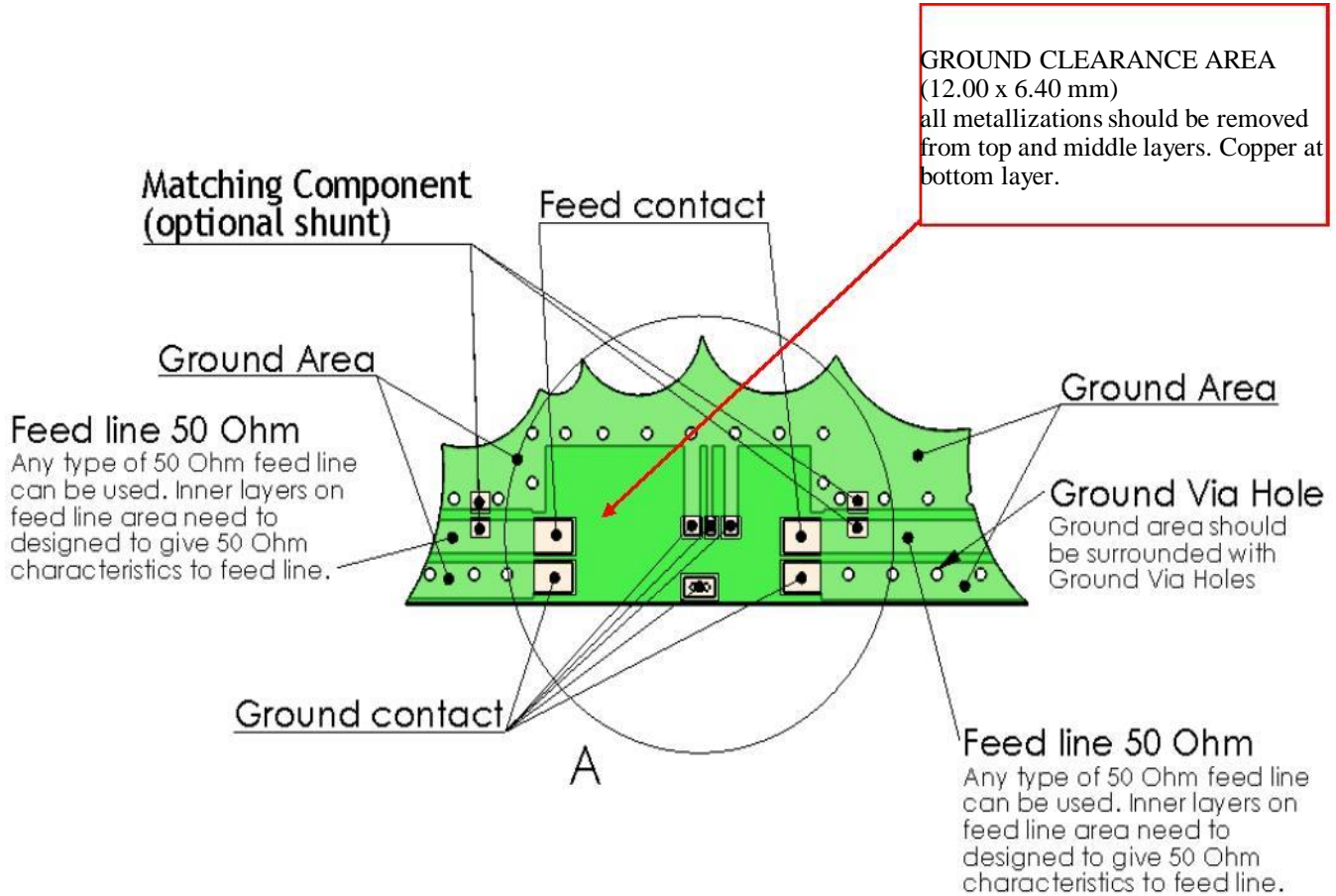
Typical performance (testboard size 96 x 45 mm, PWB ground clearance area 12 x 6.4 mm)

