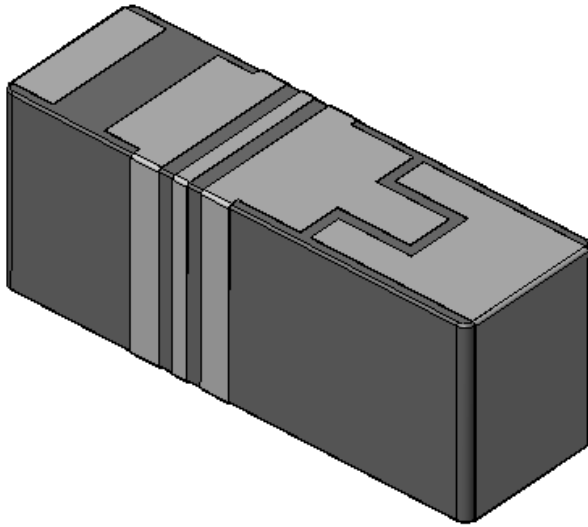


# GPS/BT Dual Feed Ceramic Chip Antenna

Pulse Part Number CW3063



## Features

- Omni directional radiation
- Low profile
- Compact size W x L x H (10 x 3.2 x 4 mm)
- Low weight (600 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 – 2.48 GHz)

## Electrical specifications @ +25 ° C

*Note: Electrical characteristics depend on test board (GP) size and antenna positioning on GP and Ground Clearance area size. Matching and tuning circuit component values are case depended.*

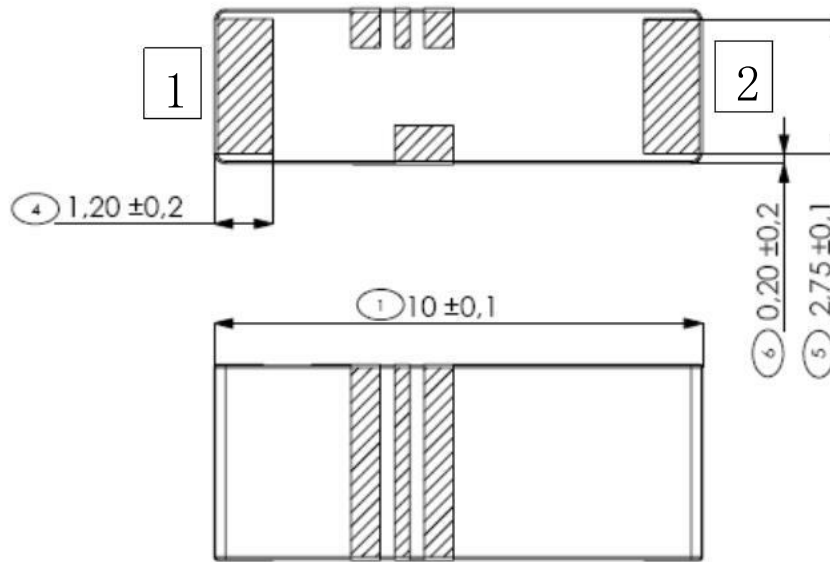
*Typical performance (testboard size 96x45 mm, PWB ground clearance area 10.8 x 6.25 mm)*

Frequency Range [MHz]	Return loss min. [dB]	Efficiency [%]/[dB]	Impedance [ $\Omega$ ]	Operating Temperature [ $^{\circ}$ C]	Isolation b/w Antennas [dB]
1575.42 +/-10	-22(peak) -4.5(+/-10 MHz)	47 / -3.3(peak) 25 / -6.1(+/-10 MHz)	50	-40 to +85	$\geq 35$
2400 – 2480	-7(peak) -2.4(band edges )	43 / -3.7(peak) 20 / -7(band edges)	50	-40 to +85	$\geq 25$

