

# Penta Band Right Angle Stubby Antenna

Pulse Part Numbers: W1900 / W1902



## Features

- Small form factor
- Antenna size W x L x H (18.4 x 8.0 x 49.5mm)
- Lead free materials
- RoHS Compliant Product
- Connector Type: SMA

## Applications

- Penta band EU/US GSM/WCDMA
- Frequency range: 850 / 900 / 1800 / 1900/ 2100 MHz
- M2M Applications

## Part Numbers:

P/N	Connector
W1900	SMA(Male)
W1902	RP-SMA(Male)

## Electrical specifications @ +25 °C

*Note: Electrical characteristics depend on device mechanics.*

*W1900 & W1902 Typical free space performance, measured in test unit mechanics (position 1.)*

Frequency [MHz]	Max Gain [dBi]	Efficiency [%] / [dB]	Return loss min. [dB]	Impedance [ $\Omega$ ]	Operating Temperature [°C]
824 - 960	1.0 (peak) -0.5 (min)	65 / -1.8 (peak) 50 / -3.0 (min)	-4	50	-40 to +85
1710 - 1990	2.0 (peak) 0.5 (min)	65 / -1.8 (peak) 50 / -3.0 (min)	-6		
1920 - 2170	2.5 (peak) 2.0 (min)	65 / -1.8 (peak) 50 / -3.0 (min)	-6		

### Pulse Finland Oy

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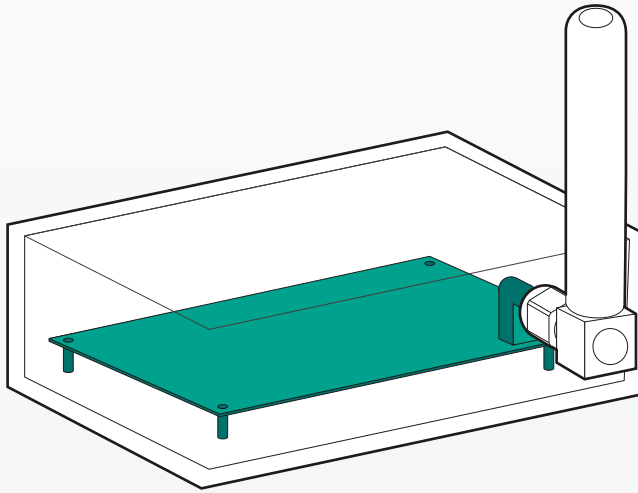
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## Test Unit and Antenna Mounting Position 1



*Ground Plane Size: 70mm(L) x 50mm(W) x 1mm(T)*

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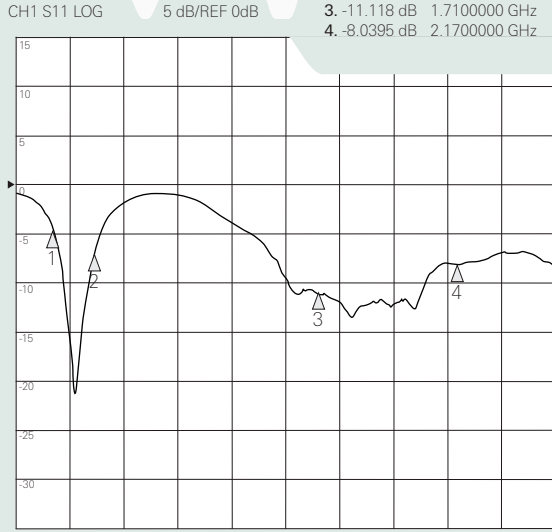
## Typical Electrical Characteristics (T=25 °C)

Typical free space performance, measured in test unit mechanics with 150mm feed cable (position 1.)

### W1900, W1902

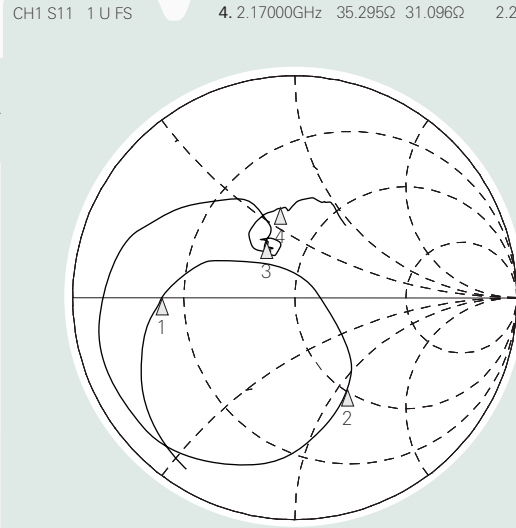
CH1 Markers

1.	-4.5578 dB	824.00000 MHz
2.	-6.9178 dB	960.00000 MHz
3.	-11.118 dB	1.7100000 GHz
4.	-8.0395 dB	2.1700000 GHz