Frequency Range [MHz]	Efficiency [%]/[dB]	Return loss min. [dB]	Impedance [Ω]	Operating Temperature [$^{\circ}$ C]	Isolation b/w Antennas [dB]
1575.42+/-10	46 / -3.4(peak) 30/-4(+/-10MHz)	-8.7(peak) -4.5(+/-10MHz)	50	-40 to +85	>27 (2440MHz)
2400-2480	28 / -5.5(peak) 15/-8(band edges)	-5.5(peak) -2.5(band edges)	50	-40 to +85	

GPS/BT Dual Feed Ceramic Chip Antenna

Pulse Part Number CW3059

Terminal Configuration PWB Layout



No.	Terminal Name	Terminal Dimensions
1	GPS Feed	1.35 x 1.70 mm
2	BT Feed	1.35 x 1.70 mm
3	GND	1.35 x 1.70 mm
4	GND	1.35 x 1.70 mm
5	GND	0.80 x 1.40 mm
6	GND	0.75 x 0.70 mm
7	GND	0.75 x 0.40 mm
8	GND	0.75 x 0.60 mm

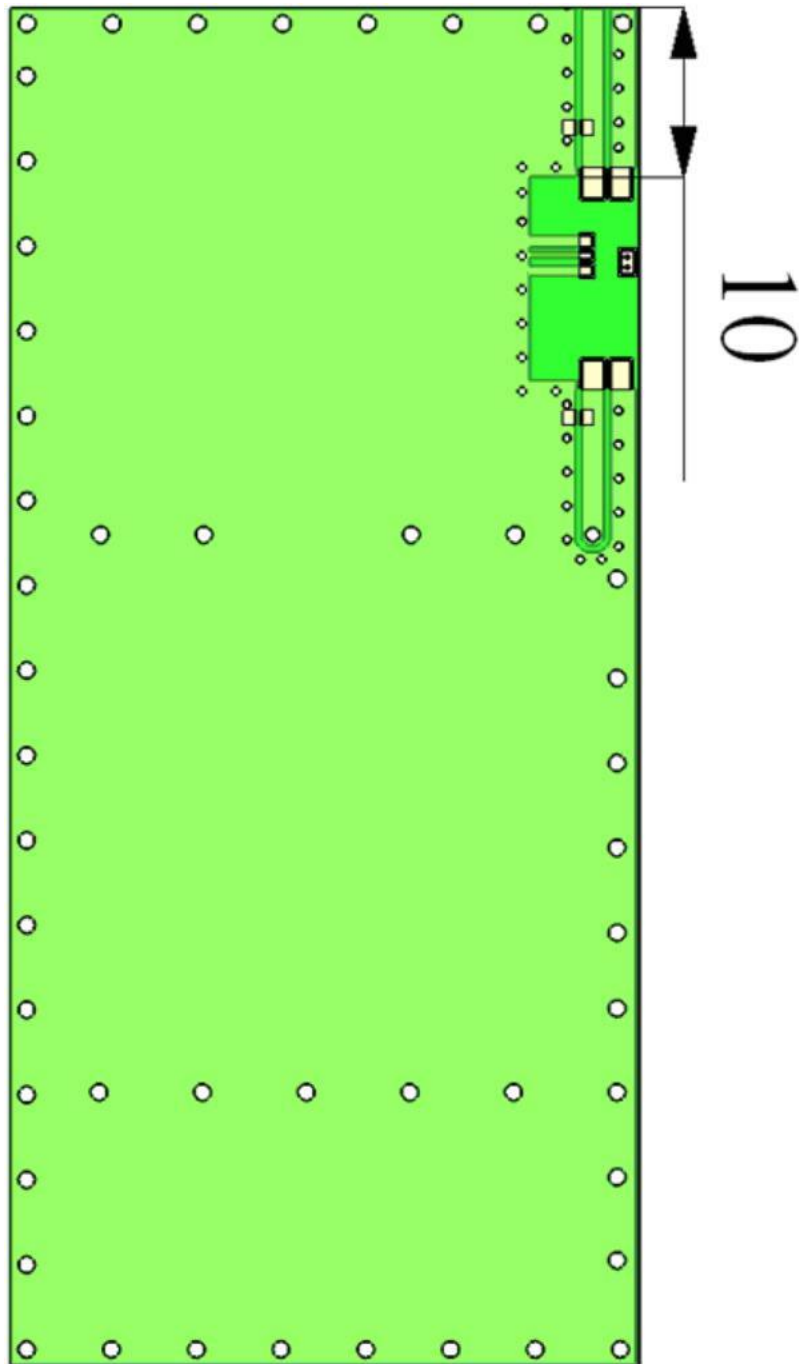
Contact: mobiledeviceantenna.sales@pulseelectronics.com

