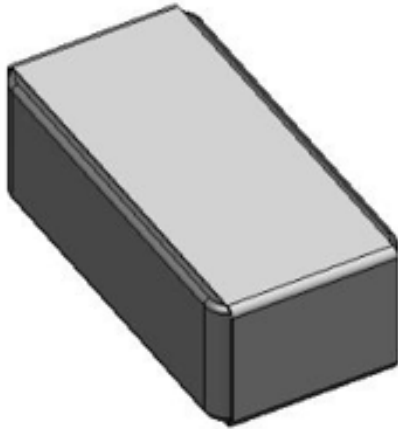


# GPS, BT, WLAN,WIFI Ceramic Chip Antenna

Pulse Part Number CW3043



## Features

- Multipurpose for various frequency applications
- 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
- 2.4 GHz WLAN
- 2.4 GHz ISM Band System
- GPS
- IEEE 802.11b/g
- ZigBee IEEE 802.15.4

## Electrical specifications @ +25 ° C

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

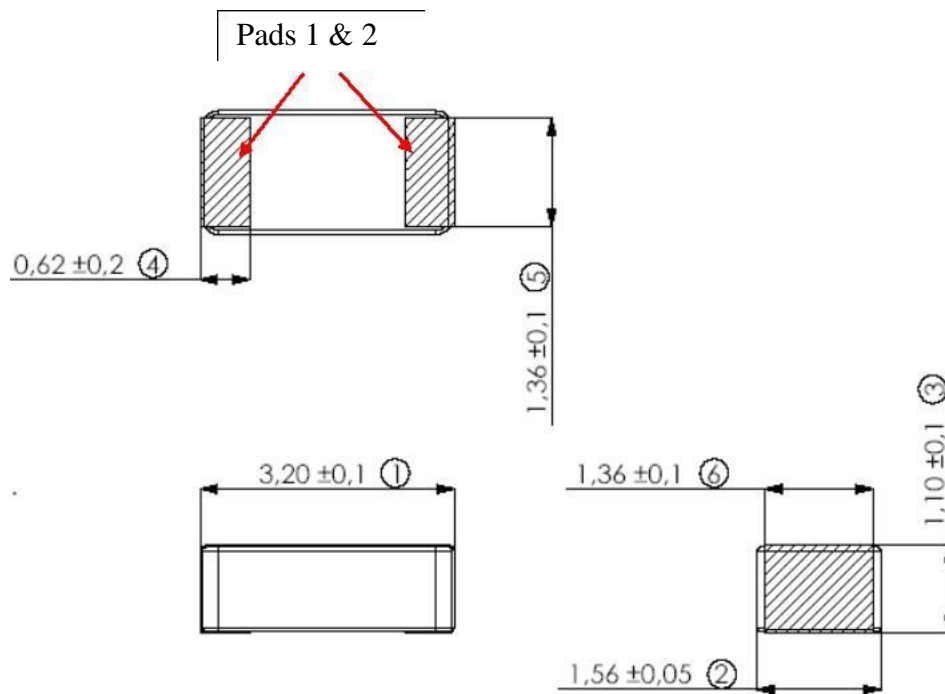
*Typical performance (testboard size 37x20 mm, PWB ground clearance area 17 x 20 mm)*

Frequency Range [MHz]	Max Gain [dBi]	Return loss min. [dB]	Efficiency [%]/[dB]	Impedance [ $\Omega$ ]	Operating Temperature [ $^{\circ}$ C]
1575.42+/-10	0.35	-15	43/-3.67	50	-40 to +85
2400 – 2483.5	4	-12	70 / -1.55	50	-40 to +85

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## Terminal Configuration and antenna dimensions



No.	Terminal Name	Terminal Dimensions
1	Feed / Support	0.62 x 1.36 mm
2	Feed / Support	0.62 x 1.36 mm

