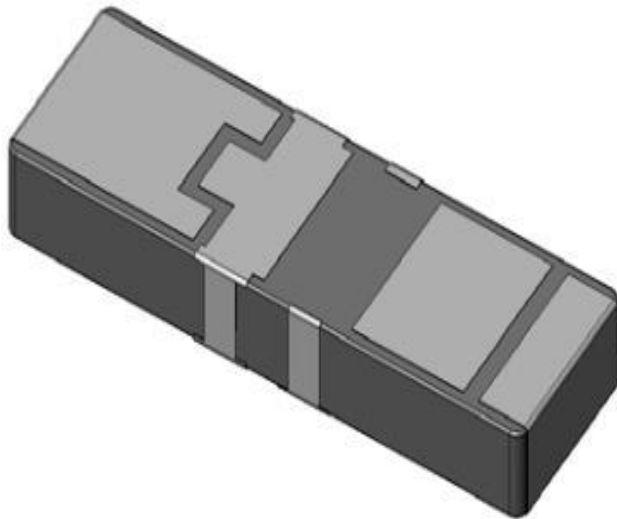


# GPS/BT Dual Feed Ceramic Chip Antenna

Pulse Part Number CW3064A



## Features

- Omni directional radiation
- Low profile
- Compact size W x L x H (10 x 3.2 x 1.5mm)
- Low weight (240 mg)
- Lead free materials
- Fully SMD compatible
- Lead free soldering compatible
- Tape and reel packing
- RoHS Compliant Product
- Flexible mounting orientation due to symmetrical pad layout

## Applications

- GPS L1 band (1.575 GHz)
- Bluetooth, WLAN, WIFI (2.4 – 2.483GHz)

## Electrical specifications @ +25 ° C

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

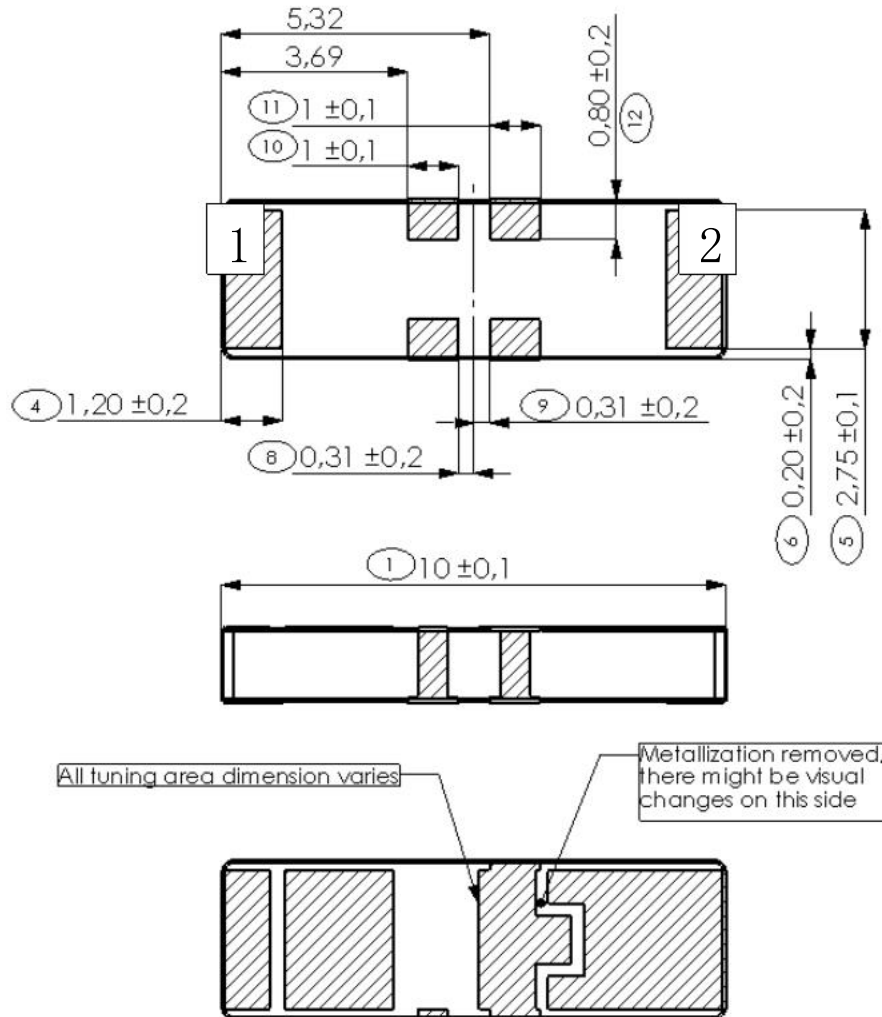
Typical performance (testboard size 96 x 45 mm, PWB ground clearance area 10.8 x 6.4 mm), antenna located on side-center position