GPS/BT Dual Feed Ceramic Chip Antenna

Pulse Part Number CW3059

Antenna position on PWB

This PWB size is 45 x 96 mm, antenna position 10 mm from top corner. Other sized boards and other antenna positions can be used depending on customer device size.



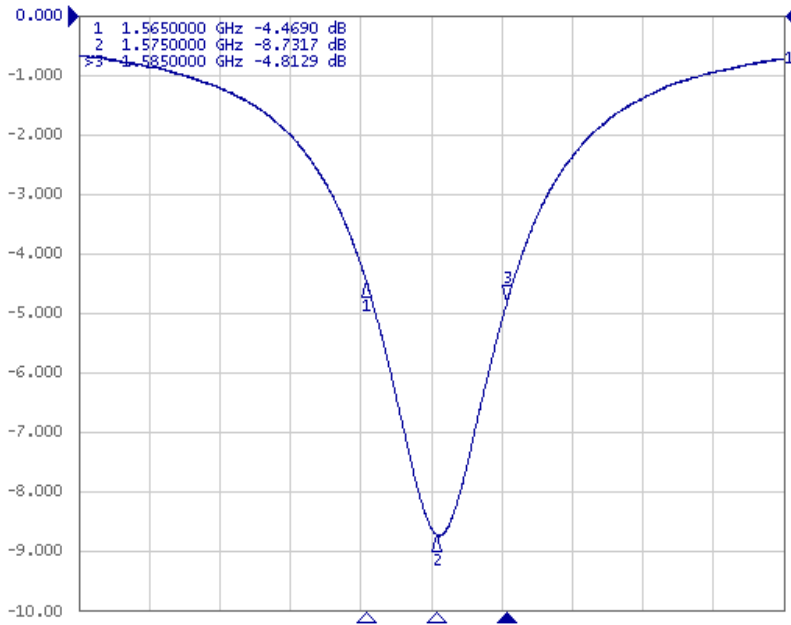
GPS/BT Dual Feed Ceramic Chip Antenna

Pulse Part Number CW3059

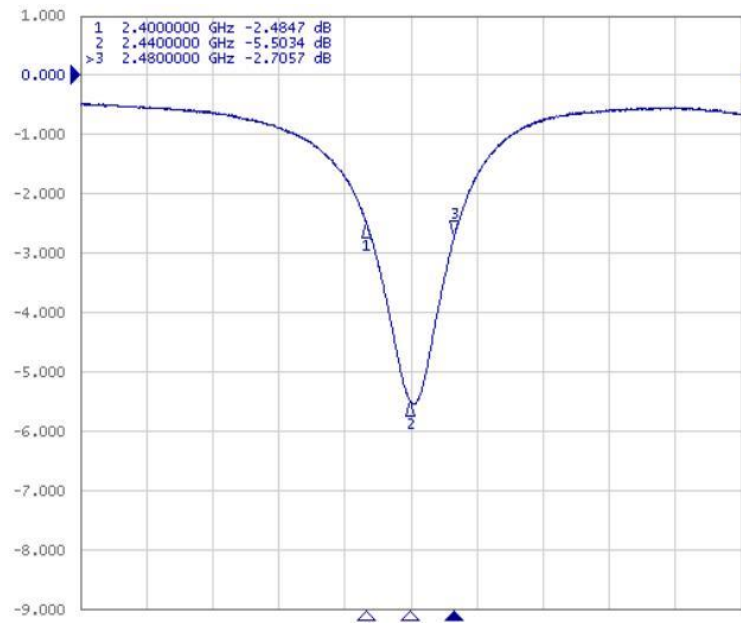
Typical Electrical Characteristics (T=25 ° C)