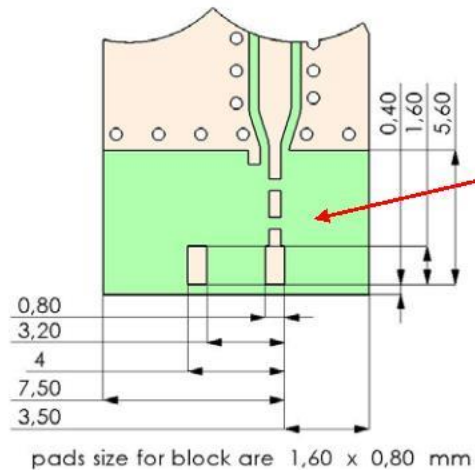
Antenna is symmetrical. Either of terminals 1 or 2 can be Feed / Support

# GPS, BT, WLAN, WIFI Ceramic Chip Antenna

Pulse Part Number CW3043

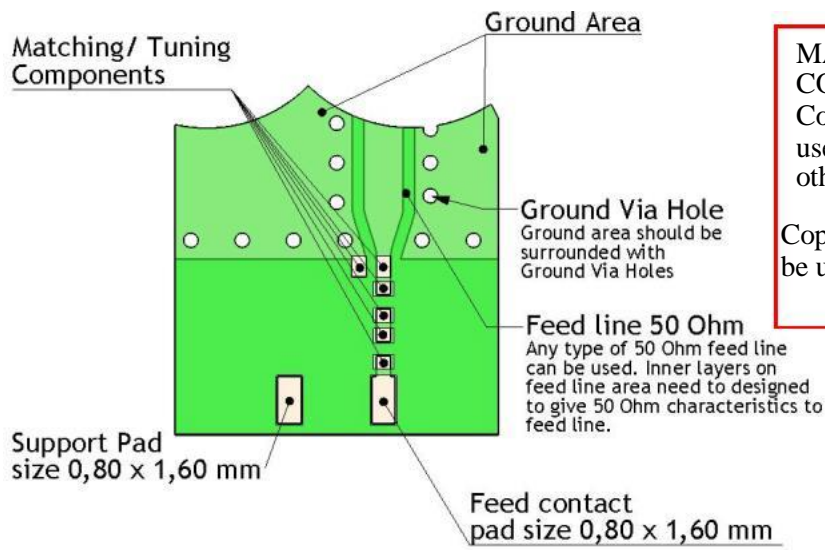
## PWB Layout

Pad dimensions in top copper



**GROUND CLEARANCE AREA**  
All metallization should be removed from all PWB layers  
  
Clearance area dimensions can be adjusted to available board space

PWB manufacturing requirements according to IPC-A-600 revision G or similar



**MATCHING/TUNING COMPONENTS**  
Component values depend on used ground clearance area and other device mechnicis  
  
Copper extension on board can be used for frequency fine tuning

PWB features		
No.	Terminal Name	Terminal Dimensions
1	Feed	0.80 x 1.60 mm
2	Mech support pad	0.80 x 1.60 mm

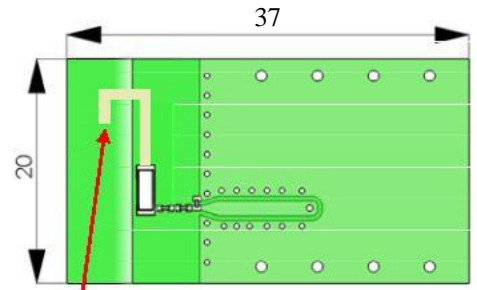
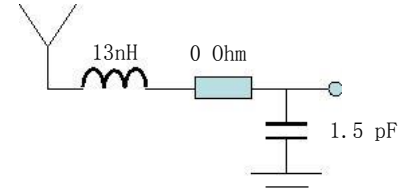
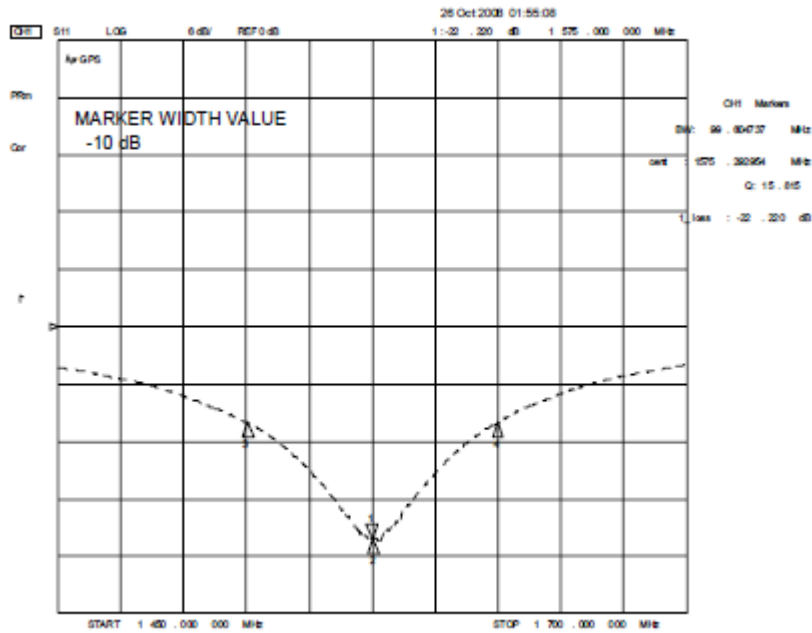
# GPS, BT, WLAN, WIFI Ceramic Chip Antenna