# GPS/BT Dual Feed Ceramic Chip Antenna

Pulse Part Number CW3063

## Terminal Configuration and antenna dimensions

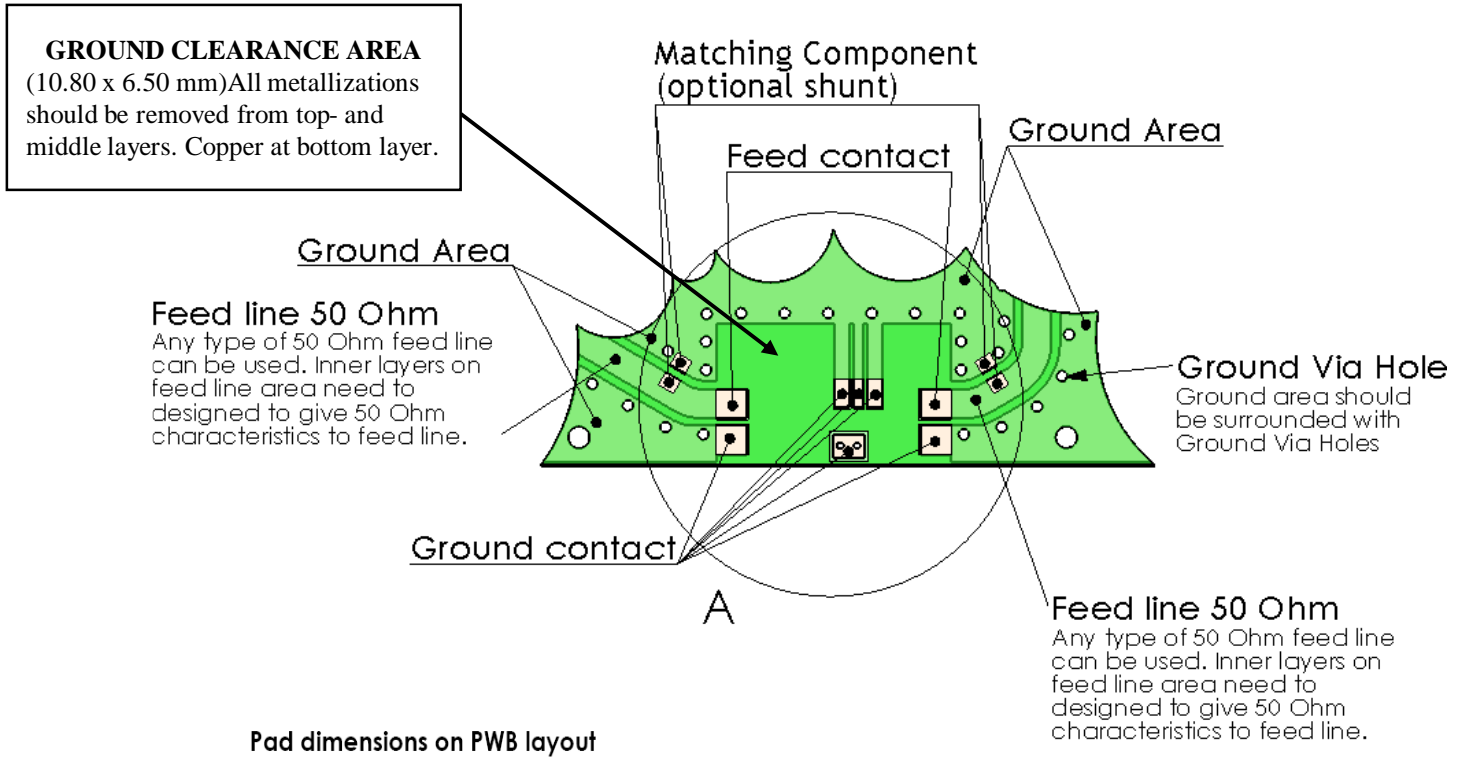


No.	Terminal Name	Terminal Dimensions
1	Feed BT/ GND	1.20 x 2.75 mm
2	Feed GPS/ GND	1.20 x 2.75 mm

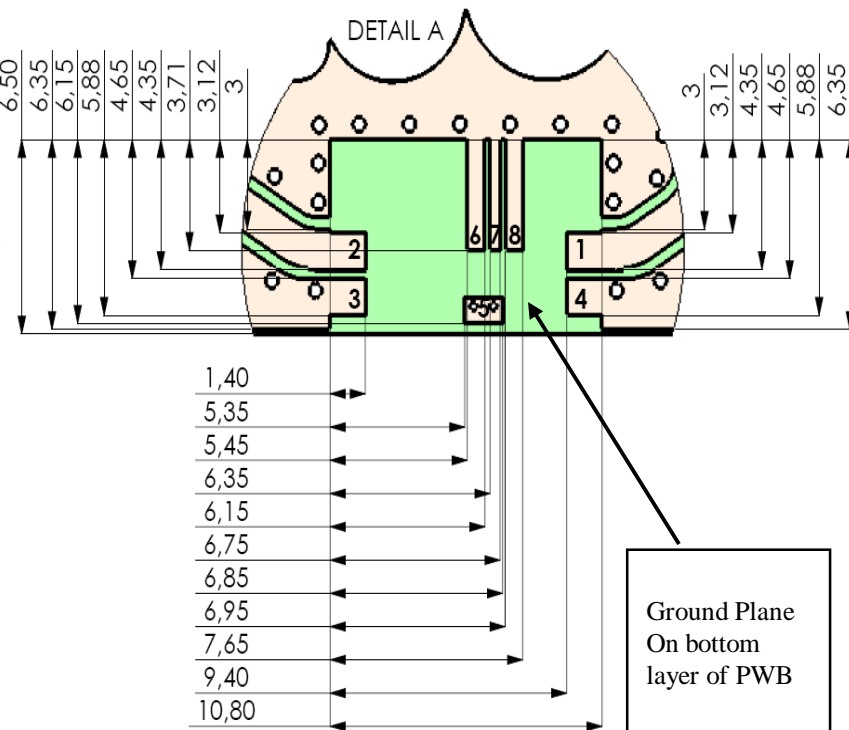
# GPS/BT Dual Feed Ceramic Chip Antenna

Pulse Part Number CW3063

## Terminal Configuration PWB Layout



Pad dimensions on PWB layout



No.	Terminal Name	Terminal Dimensions
1	BT Feed	1.23 x 1.40 mm
2	GPS Feed	1.23 x 1.40 mm
3	GND	1.23 x 1.40 mm
4	GND	1.23 x 1.40 mm
5	GND	0.85 x 1.50 mm
6	GND	1.21 x 0.70 mm
7	GND	1.21 x 0.40 mm
8	GND	1.21 x 0.70 mm