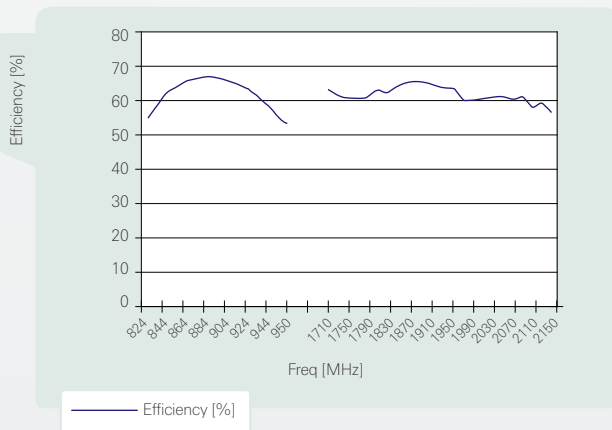
### W1900, W1902

1.	824.000MHz	12.600Ω	-313.13mΩ	616.83pF
2.	960.000MHz	51.934Ω	-54.344Ω	3.0507pF
3.	1.71000GHz	34.219Ω	19.439Ω	1.8093nH
4.	2.17000GHz	35.295Ω	31.096Ω	2.2807nH



## Free Space Efficiency and Maximum Gain

### W1900, W1902 Efficiency



### W1900, W1902 Max Gain



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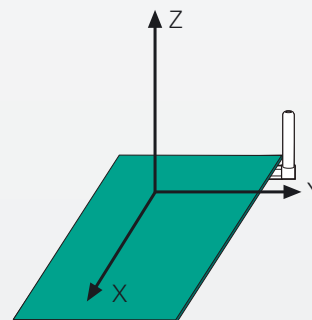
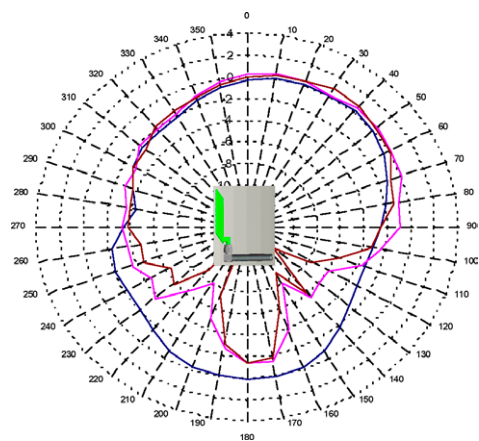
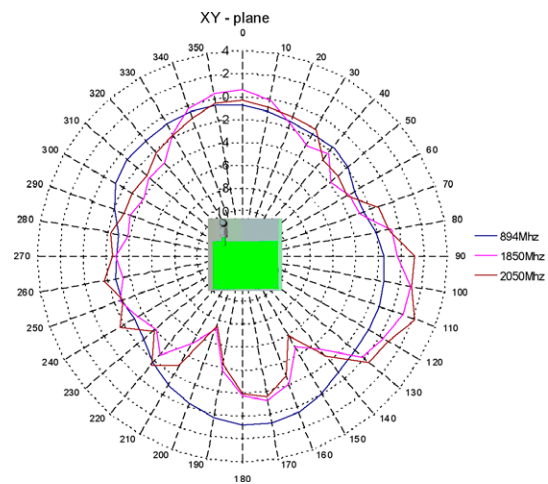
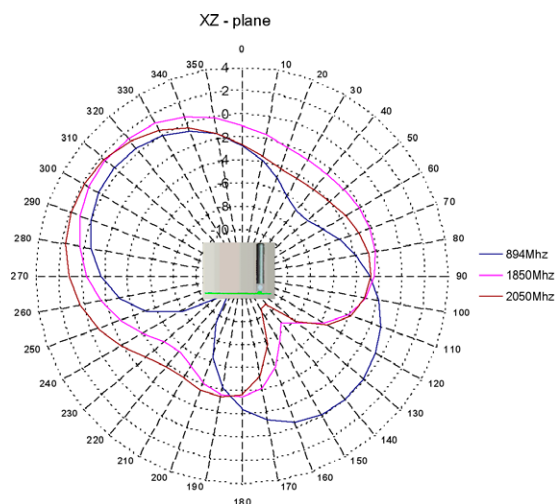


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## Typical Free space Radiation Patterns

Patterns measured in test unit mechanics (position1.)



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