Pulse Part Number CW3043

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

Measured on 37x20mm test board, ground clearance area 12 x 20mm

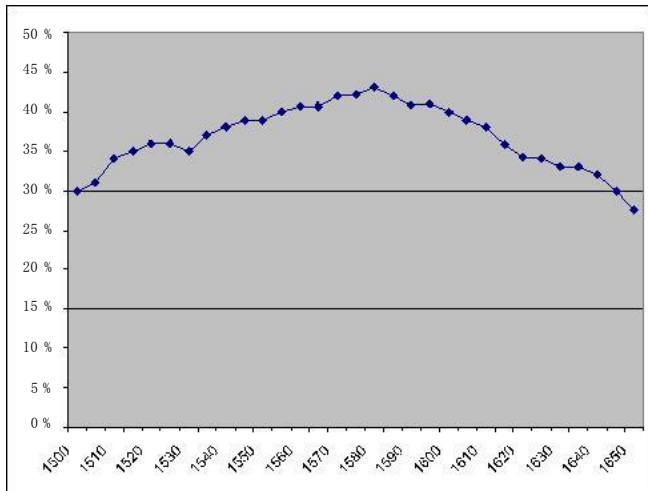
### Typical Return Loss S11



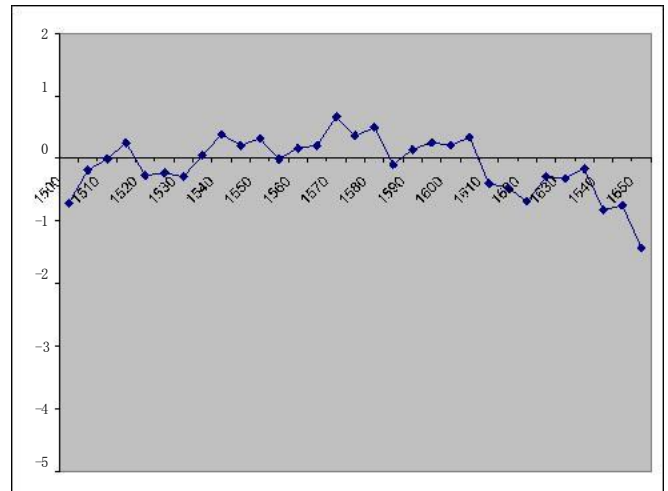
FREQUENCY FINE TUNING  
 DONE WITH METAL STRIP ON  
 BOARD