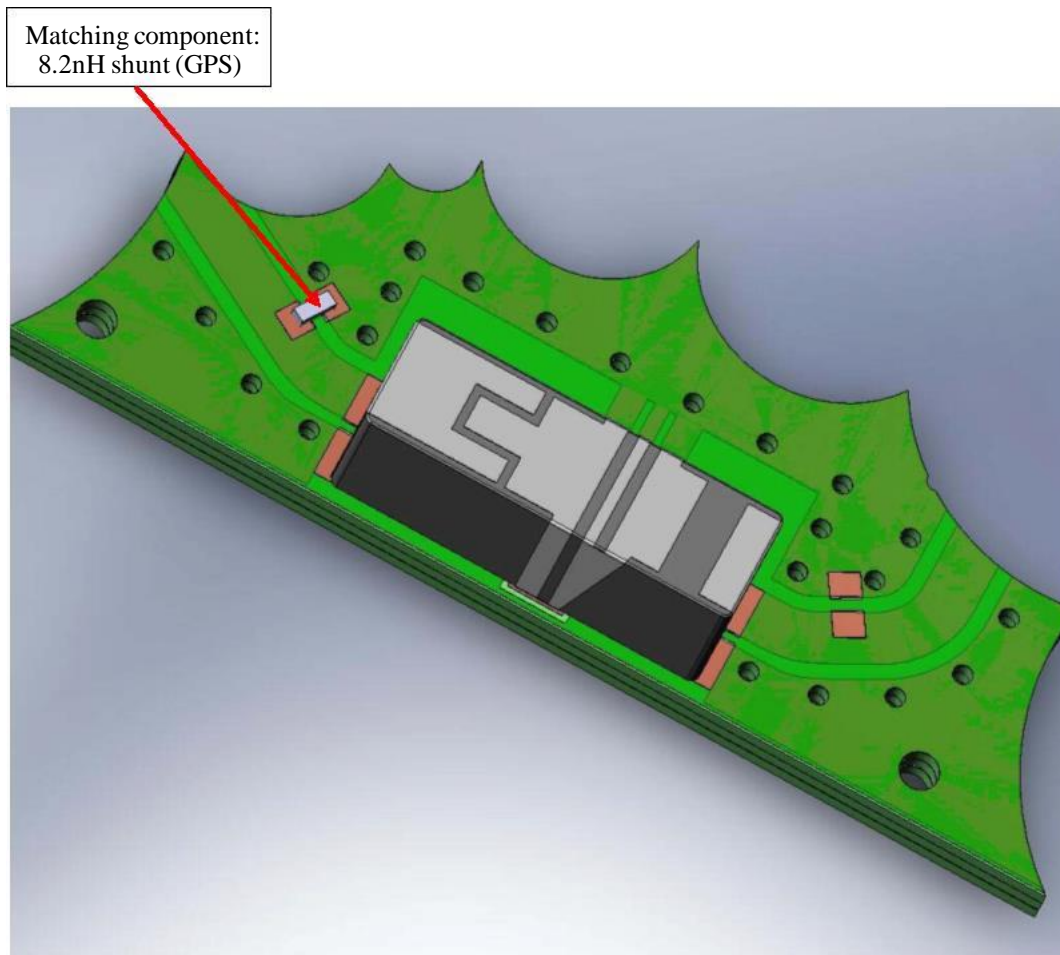
Contact: [mobiledeviceantenna.sales@pulseelectronics.com](mailto:mobiledeviceantenna.sales@pulseelectronics.com)

# GPS/BT Dual Feed Ceramic Chip Antenna

Pulse Part Number CW3063

## 3D- view of Test Setup

Recommended test board- layout for electrical characteristic measurement. Test board outline size 96 x 45mm.