Frequency Range [MHz]	Efficiency [%]/[dB]	Isolation b/w antennas [dB]	Impedance [ $\Omega$ ]	Operating Temperature [ $^{\circ}$ C]
1575.42+/-10	67 / -1.7(peak)	$\geq 24$	50	-40 to +85
2400-2483.5	86 / -0.7(peak) 60/-2.2(band edges)	$\geq 25$	50	-40 to +85

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## Terminal Configuration and antenna dimensions



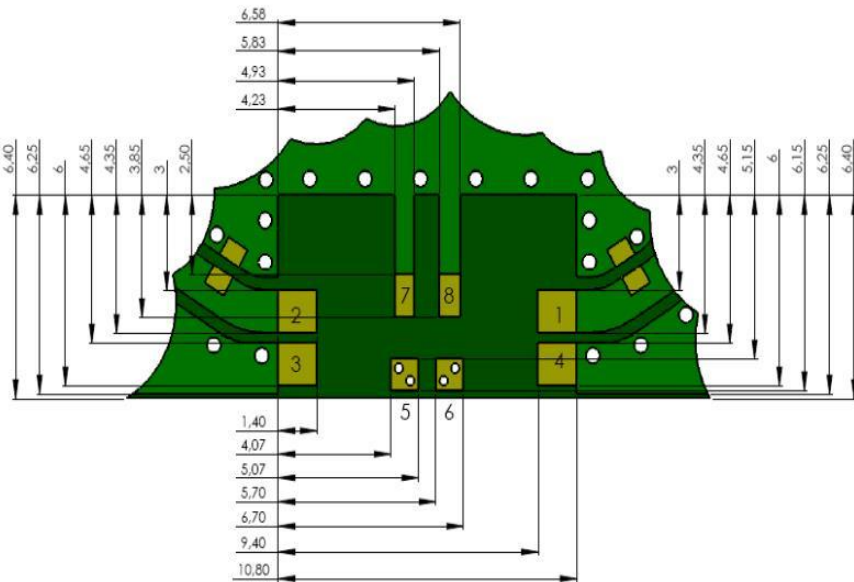
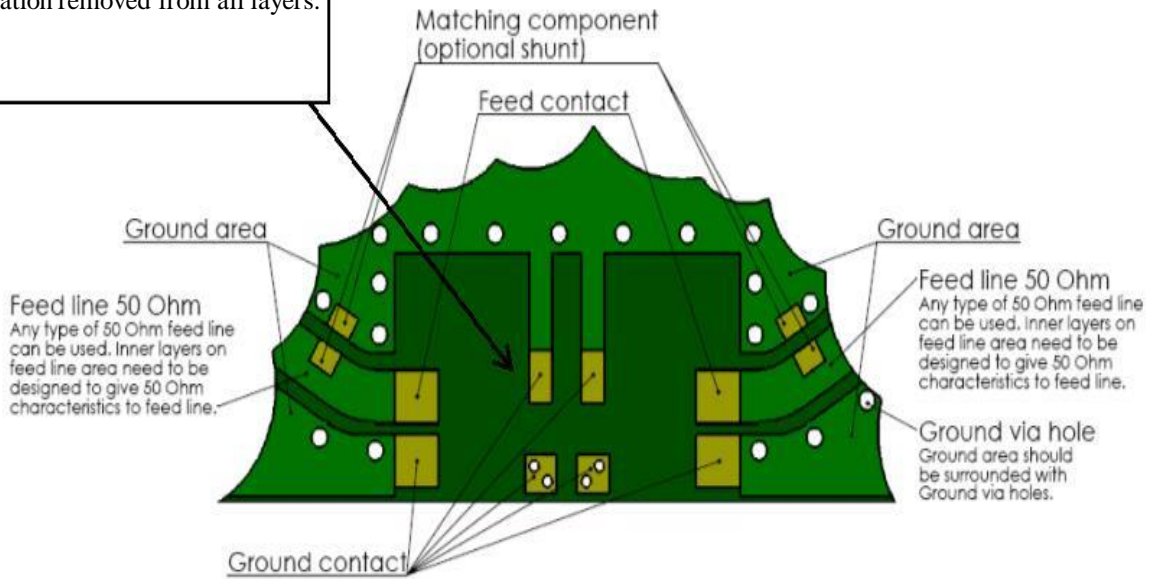
No.	Terminal Name	Terminal Dimensions
1	Feed BT / GND	1.20 x 2.75 mm
2	Feed GPS / GND	1.20 x 2.75 mm

