



Specification

SPECIFICATION

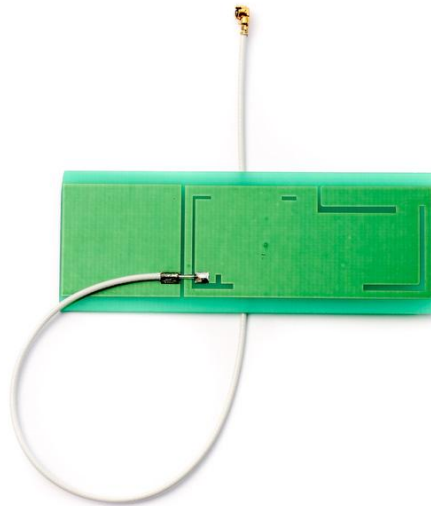
Part No. : **PC21.07.0144B**

Specification No : **PC-2902-09**

Product Name : **TheStripe™ 850/900/1800/1900MHz GSM PCB Antenna**

Features : 66mm*25mm*0.8mm
144mm Length 0.81mm Diameter Cable IPEX MHFII

Photo :



REVISION STATUS

Version	Date	Page	Revision Description	Prepared	Approved
01	Nov 17 th 2006	All	New format	TW Product Centre	Ronan Quinlan



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1.0 System

This miniaturized low profile PCB antenna is based on smart TheStripe™ antenna technology. It consists of a PCB antenna and mini coaxial cable.

2.0 General

2.1 Environmental Conditions

2.1.1	Operation Temperature	-40°C to + 85°C
2.1.2	Storage Temperature	-40°C to + 85°C
2.1.3	Relative Humidity	40% to 95%

2.2 Cable & Connector

2.3.1	RF Cable	RF Coaxial Cable $\varphi 0.81 \pm 0.1\text{mm}$ L = 144 +/- 3 mm White
2.3.2	RF Connector	Ipex MHF II (Hirose U.FL compatible)

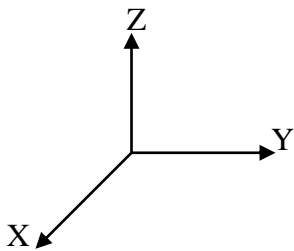
3.0 Antenna

3.1	Communication System	AMPS	GSM	DCS	PCS
3.2	Frequency Band	850 MHz	900 MHz	1800 MHz	1900 MHz
3.3	VSWR	1.92	1.65	1.92	1.40
3.4	Return Loss	-10 dB	-12.24 dB	- 10.01 dB	-15.55 dB
3.5	Impedance	50 Ohm			
3.6	Radiation Pattern	Omnidirectional			
3.7	Polarization	Horizontal			

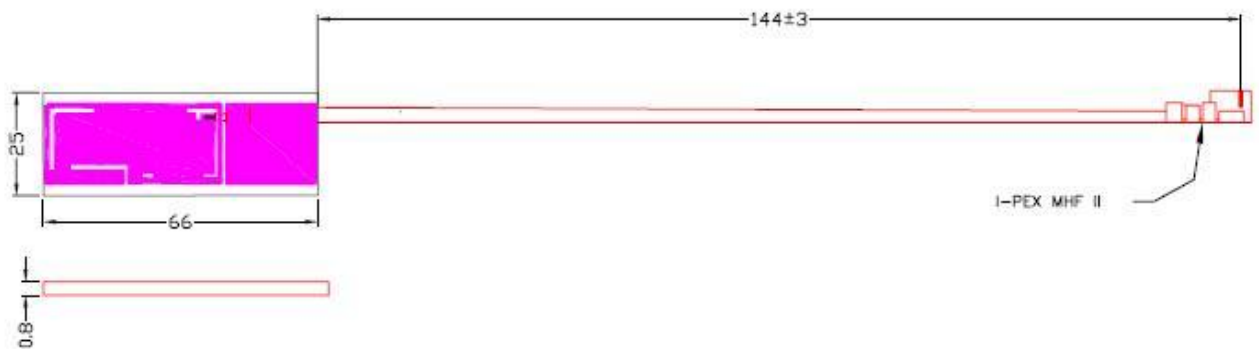


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4.0 Mechanical Dimensions



- Note :
1. The upper face of the PCB is in the X axis
 2. Connector positioning is towards the Z direction



