

# 850 MHz RX Diversity Helical SMD Antenna

Ground cleared under antenna, clearance area 8.00 x 40.00 mm. *Pulse Part Number: W3117*

## Features

- Low profile (2.5 mm, embedded to board)
- Snap in fixing to board
- Compact size W x L x H (12.4 x 8 x 2.5 mm)
- Low weight (400 mg)
- Lead Free materials
- Fully SMD compatible
  - Glue needed between antenna and PWB
- Lead free soldering compatible
- Tape and reel packing
- RoHS Compliant Product

## Applications

- GSM 850 Band
- 869-894 MHz

*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.*

## RX Diversity 850 MHz

Typical performance (testboard size 100 x 40 mm, PWB ground clearance area 8.00 x 40.00 mm)

Frequency Range [MHz]	Linear Max Gain [dBi]	Efficiency [%] / [dB]	Return Loss min. [dB]	Impedance [ $\Omega$ ]	Operating Temperature [°C]
869 – 894	0 (peak) -1.3 (band edges)	55 / -2.6 (peak) 40 / -4 (band edges)	-9	50	-40 to +85

### Pulse Finland Oy

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

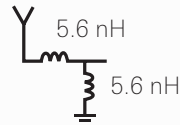


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## Typical Electrical Characteristics (T=25 °C)

Measured on the 100 x 40 mm test board with matching circuit



Typical Return Loss S11/ impedance

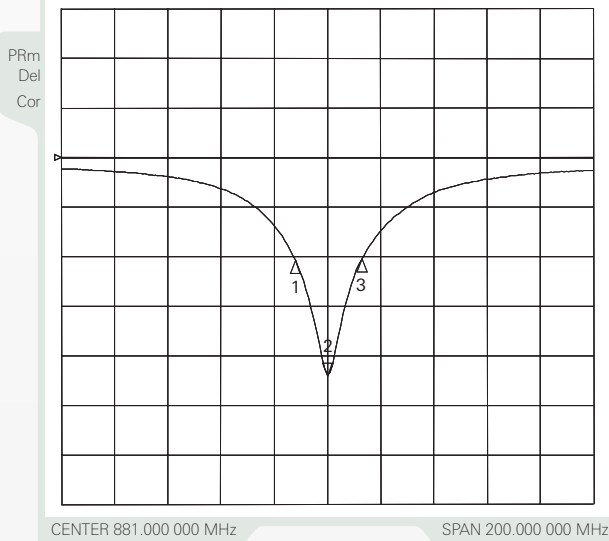
### RX Diversity

4 Oct 2006 14:52:08

CH1 Markers

- 1. -10.379 dB 869.000 MHz
- 2. -22.048 dB 881.000 000 MHz
- 3. -10.204 dB 894.000 MHz

CH1 S11 LOG 5 dB/REF 0 dB



### RX Diversity

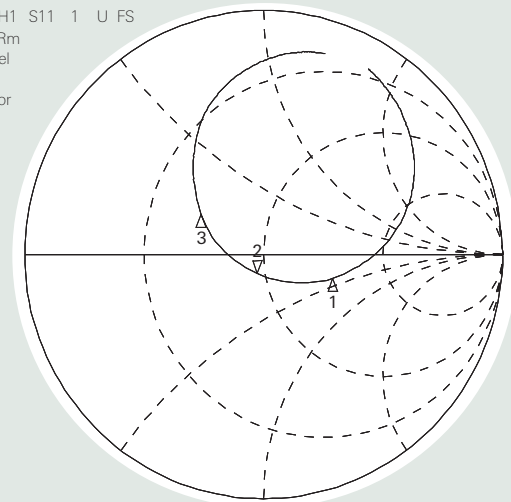
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CH1 Markers

- 1. 88.105 Ω -19.090 Ω 869.000 MHz
- 2. 46.920 Ω -7.2852 Ω 24.797 pF 881.000 000 MHz
- 3. 27.967 Ω 10.135 Ω 894.000 MHz