# GPS/BT Dual Feed Ceramic Chip Antenna

Pulse Part Number CW3064A

## Terminal Configuration PWB Layout

**GROUND REMOVAL AREA UNDER ANTENNA**  
10.80 x 6.40 mm  
All metallization removed from all layers.



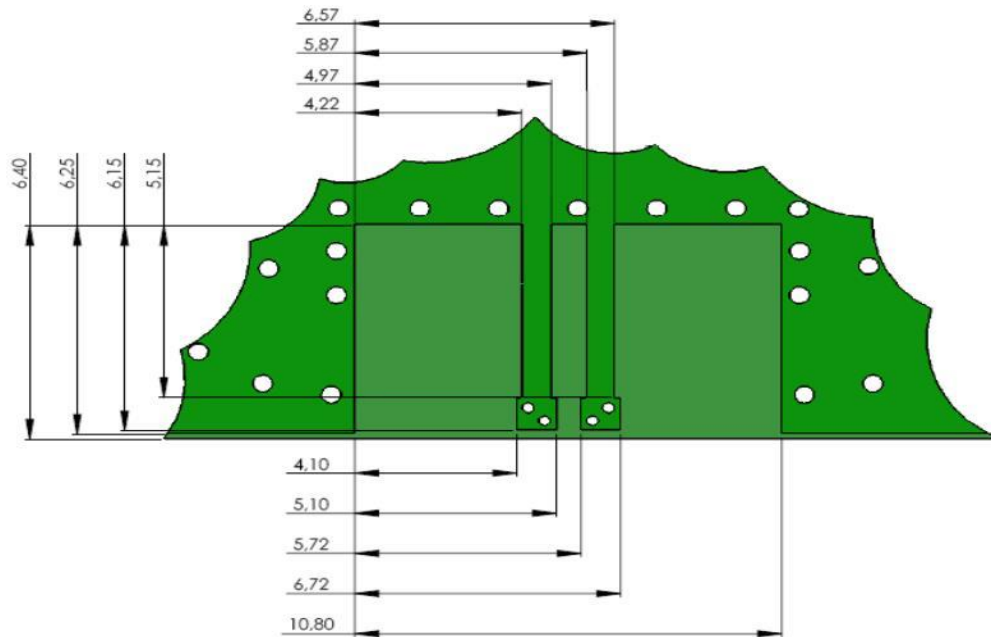
No.	Terminal Name	Terminal Dimensions
1	BT/GPS Feed*	1.35 x 1.40 mm
2	GPS/BT Feed *	1.35 x 1.40 mm
3	GND	1.35 x 1.40 mm
4	GND	1.35 x 1.40 mm
5	GND	1.00 x 1.00 mm
6	GND	1.00 x 1.00 mm
7	GND	1.35 x 0.70 mm
8	GND	1.35 x 0.75 mm

\*Antenna orientation can be rotated freely by 180 degrees because of the symmetrical pad layout.