### Free space efficiency and maximum gain

3D Total Efficiency



3D Max Gain



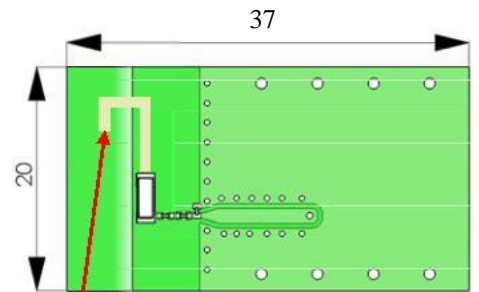
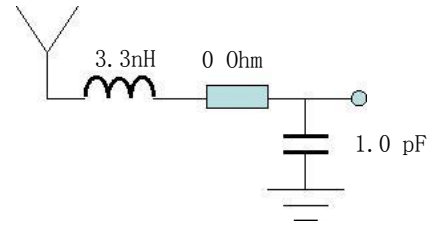
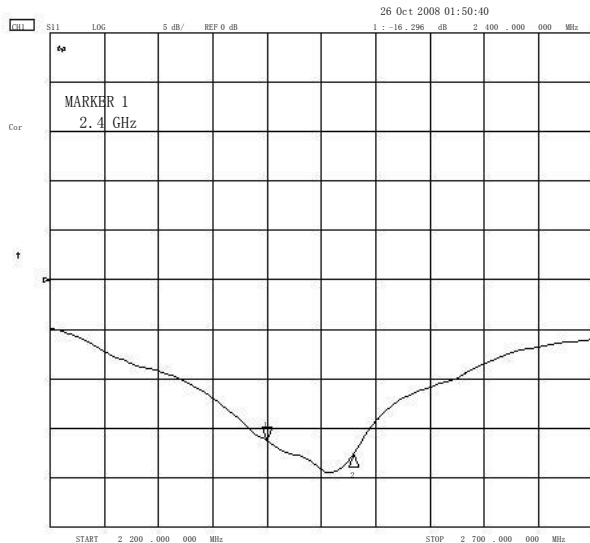
# GPS, BT, WLAN, WIFI Ceramic Chip Antenna

Pulse Part Number CW3043

## BT, WLAN, WIFI Typical Electrical Characteristics (T=25 ° C)

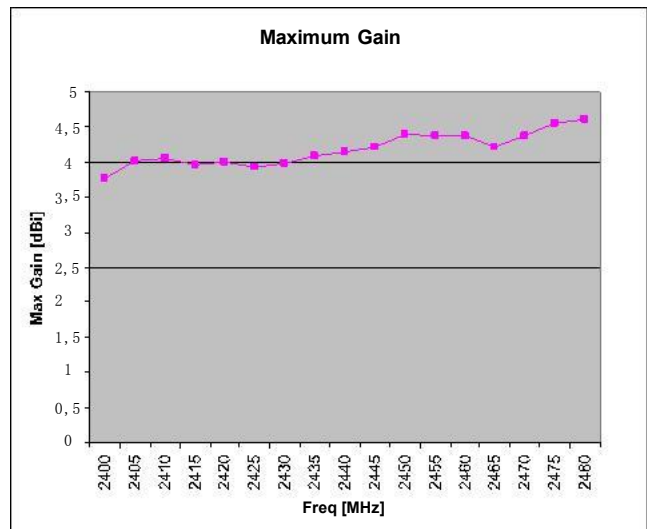
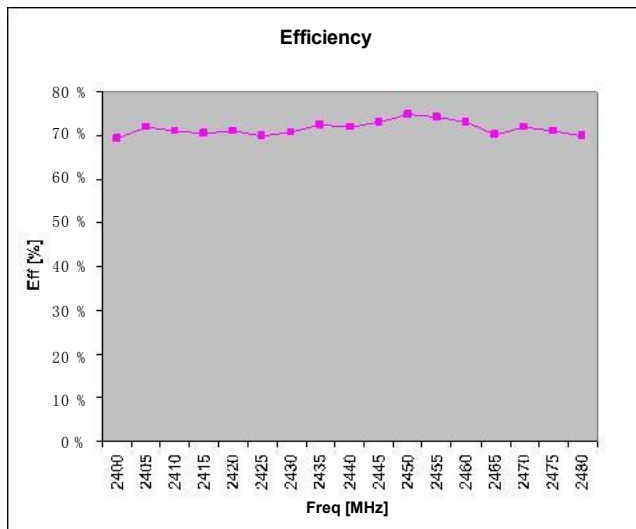
Measured on 37x20mm test board, ground clearance area 12 x 20mm

