

# 2.4 GHz Helical WiFi SMD Antenna

Ground cleared under antenna, clearance area 7.50 x 5.50 mm. Pulse Part Number: W3108



## Features

- Low profile (5.5 mm)
- Compact size W x L x H (5.0 x 2.5 x 5.5 mm)
- Low weight (140 mg)
- Lead Free materials
- Fully SMD compatible
- Lead free soldering compatible
- Tape and reel packing
- RoHS Compliant Product

## Applications

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

*Engineering samples available*

## Electrical specifications @ +25 °C

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

## 2.4 GHz WiFi

Typical performance (testboard size 100 x 40 mm, PWB ground clearance area 7.5 x 5.5 mm)

Values below are measured inside typical mobile phone chassis including all mechanics

Frequency Range [MHz]	Max Gain [dBi]	Efficiency [%] / [dB]	Return loss min. [dB]	Impedance [ $\Omega$ ]	Operating Temperature [°C]
2400 – 2483.5	1.5	50 / -3	-8	50	-40 to +85

## Pulse Finland Oy

Takatie 6  
90440 Kempele, Finland  
Tel: +358 207 935 500  
Fax: +358 207 935 501  
[www.pulseeng.com/antennas](http://www.pulseeng.com/antennas)



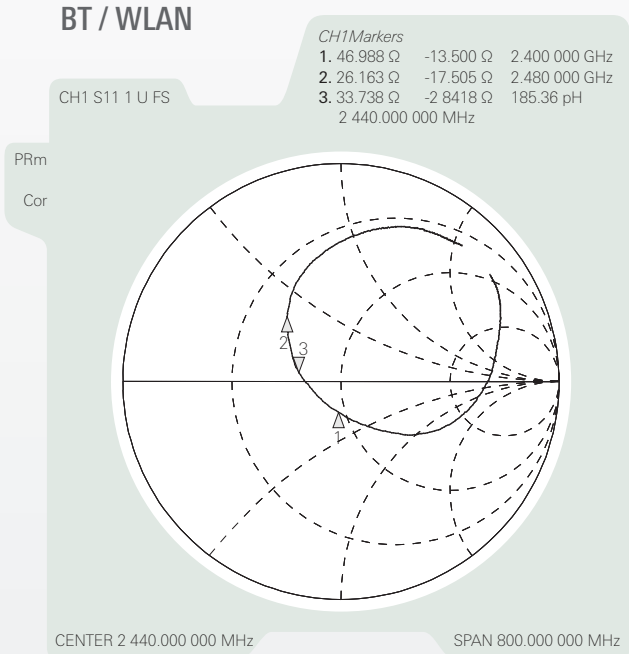
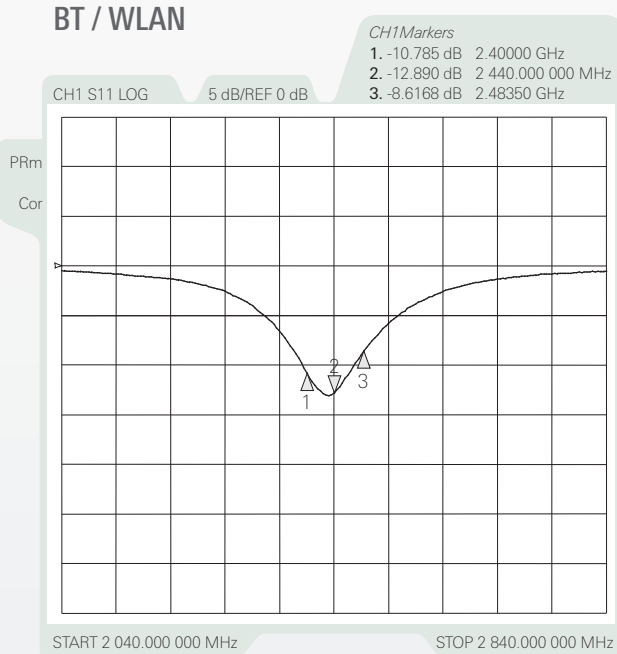
# 2.4 GHz Helical WiFi SMD Antenna