Measured on the 96 x 45 mm test board with matching circuit (5.6 nH shunt inductor on BT antenna feed. No matching circuit used for GPS).

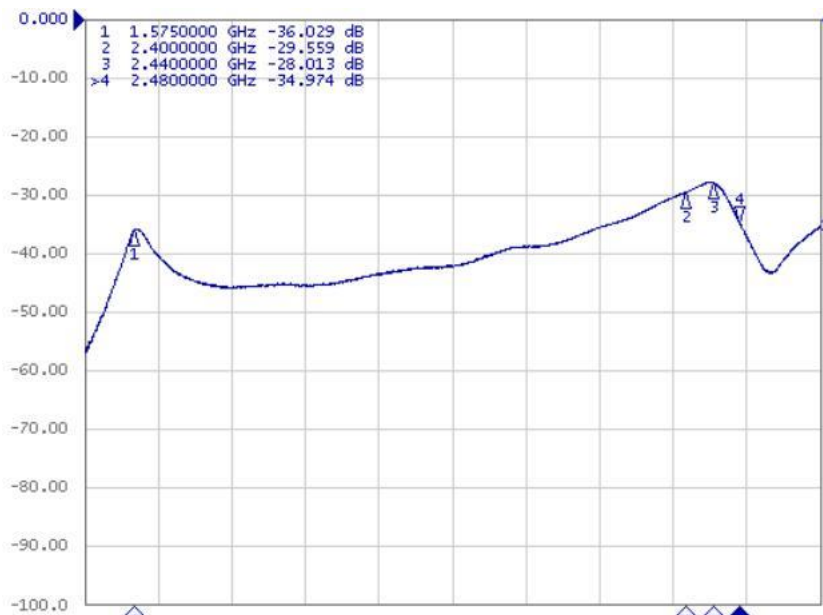
Typical S11,S22 and S21



Typical Return Loss S11



Typical Return Loss S22



Typical S21

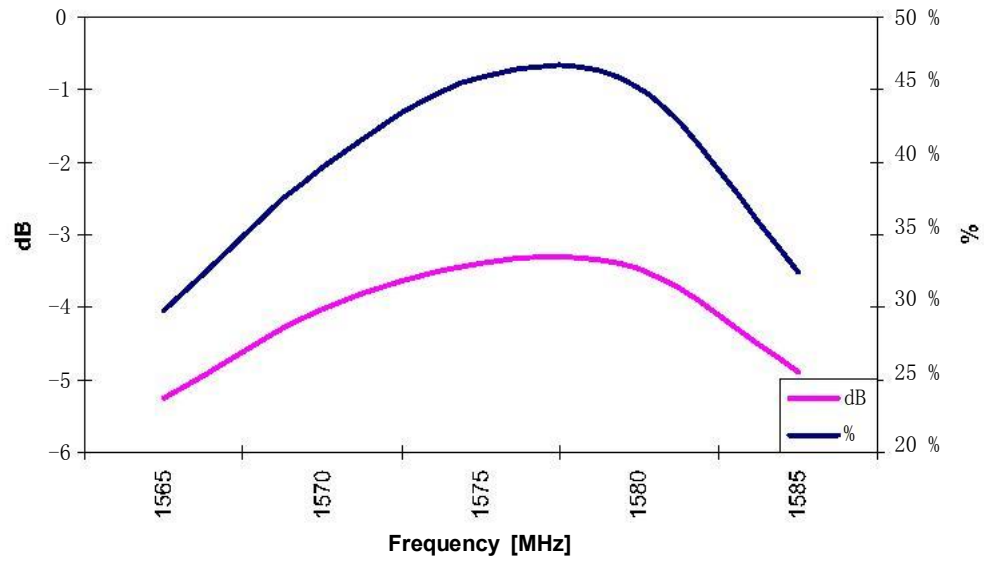
Contact: mobiledeviceantenna.sales@pulseelectronics.com