### Typical Return Loss S11



FREQUENCY FINE TUNING  
DONE WITH METAL STRIP ON  
BOARD

### Free space efficiency and maximum gain

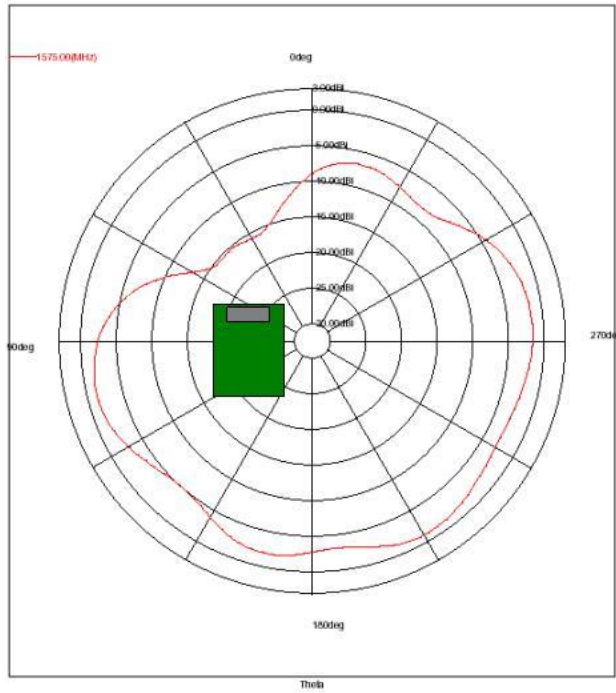


# GPS, BT, WLAN, WIFI Ceramic Chip Antenna

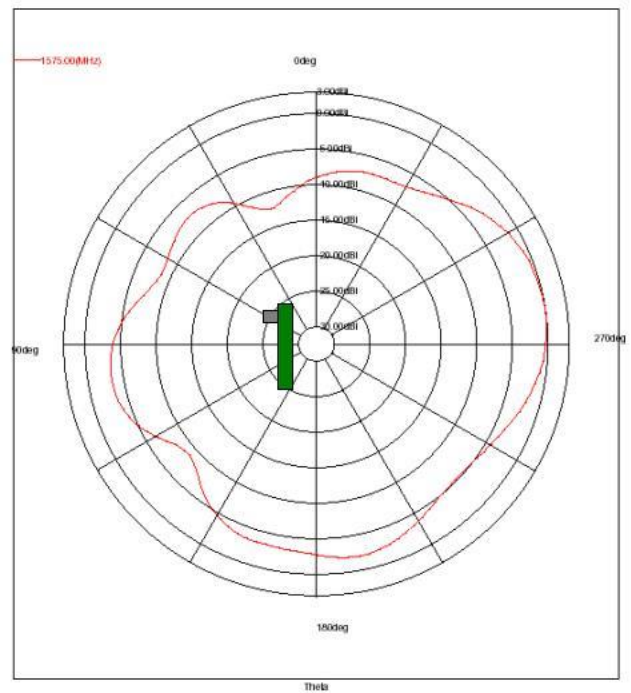
Pulse Part Number CW3043

## GPS Typical Free space Radiation Patterns

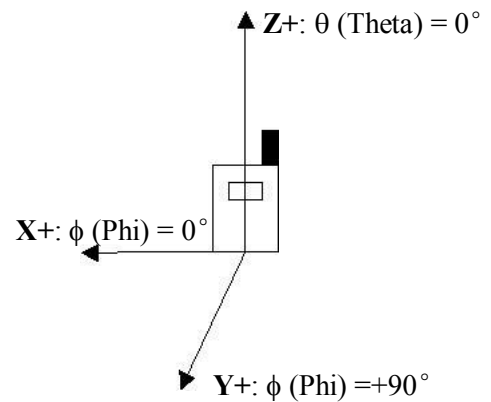
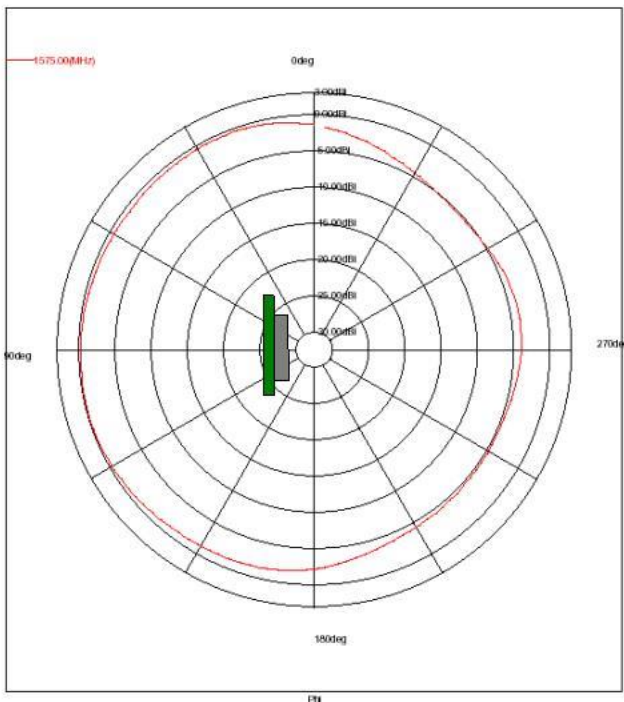