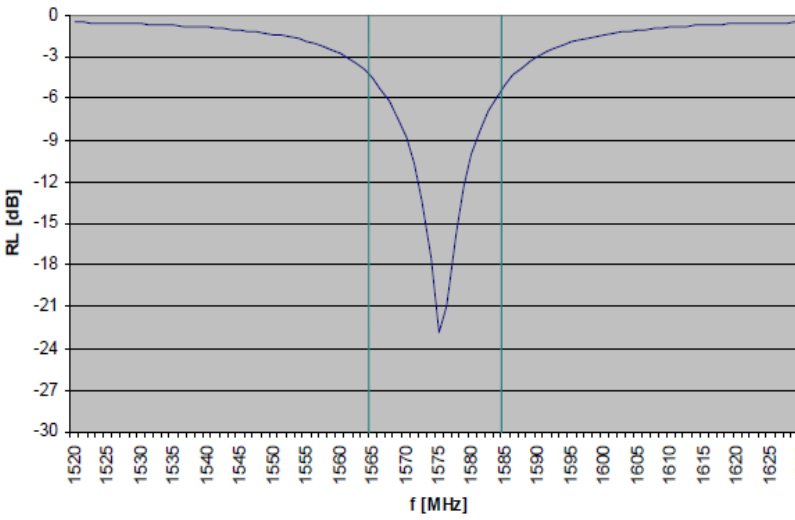
# GPS/BT Dual Feed Ceramic Chip Antenna

Pulse Part Number CW3063

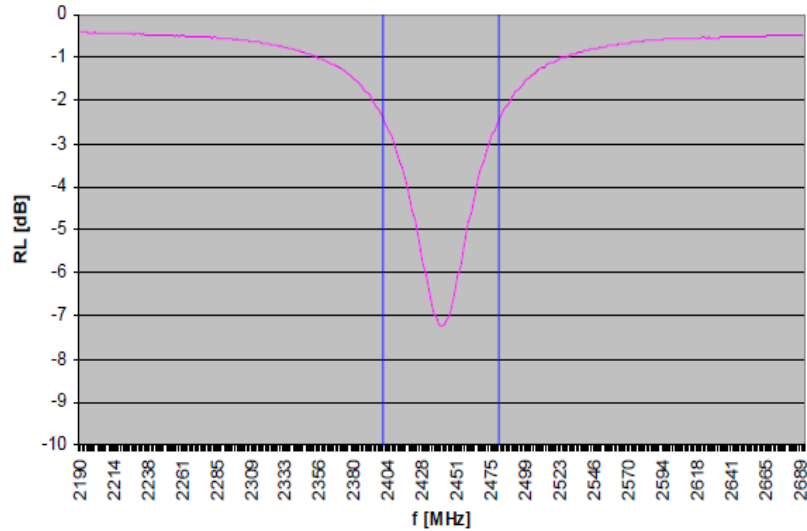
## Typical Electrical Characteristics (T=25 °C)

Measured on the 96 x 45 mm test board with matching circuit (8.2nH shunt inductor on GPS antenna feed. No matching circuit used for BT).

### Typical Return Loss

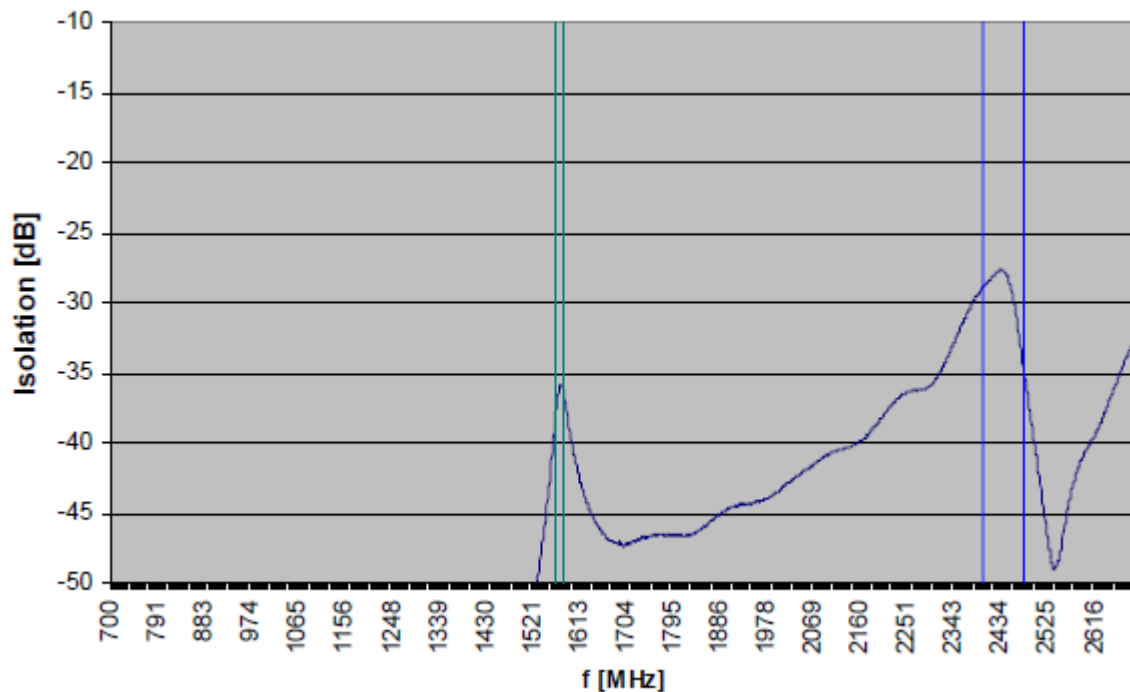


GPS Return Loss [dB]



BT Return Loss [dB]