CH1 S11 1 U FS

PRm Del Cor

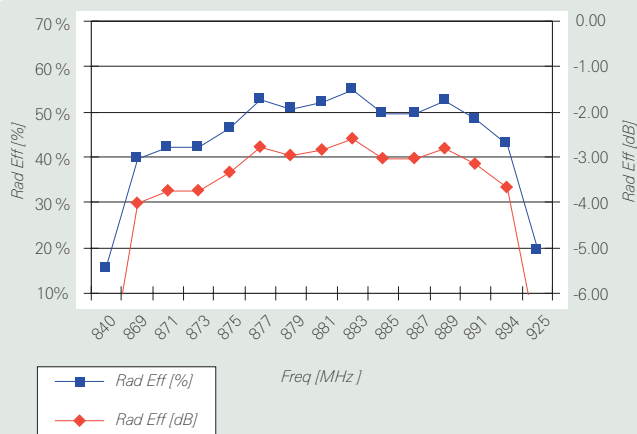


CENTER 881.000 000 MHz

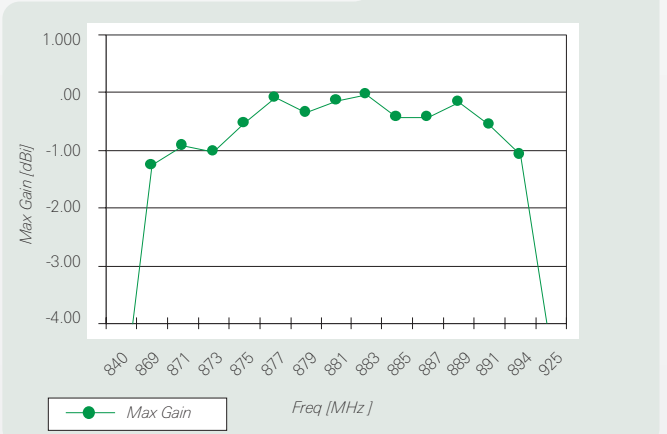
SPAN 200.000 000 MHz

Free space efficiency and maximum gain

### RX Diversity 869-894 MHz



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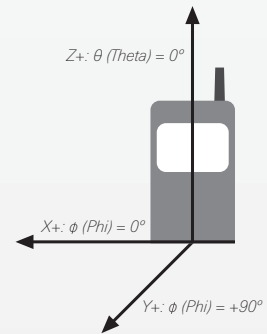
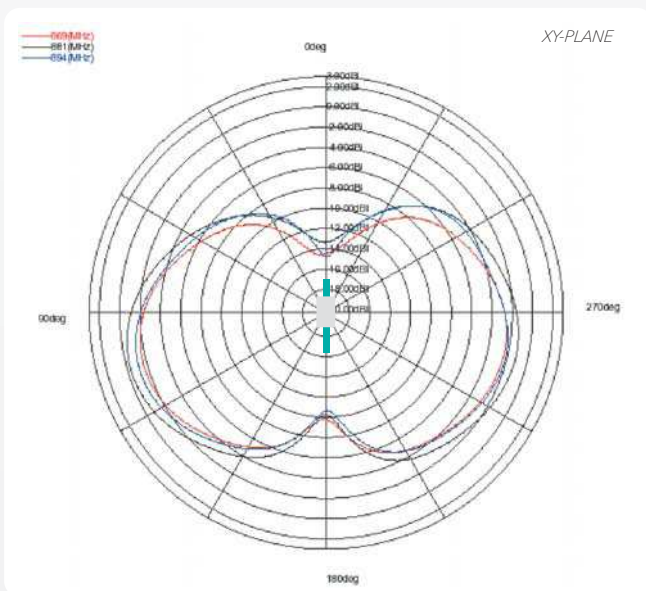
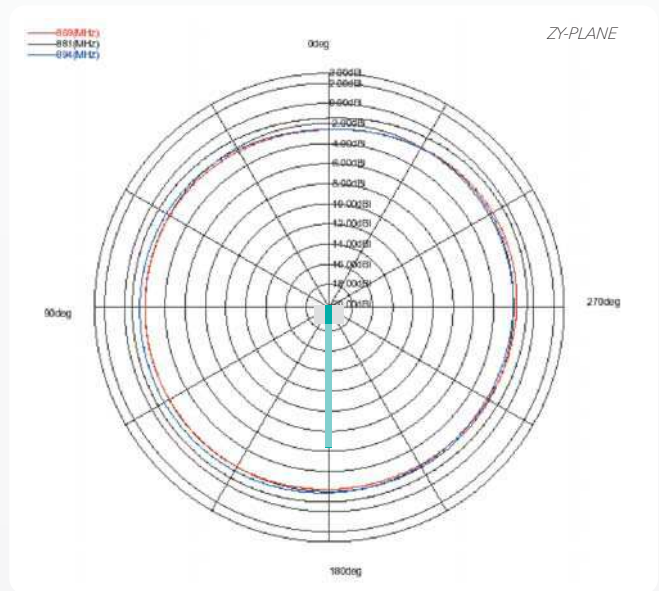
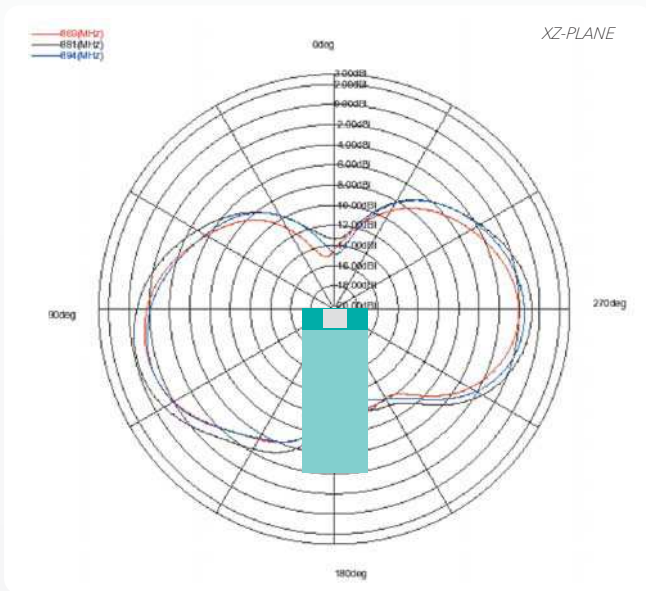
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## Typical Free Space Radiation Patterns



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