

Active GPS Antenna

(30 x 50 x 5.45 mm)

Part Numbers and Connector Types

W4000D197	MMCX male straight, 5m cable
W4000G197	SMA male straight, 5m cable
W4000J197	MCX male straight, 5m cable
W4000L197	FME male straight, 5m cable
W4000G118	SMA male straight, 3m cable
W4000G059	SMA male straight, 1.5m cable

Electrical Specifications

Frequency [MHz]	1575.42
Nominal Impedance [Ω]	50
VSWR Max	1.5:1
Element Max Gain [dBi]	1.5
LNA Gain [dB]	26 $\pm$ 2
Radiation Pattern	Omni-directional
Voltage [V]	Dc 3-5 ($\pm$ 10%)
Current [mA]	12 typ
Cable Type	Rg-174
Length [m]	5, 3 and 1.5
Noise Figure [dB]	1 Max
Band Attenuation [dB]	20 min @ Fo $\pm$ 50 MHz

Mechanical Specifications

Plastic radome	PC-ABS plastic blend
Color	Black
Height [mm]	5.45
Width [mm]	30 x 50
Mounting	Die cut double-sided tape included

Environmental Specifications

Operating temperature [$^{\circ}$ C]	-40 to +85
Storage temperature [$^{\circ}$ C]	-40 to +85
Relative humidity [%]	20 to 95
Vibration [Hz]	10-200, 3G 15 minutes, all axis
Thermal shock [$^{\circ}$ C]	-40 to +85, 50 cycles
Application	Inside vehicle antenna

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www.pulseeng.com/antennas



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(30 x 50 x 5.45 mm)

Typical Response

Without cable losses

S21

16 Apr 2009 19:00

Tr1 Log Mag

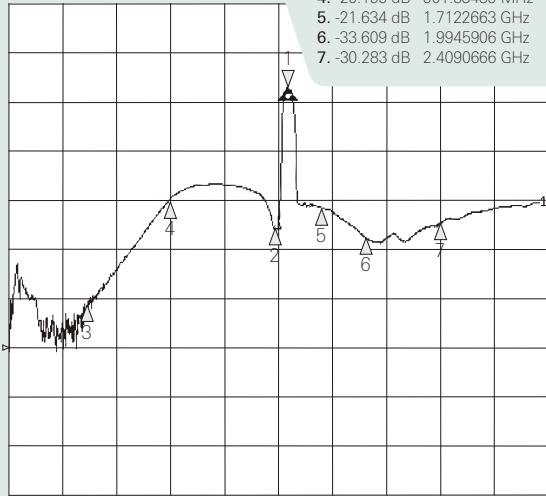
20 dB/REF -80 dB

CH1Markers

1.	26.368 dB	1.5754200 GHz
2.	-25.829 dB	1.5140386 GHz
3.	-66.265 dB	432.79675 MHz
4.	-20.199 dB	901.33489 MHz
5.	-21.634 dB	1.7122663 GHz
6.	-33.609 dB	1.9945906 GHz
7.	-30.283 dB	2.4090666 GHz