Ground cleared under antenna, clearance area 7.50 x 5.50 mm. Pulse Part Number: W3108

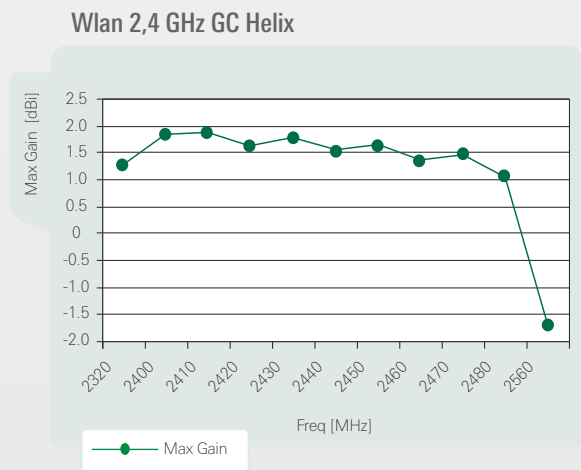
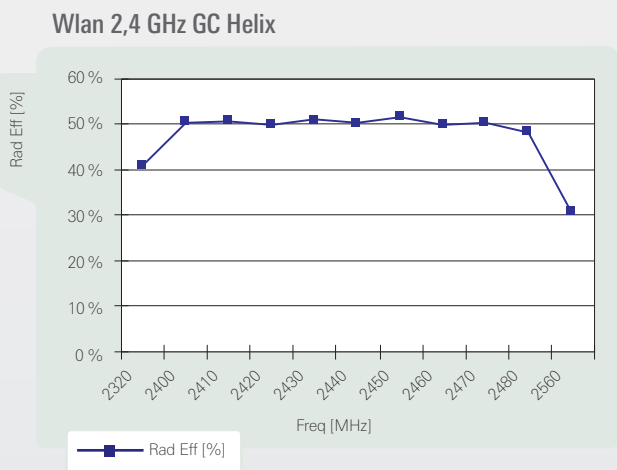
## Typical Electrical Characteristics (T=25 °C)

Measured on basic chassis including PWB, display, battery and plastic covers. Chassis size abt. 17 x 40 x 100 mm.

Typical Return Loss S11/ impedance



Free space efficiency and maximum gain, PWB ground clearance area 6.00 x 11.00 mm