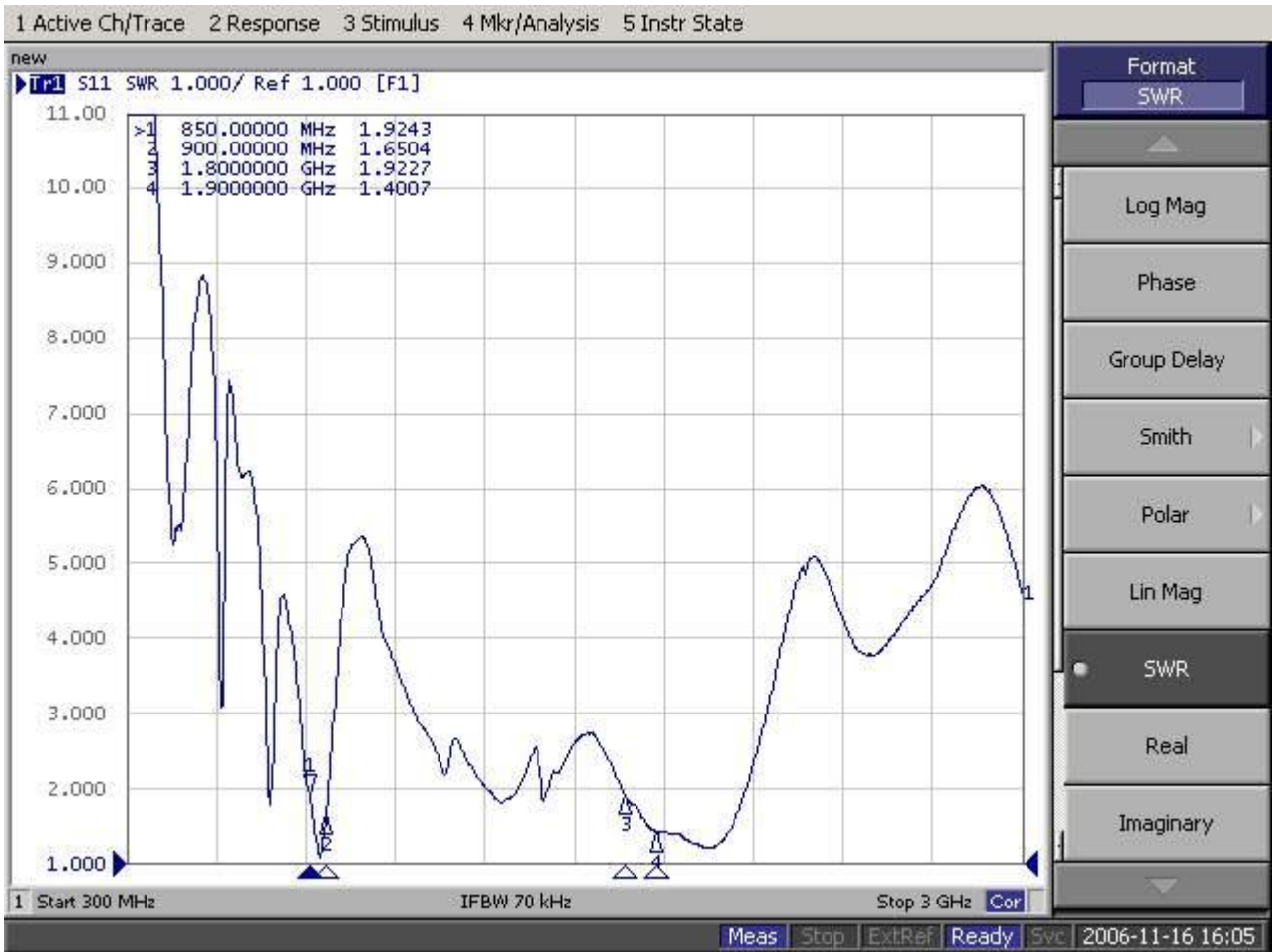
- NOTE :
1. Unit : mm
 2. Cable : 0.81 Tin cable white