### Typical Isolation between GPS and BT antennas [dB]

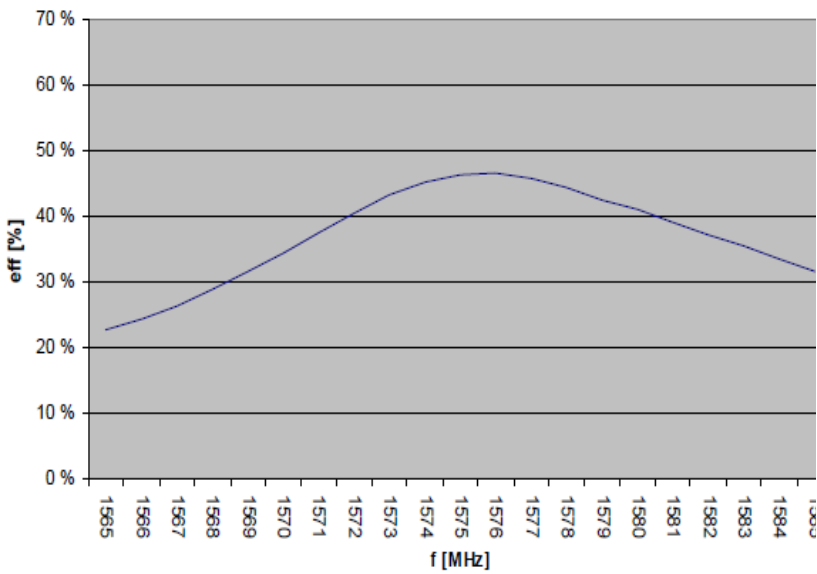


Contact: [mobiledeviceantenna.sales@pulseelectronics.com](mailto:mobiledeviceantenna.sales@pulseelectronics.com)

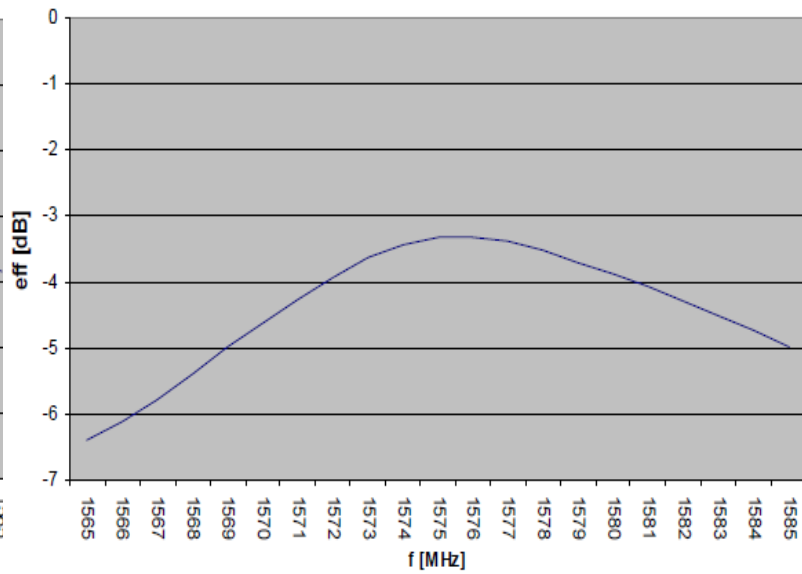
# GPS/BT Dual Feed Ceramic Chip Antenna

Pulse Part Number CW3063

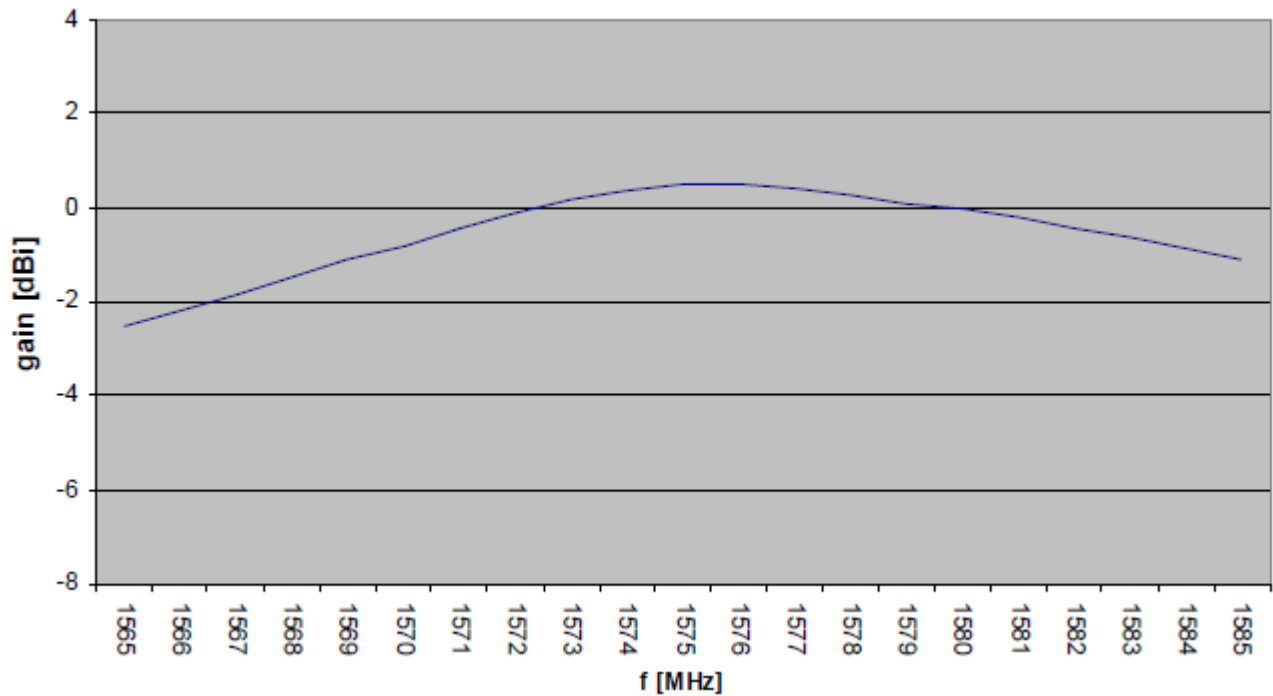
## GPS Typical free space efficiency and maximum gain