# GPS/BT Dual Feed Ceramic Chip Antenna

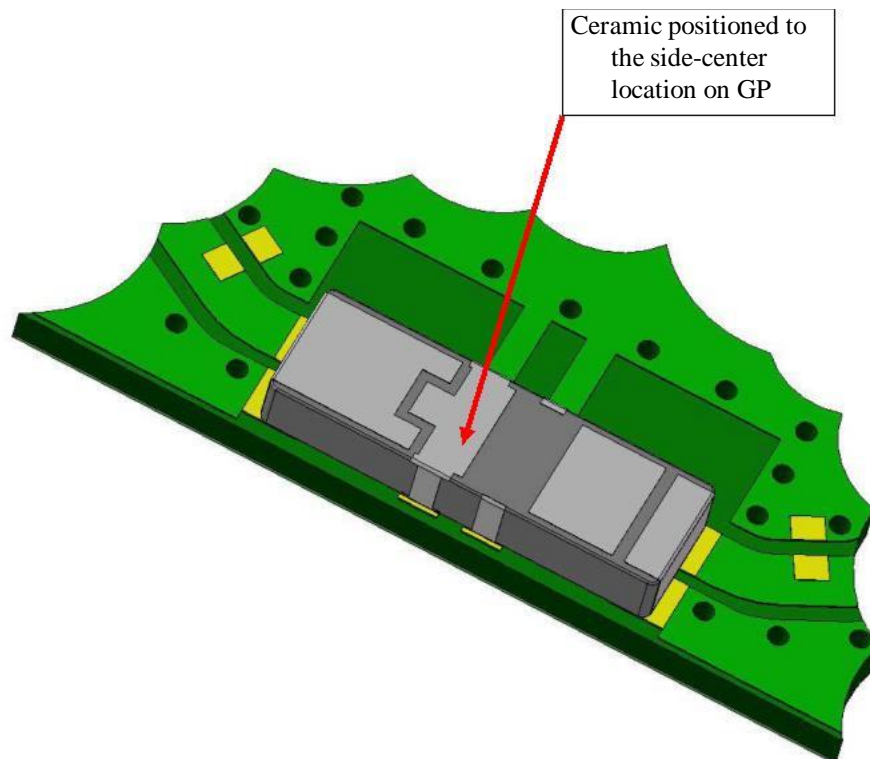
Pulse Part Number CW3064A

## Recommended Antenna Dimensions on PWB Layout



## 3D- view of Test Setup

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



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

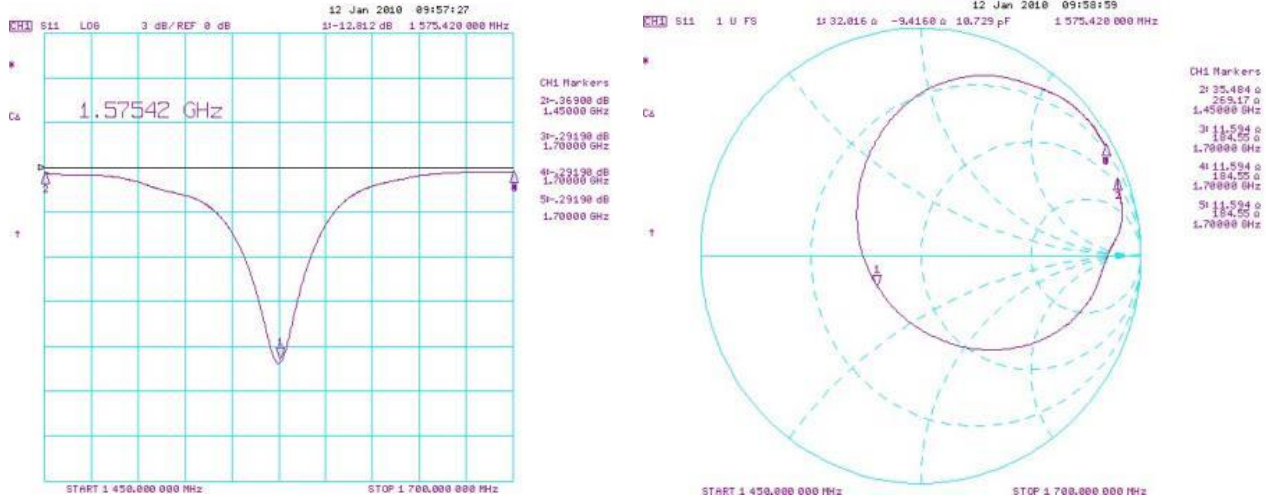
# GPS/BT Dual Feed Ceramic Chip Antenna

Pulse Part Number CW3064A

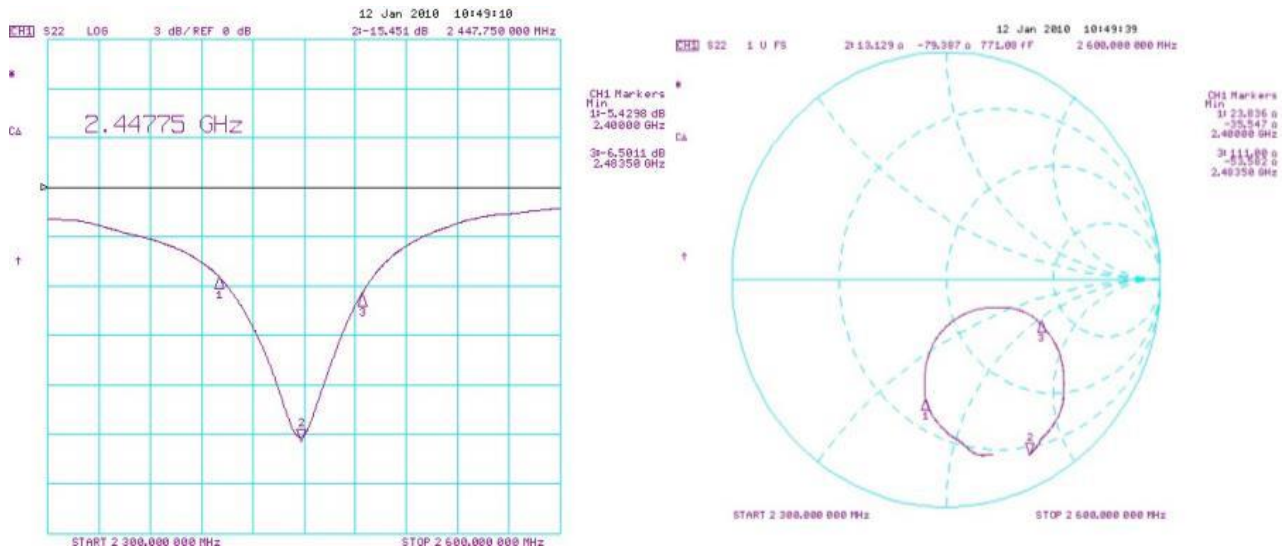