PRm

Cor



START 300 kHz

IFBW 300 Hz

STOP 3 GHz

S22

16 Apr 2009 19:05

Tr1 Log Mag

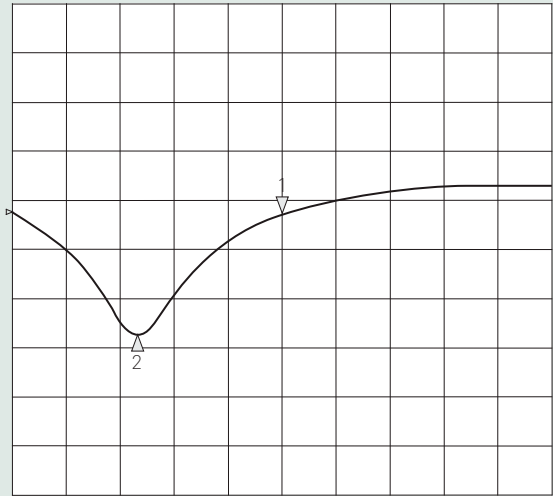
20 dB/REF -80 dB

CH1Markers

1.	-11.567 dB	1.5754200 GHz
2.	-23.789 dB	1.5701459 GHz

PRm

Cor



CENTER 1.57542 GHz

IFBW 300 Hz

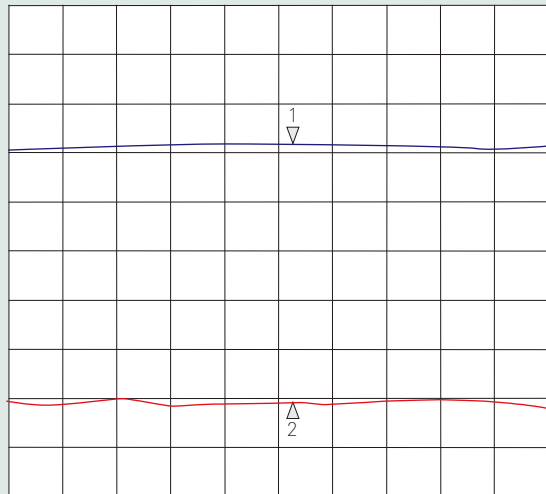
SPAN 20 MHz

Noise figure

16 Apr 2009 20:29:03

CH1Markers

1.	25.932 dB	1.5754 GHz
2.	0.887 dB	1.5754 GHz



START 1.57000 GHz

BW 100 kHz

STOP 1.58000 GHz

— GAIN Scale / 5.000 dB

— NFIG Scale / 1.000 dB

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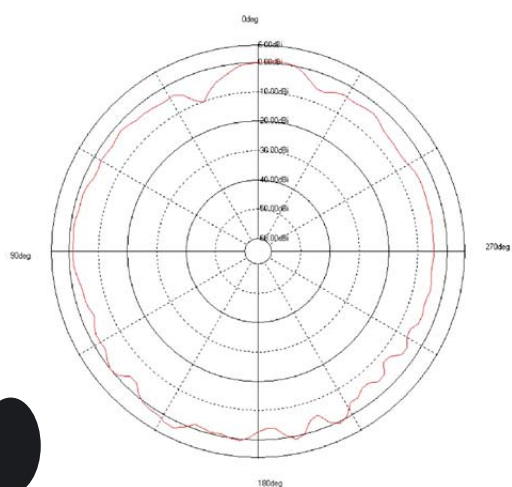
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Active GPS Antenna

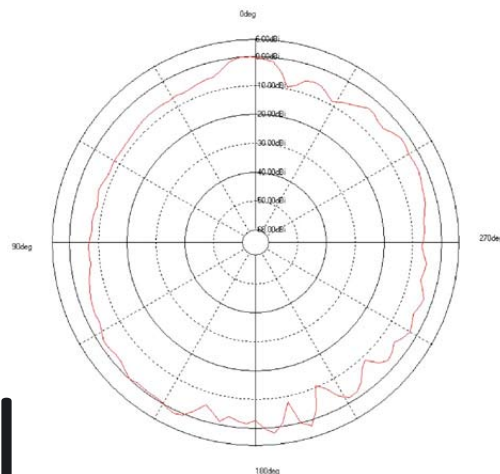
(30 x 50 x 5.45 mm)

Typical Free Space Radiation Patterns

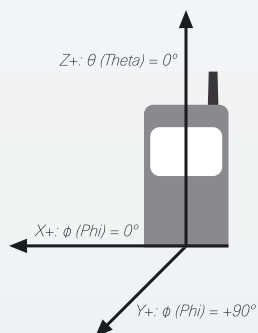
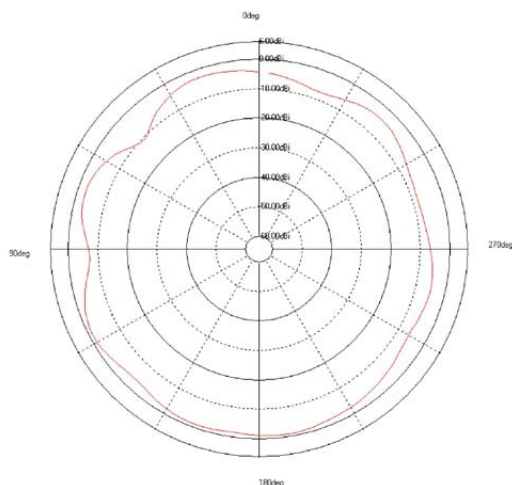
XZ-PLANE



ZY-PLANE



XY-PLANE



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