Total Efficiencies[%]



Total Efficiencies[dB]



Maximum Gain

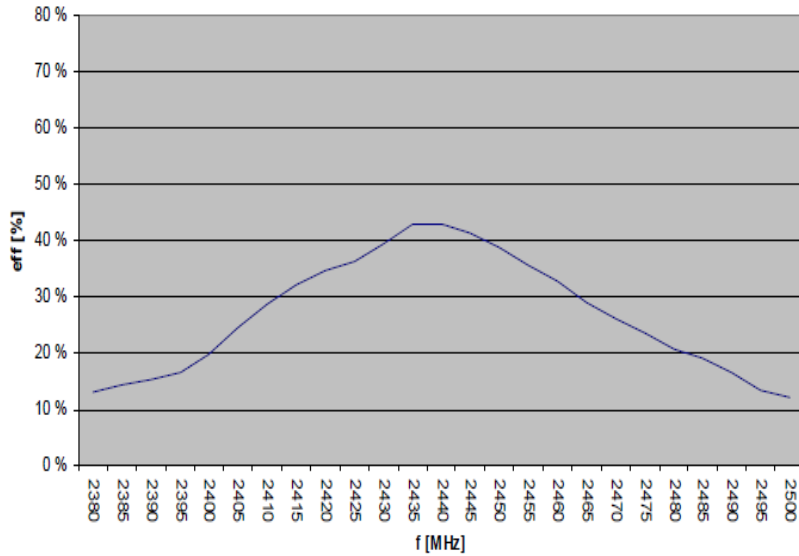
Contact: [mobiledeviceantenna.sales@pulseelectronics.com](mailto:mobiledeviceantenna.sales@pulseelectronics.com)