## Typical Electrical Characteristics (T=25 °C)

Test board size 96 mm x 45 mm, PWB ground removal area 10.8 mm x 6.4 mm. Antenna located on side-center position.

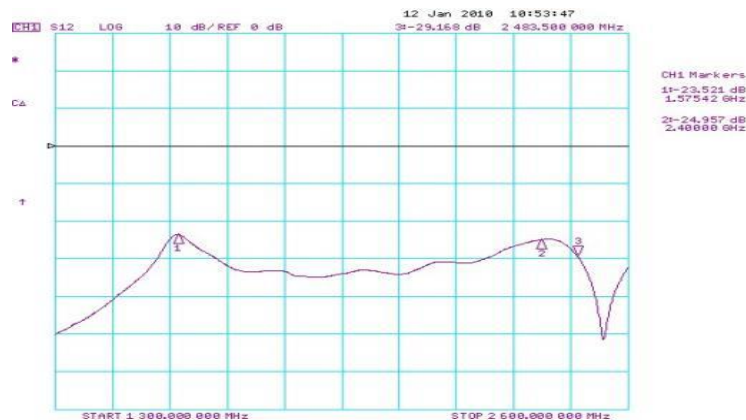
### GPS Typical Return Loss [dB] and Smith chart



### BT Typical Return Loss [dB] and Smith chart



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

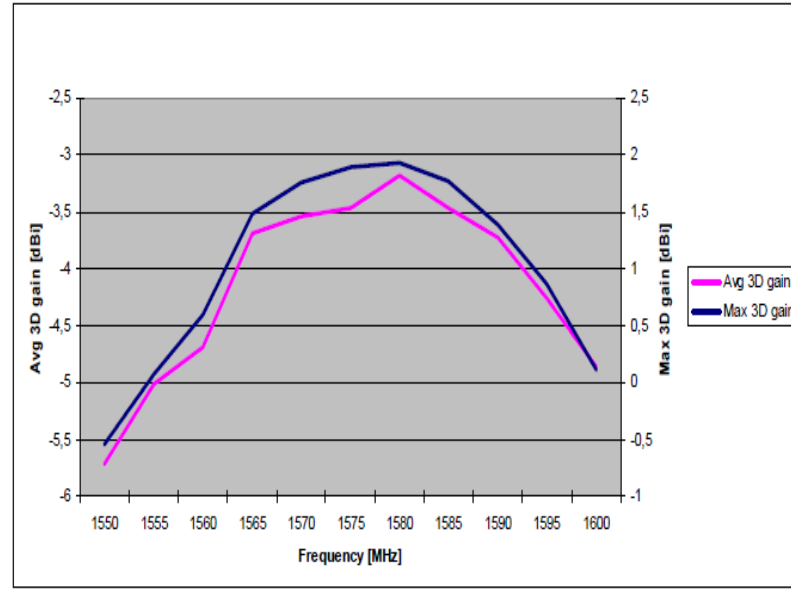
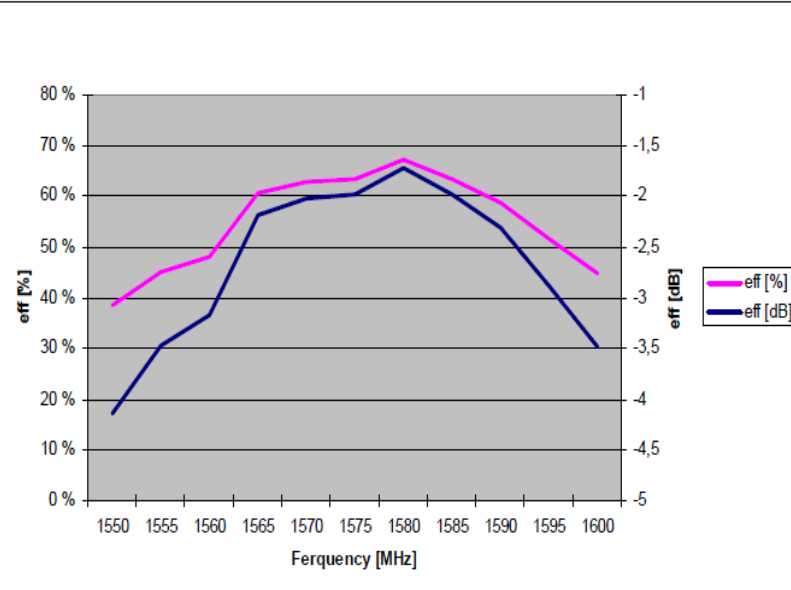