**Pulse Finland Oy**

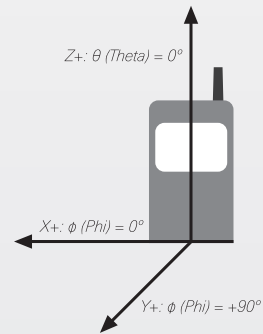
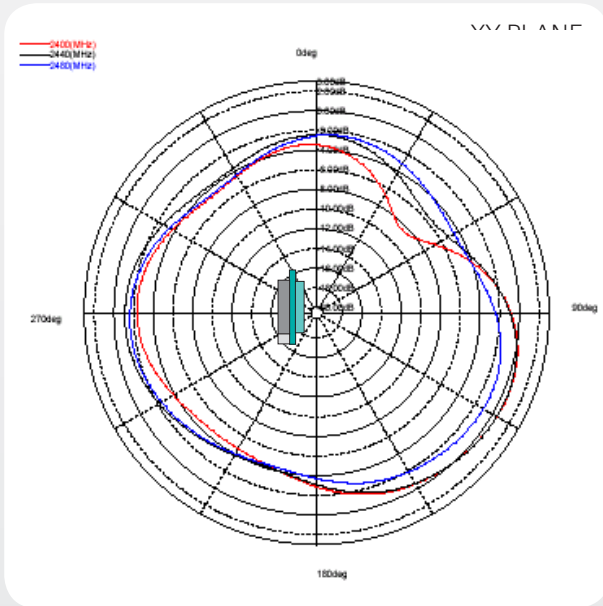
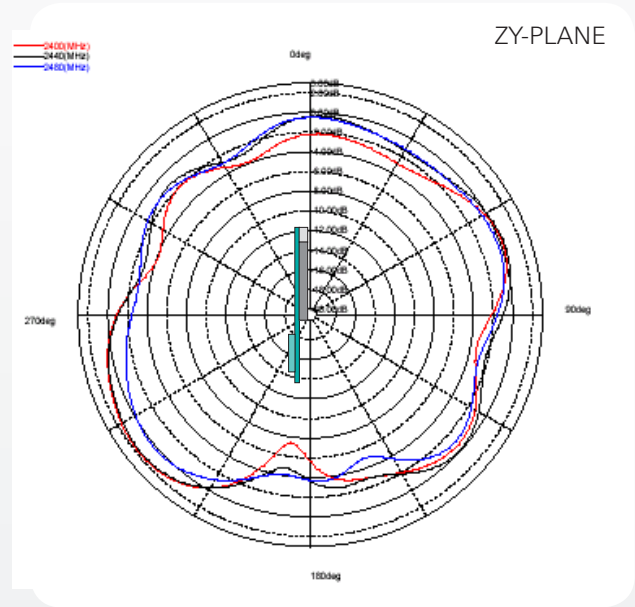
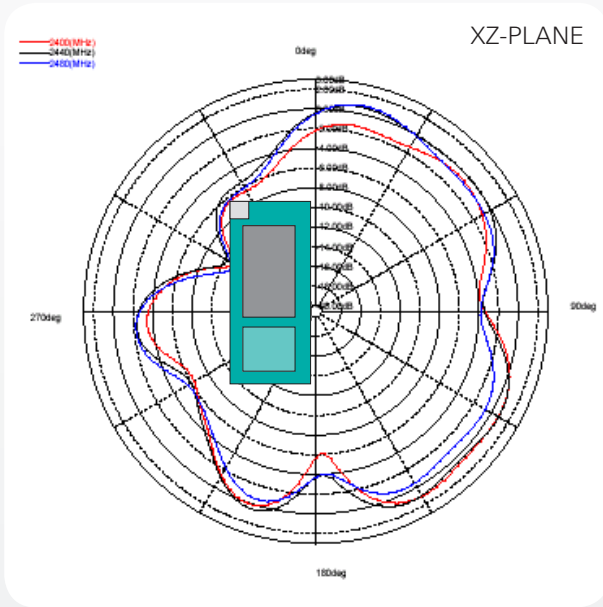
Takatie 6  
 90440 Kempele, Finland  
 Tel: +358 207 935 500  
 Fax: +358 207 935 501  
[www.pulseeng.com/antennas](http://www.pulseeng.com/antennas)



# 2.4 GHz Helical WiFi SMD Antenna

Ground cleared under antenna, clearance area 7.50 x 5.50 mm. Pulse Part Number: W3108

## Typical Free space Radiation Patterns



Pulse Finland Oy

Takatie 6  
90440 Kempele, Finland

Tel: +358 207 935 500

Fax: +358 207 935 501

[www.pulseeng.com/antennas](http://www.pulseeng.com/antennas)