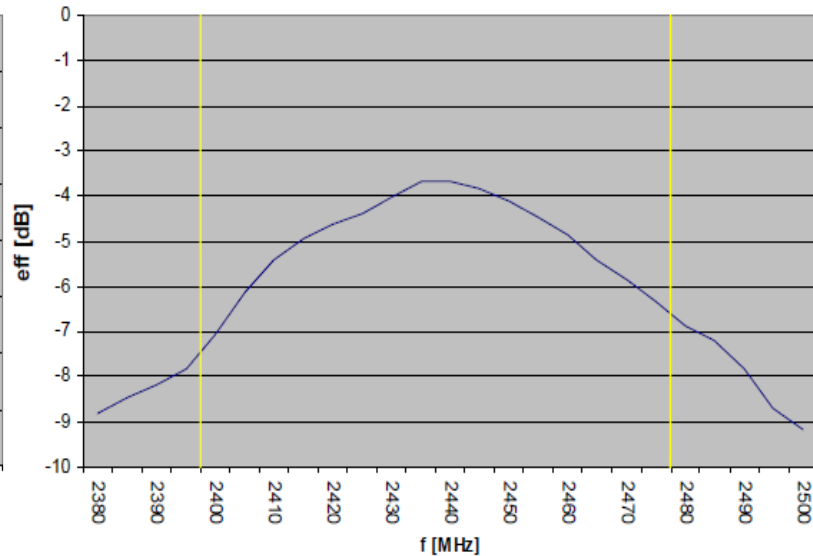
# GPS/BT Dual Feed Ceramic Chip Antenna

Pulse Part Number CW3063

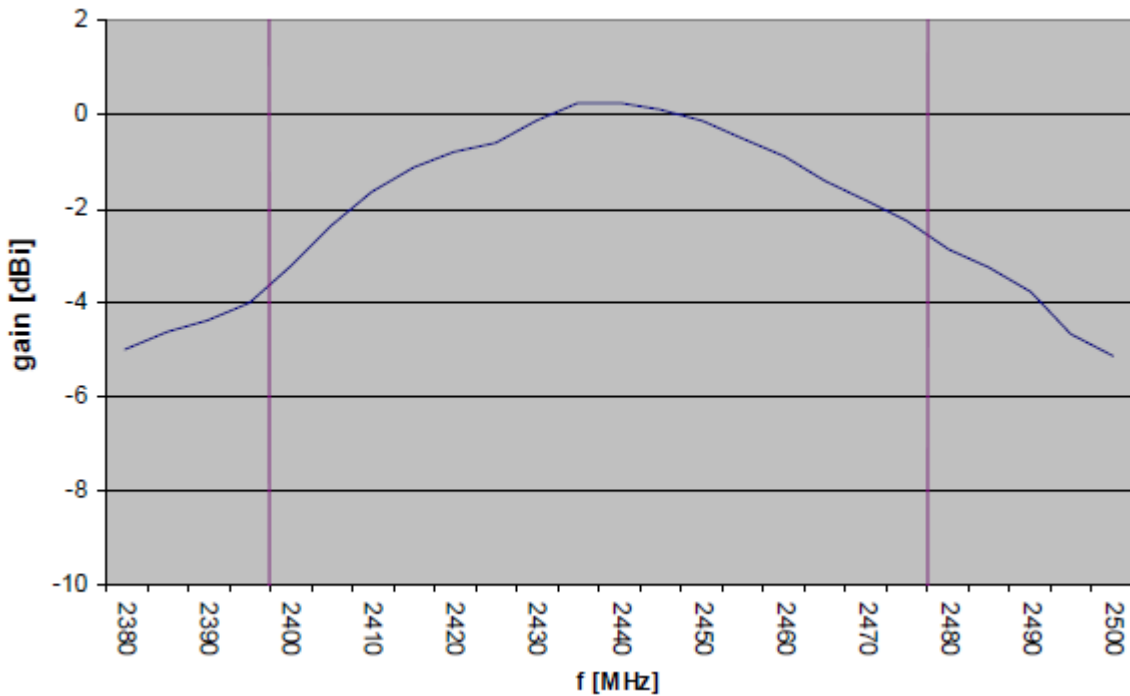
## BT Typical free space efficiency and maximum gain



Total Efficiencies [%]



Total Efficiencies [dB]



Maximum Gain

Contact: [mobiledeviceantenna.sales@pulseelectronics.com](mailto:mobiledeviceantenna.sales@pulseelectronics.com)