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5.0 Antenna Electrical Characteristics

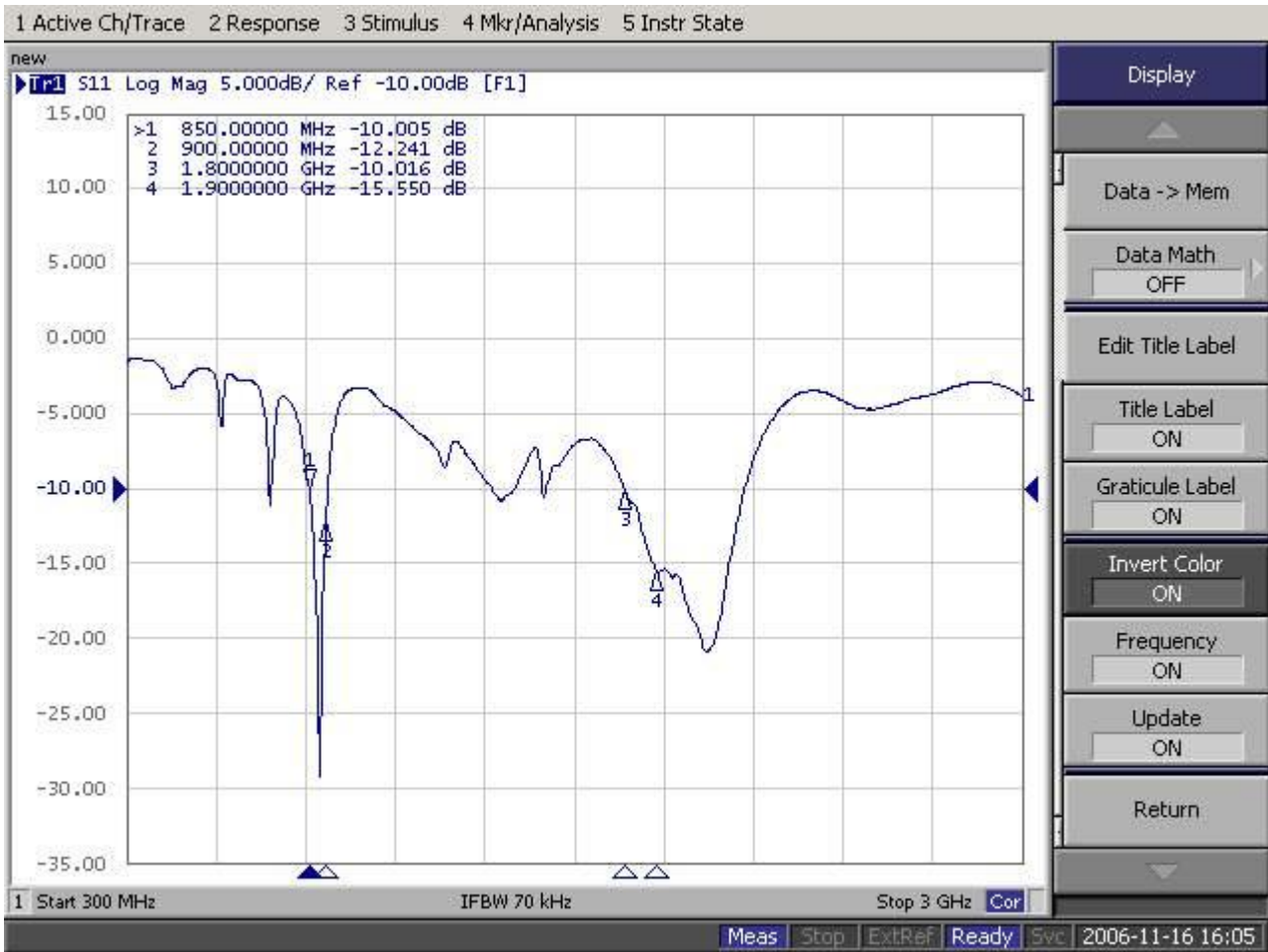
5.1 VSWR





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5.2 Return Loss





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6.0 Environmental Characteristics