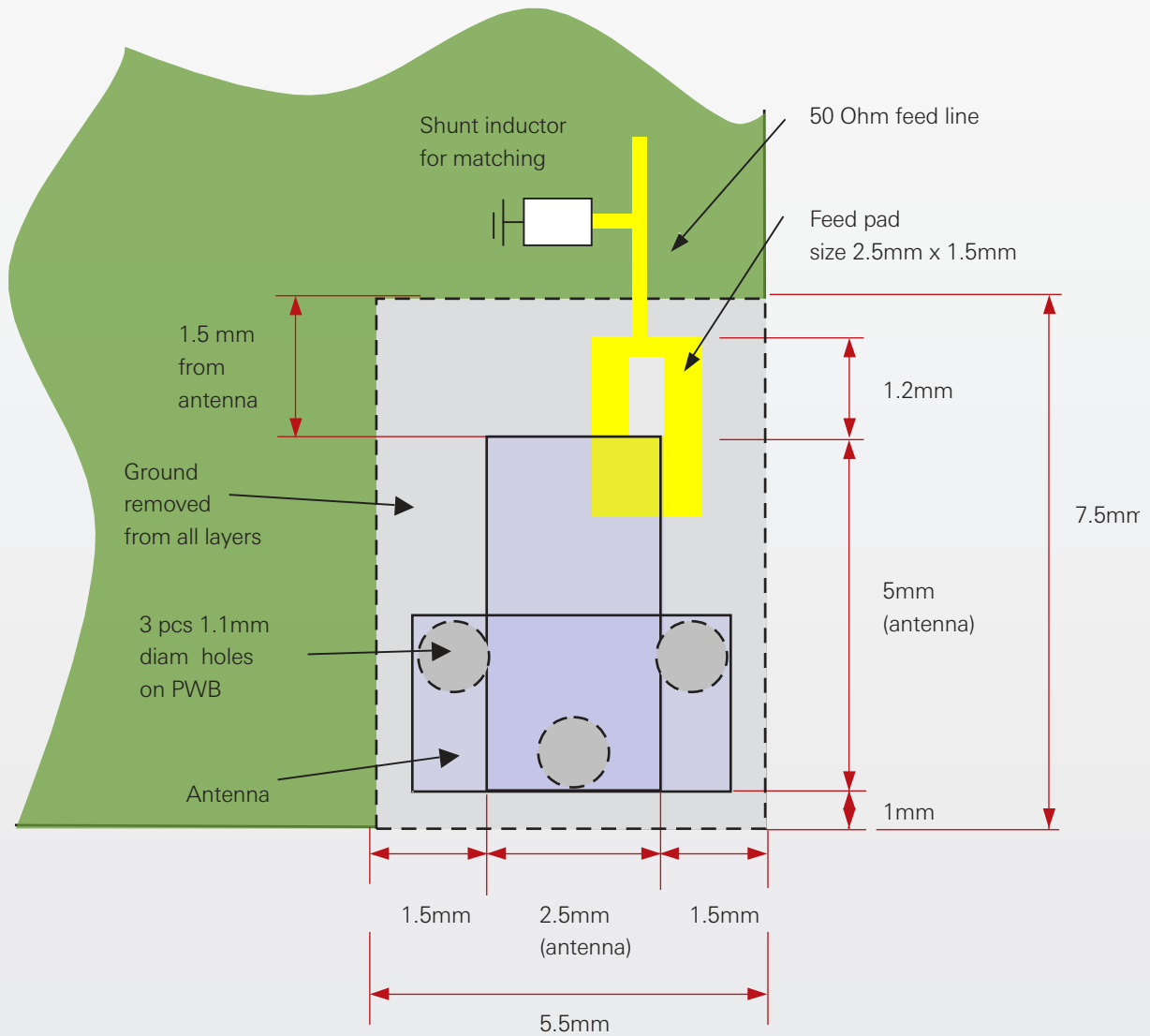


# 2.4 GHz Helical WiFi SMD Antenna

Ground cleared under antenna, clearance area 7.50 x 5.50 mm. Pulse Part Number: W3108

## Recommended pad layout and guard distances

Feed line should be designed to match 50  $\Omega$  characteristic impedance, depending on PWB material and thickness.



### Pulse Finland Oy

Takatie 6  
90440 Kempele, Finland  
Tel: +358 207 935 500  
Fax: +358 207 935 501  
[www.pulseeng.com/antennas](http://www.pulseeng.com/antennas)