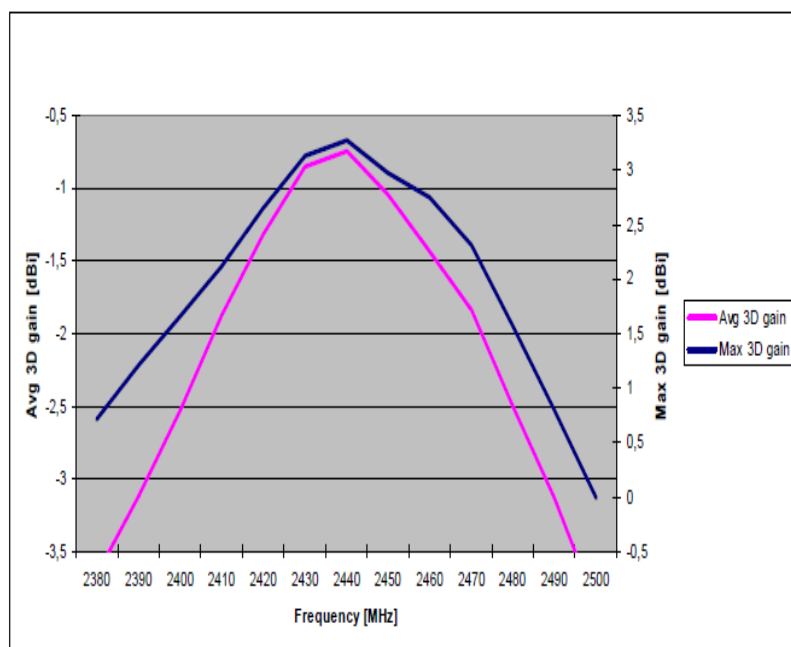
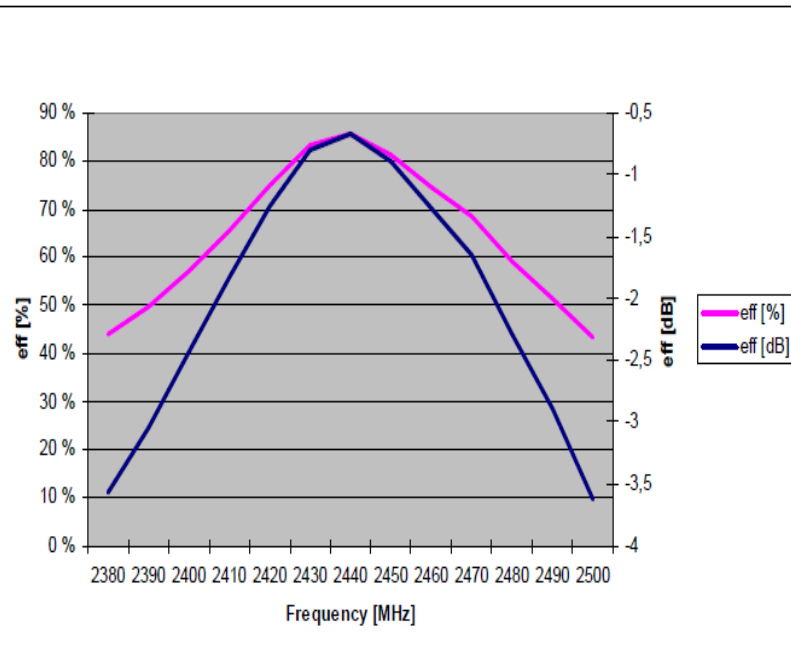
# GPS/BT Dual Feed Ceramic Chip Antenna