GPS/BT Dual Feed Ceramic Chip Antenna

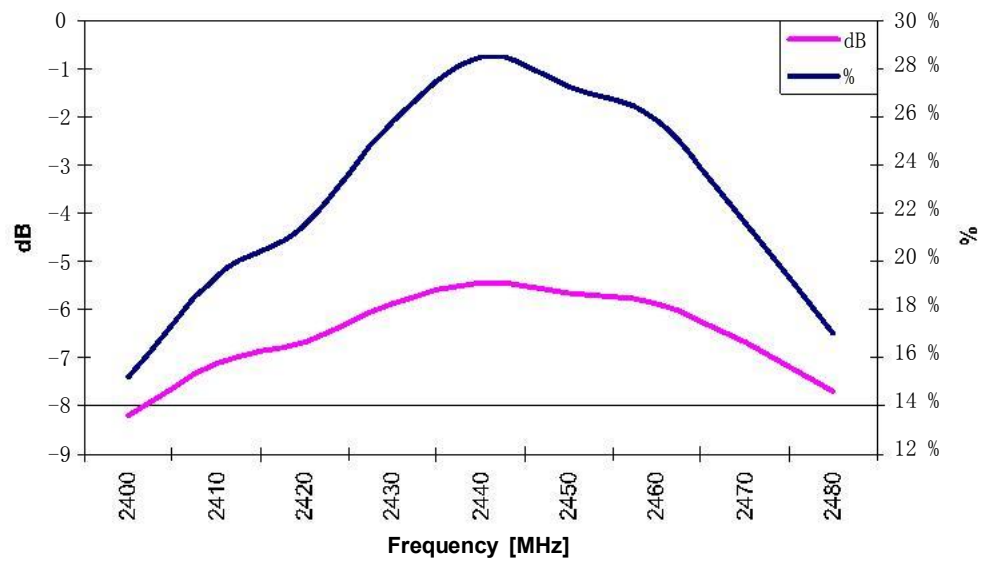
Pulse Part Number CW3059

Typical free space efficiencies

GPS Free space efficiency



BT Free space efficiency

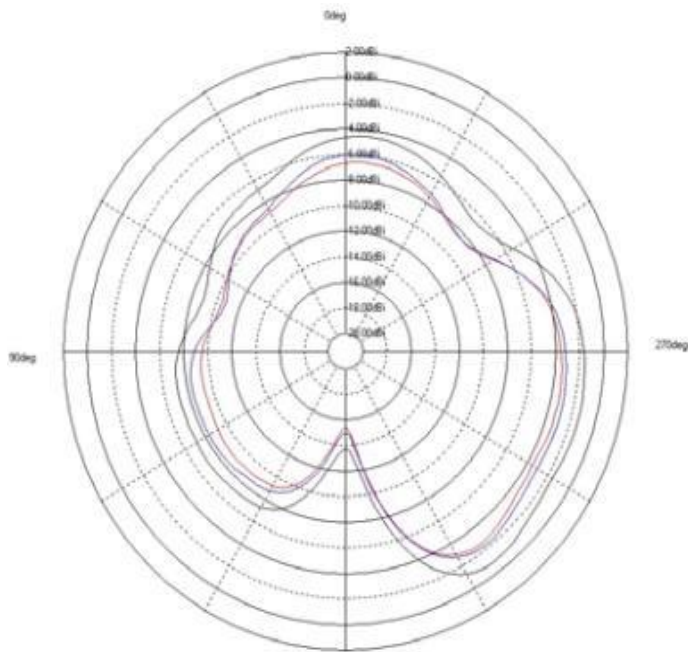


GPS/BT Dual Feed Ceramic Chip Antenna