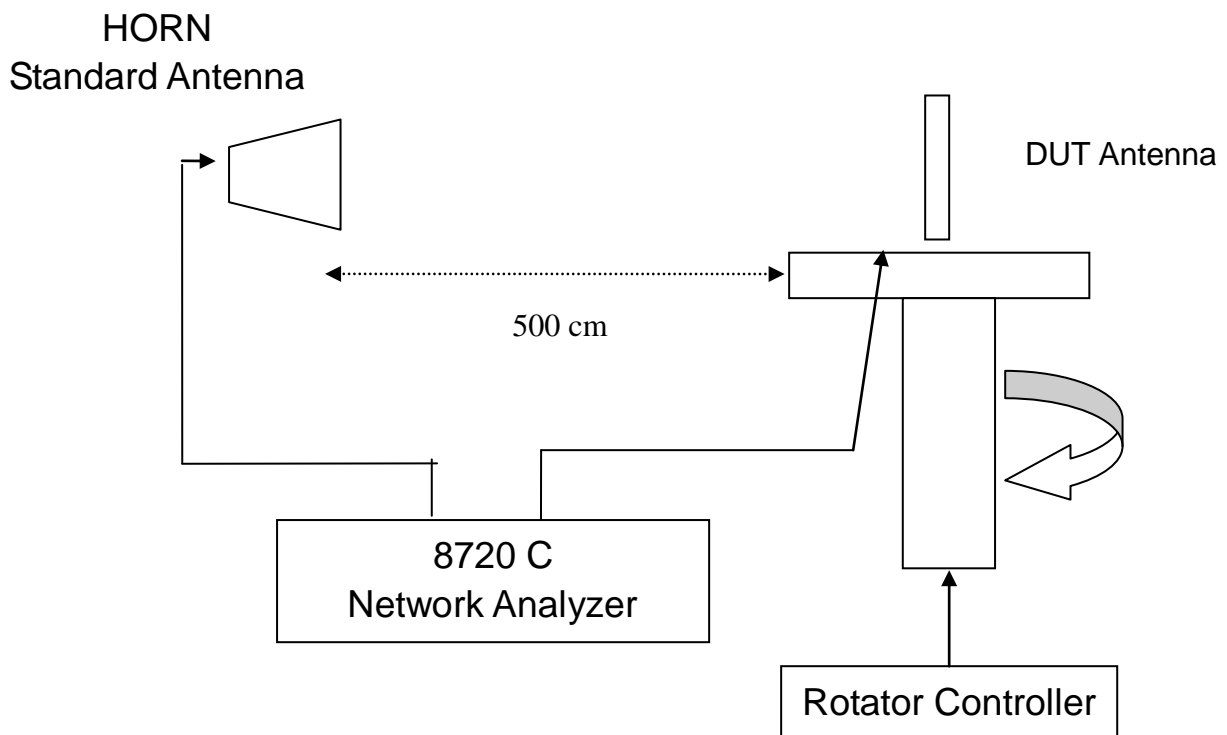
Test Items	Procedure	Requirement
Thermal Shock	Starting at -40 for 30minutes and then cycled to +85 to remain 30minutes (a complete cycle). To repeat 5 complete cycles. (Refer to IEC 68-2-14 Method Na)	<ol style="list-style-type: none"> The value of return loss must be within product specifications after this test. No physical deformation should be evident.
Storage Temperature (Cold)	Samples must be put into -30°C chamber for 72 hours and samples shall be powered during test. (Refer to IEC 68-2-1 Method Aa)	<ol style="list-style-type: none"> The value of return loss must be within product specifications after this test. No physical deformation should be evident.
Storage Temperature (Dry Heat)	Samples must be put into +75°C chamber for 72 hours and samples shall be powered during test. (Refer to IEC 68-2-1 Method Ba)	<ol style="list-style-type: none"> The value of return loss must be within product specifications after this test. No physical deformation should be evident.
Operating Temperature (Cold)	Samples must be put into -20°C chamber for 2 hours and samples shall be powered during test. (Refer to IEC 68-2-1 Method Aa)	<ol style="list-style-type: none"> The value of return loss must met specification during test/after test no mechanical defects after test.
Operating Temperature (Dry Heat)	Samples must be put into +65°C chamber for 72 hours and samples shall be powered during test. (Refer to IEC 68-2-1 Method Ba)	<ol style="list-style-type: none"> The value of return loss must met specification during test/after test no mechanical defects after test.