Pulse Part Number CW3064A

## GPS Typical free space efficiency and maximum gain



## BT Typical free space efficiency and maximum gain



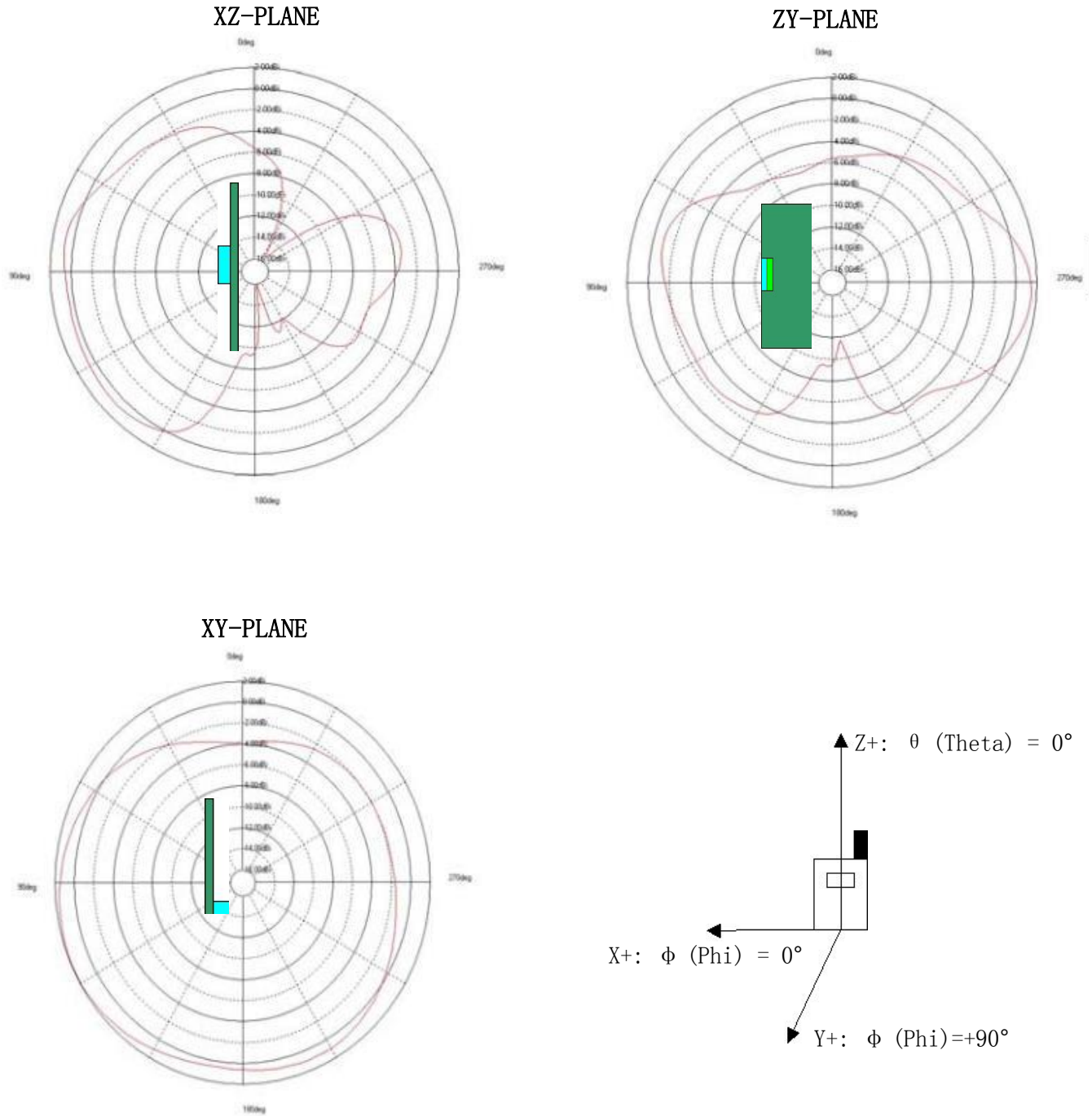
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# GPS/BT Dual Feed Ceramic Chip Antenna