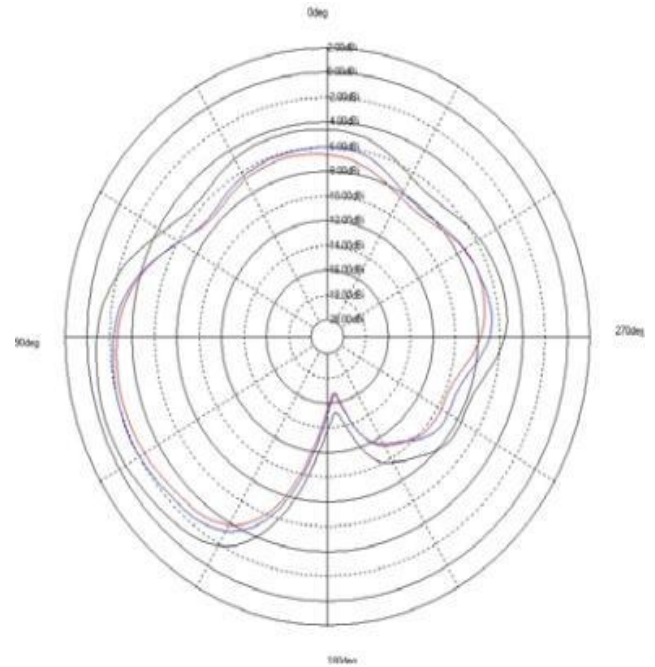
Pulse Part Number CW3059

GPS Typical Free Space Radiation Patterns

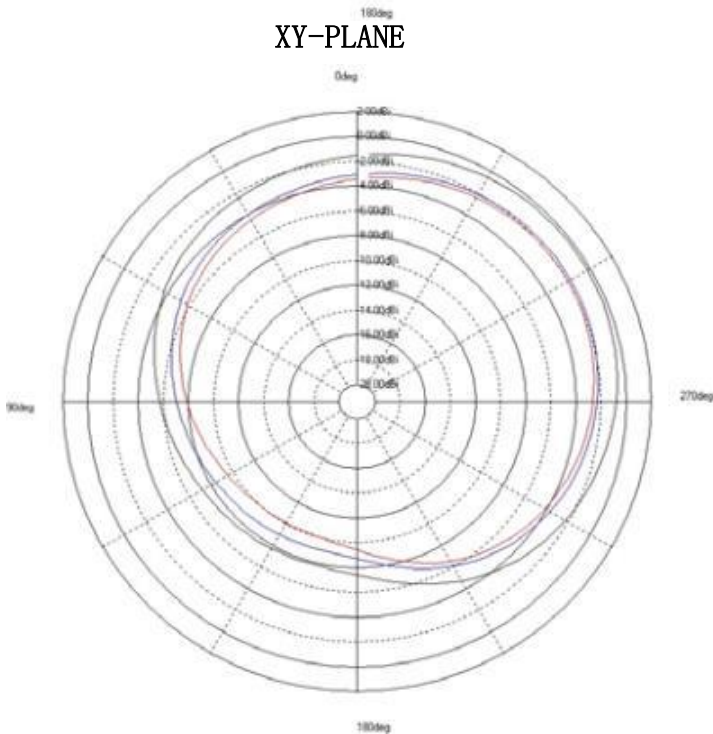
XZ-PLANE



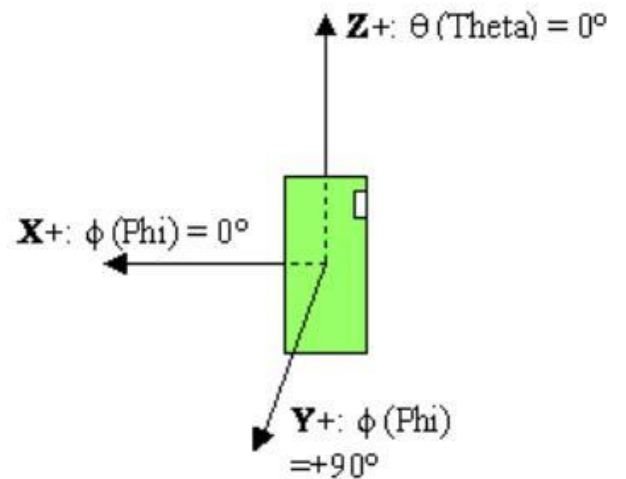
ZY-PLANE



XY-PLANE



- 1565.00(MHz)
- 1575.00(MHz)
- 1585.00(MHz)