XZ-PLANE



ZY-PLANE



XY-PLANE



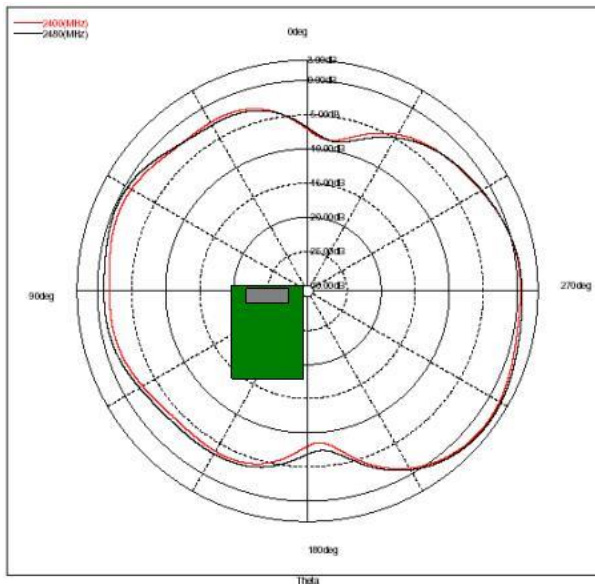
Contact: [mobiledeviceantenna.sales@pulseelectronics.com](mailto:mobiledeviceantenna.sales@pulseelectronics.com)

# GPS, BT, WLAN,WIFI Ceramic Chip Antenna

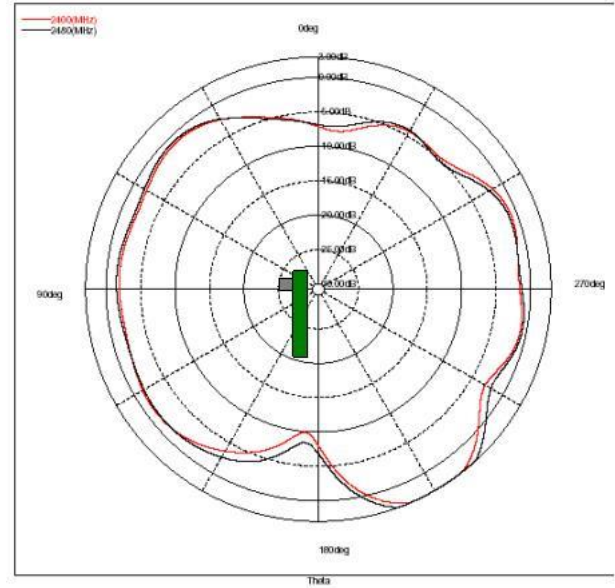
Pulse Part Number CW3043

## BT, WLAN, WIFI Typical Free space Radiation Patterns

XZ-PLANE



ZY-PLANE



XY-PLANE