Pulse Part Number CW3064A

## GPS Typical Free Space Radiation Patterns

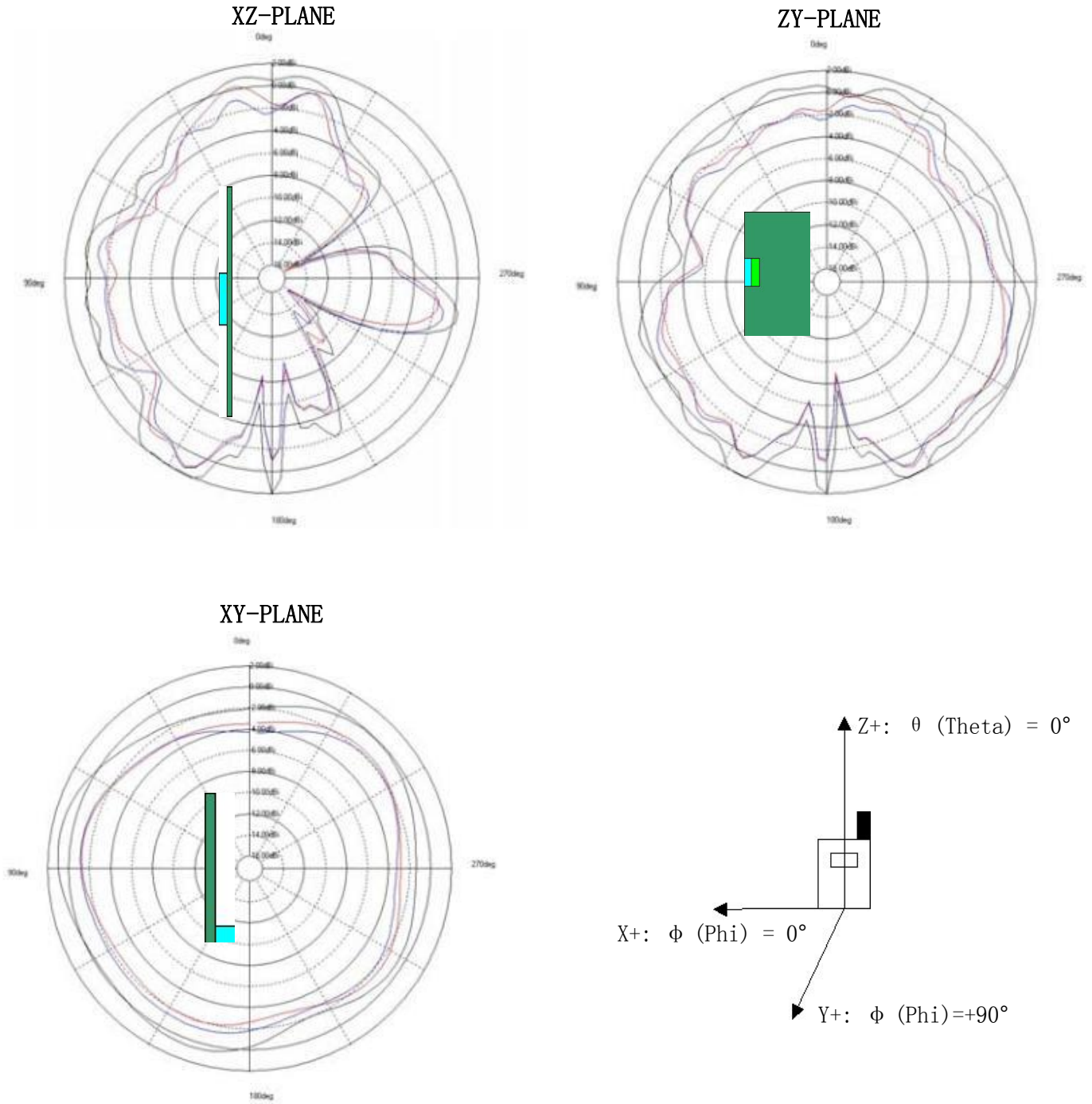


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# GPS/BT Dual Feed Ceramic Chip Antenna

Pulse Part Number CW3064A

## BT Typical Free Space Radiation Patterns



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