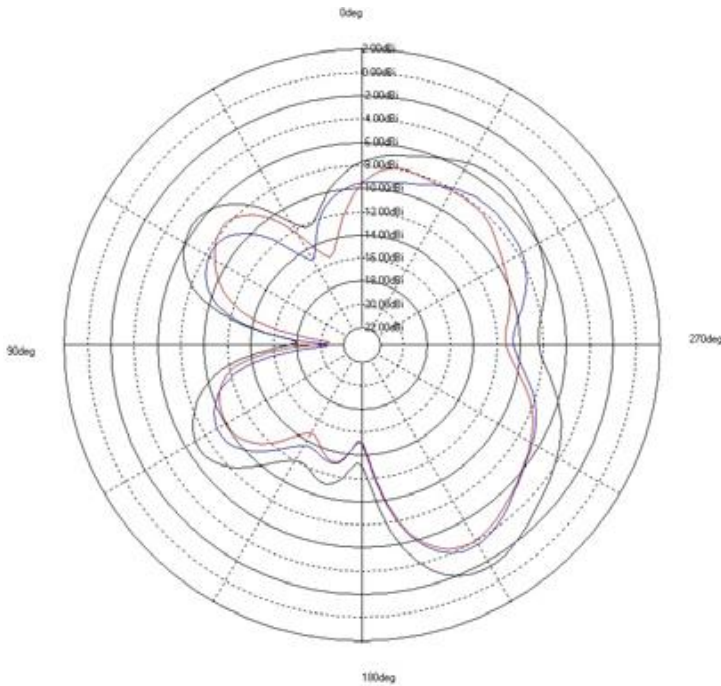


GPS/BT Dual Feed Ceramic Chip Antenna

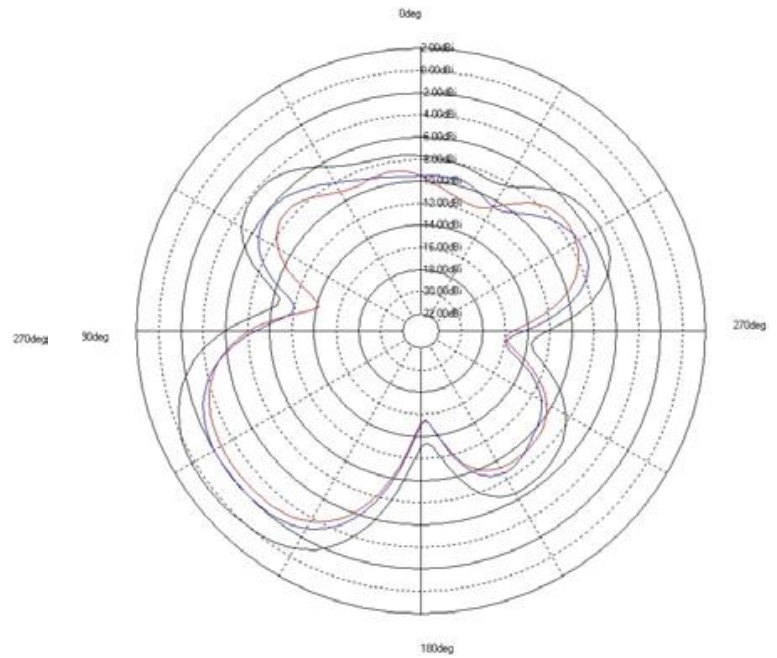
Pulse Part Number CW3059

BT Typical Free Space Radiation Patterns