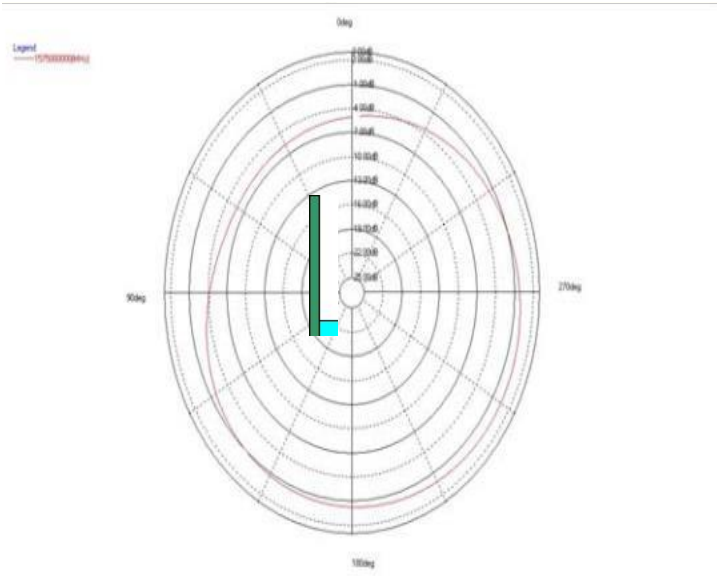


# GPS/BT Dual Feed Ceramic Chip Antenna

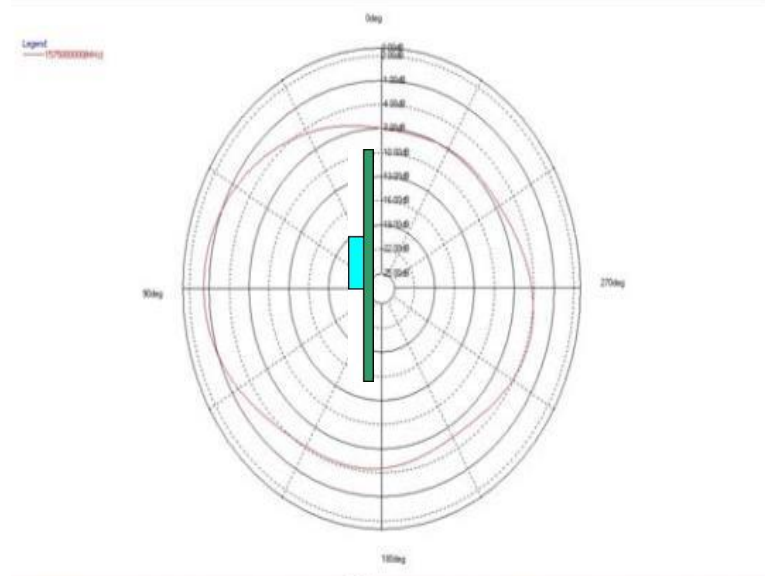
Pulse Part Number CW3063

## GPS Typical Free Space Radiation Patterns

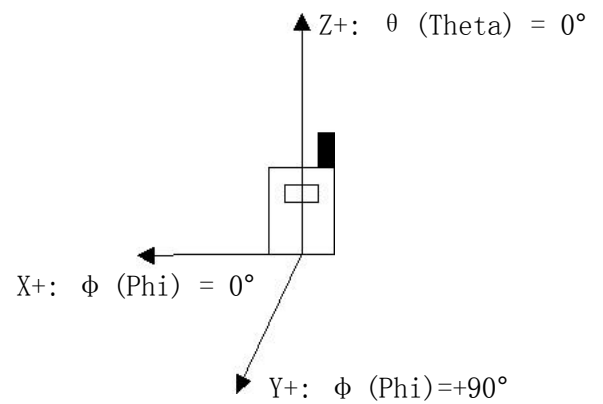
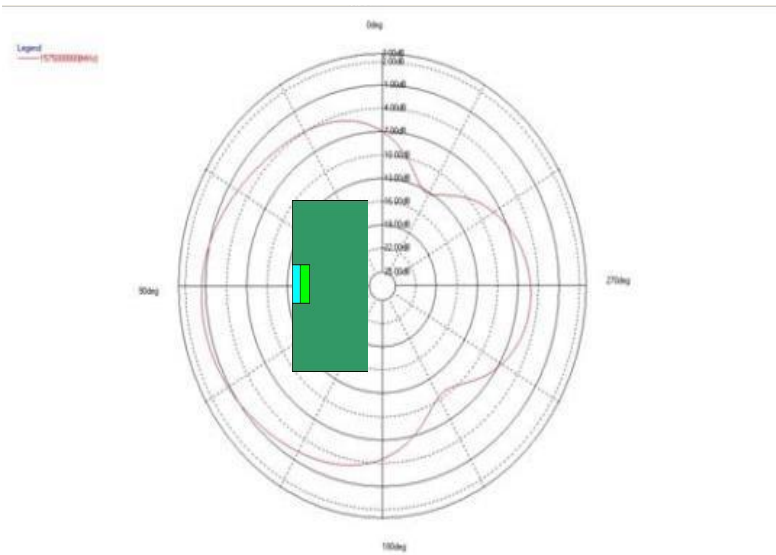
XZ-PLANE



ZY-PLANE



XY-PLANE



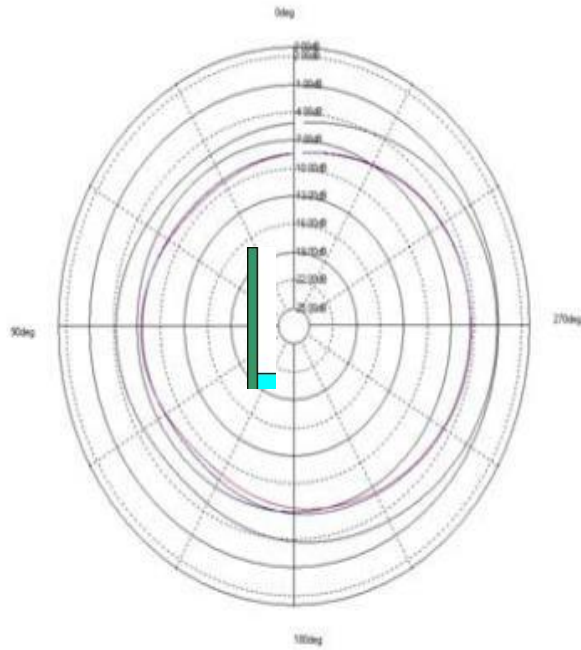


# GPS/BT Dual Feed Ceramic Chip Antenna

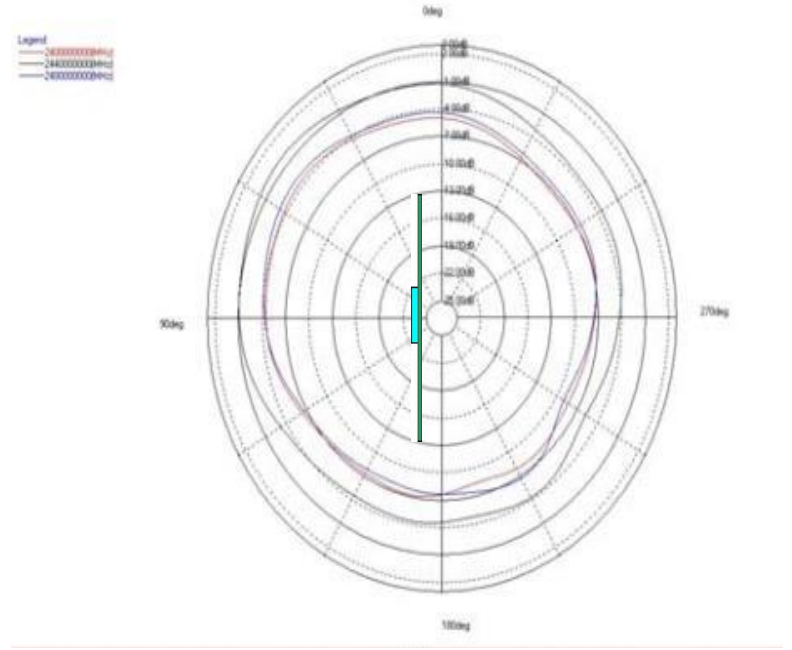
Pulse Part Number CW3063

## BT Typical Free Space Radiation Patterns

XZ-PLANE



ZY-PLANE



XY-PLANE