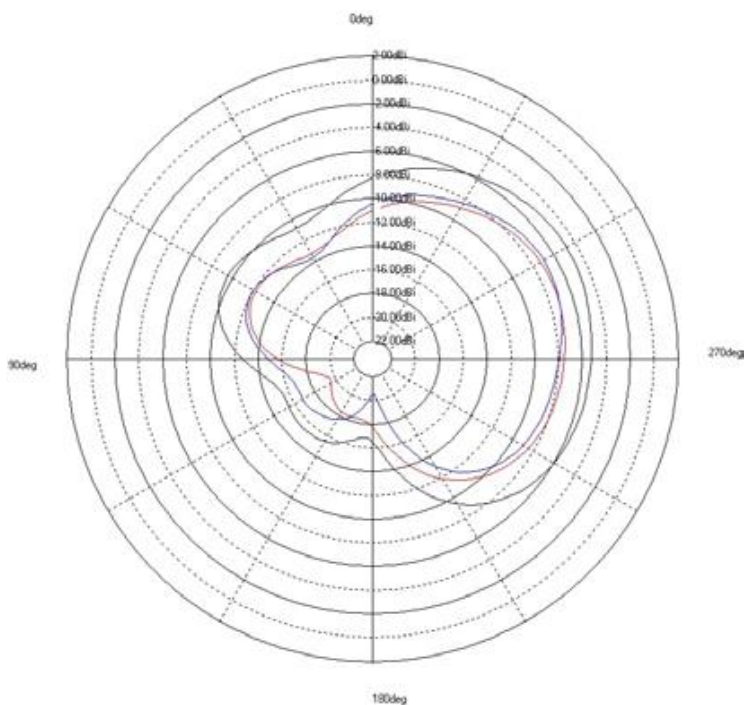
XZ-PLANE



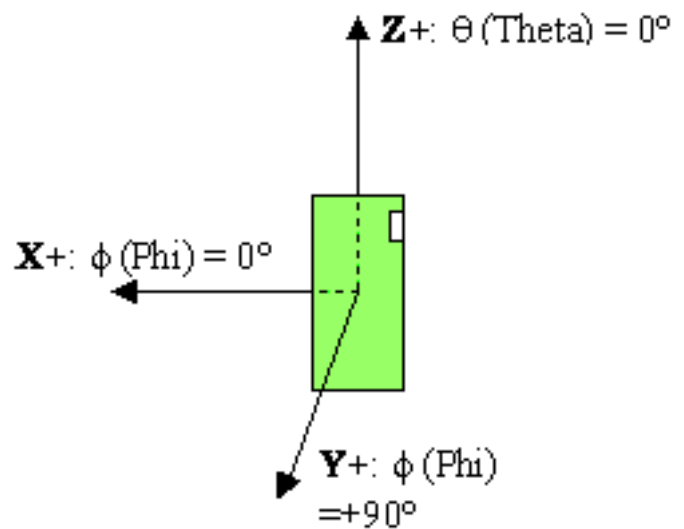
ZY-PLANE



XY-PLANE



— 2400.00(MHz)
— 2440.00(MHz)
— 2480.00(MHz)



Contact: mobiledeviceantenna.sales@pulseelectronics.com