7.0 Antenna Test Setup

7.1 Equipment

Radiation Pattern Testing - Anechoic Chamber

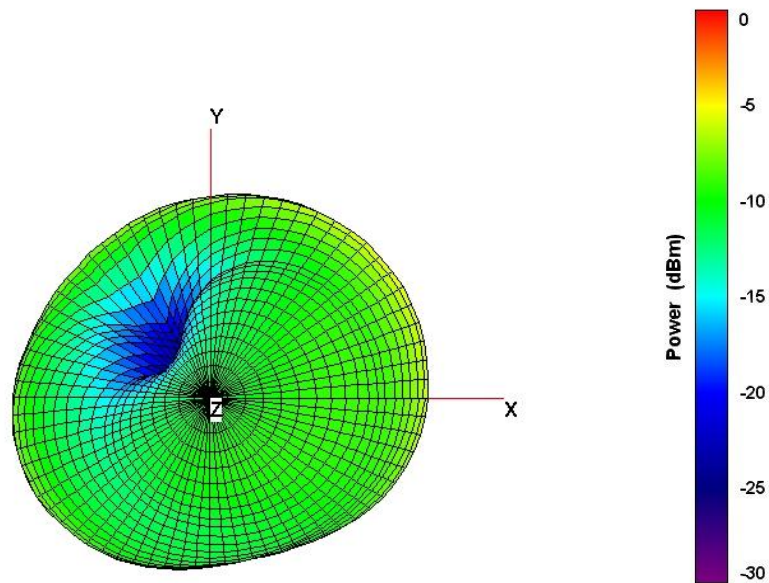




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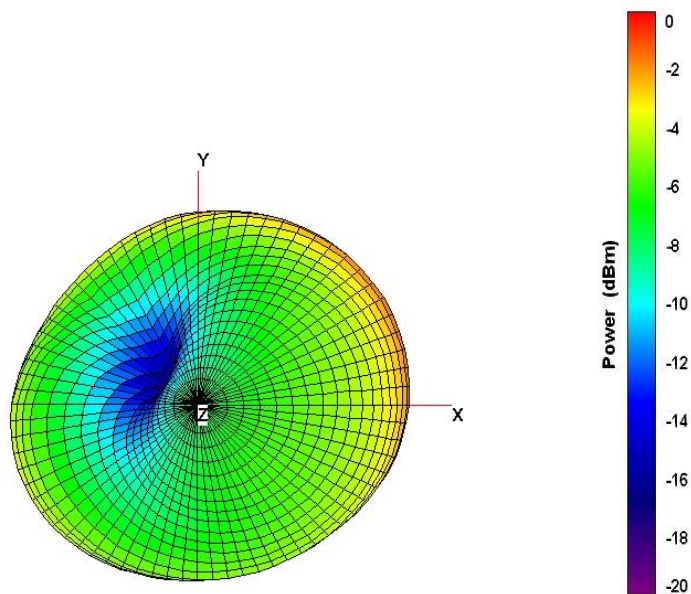
HORIZONTAL MOUNTING

850 MHz



HORIZONTAL MOUNTING

900 MHz

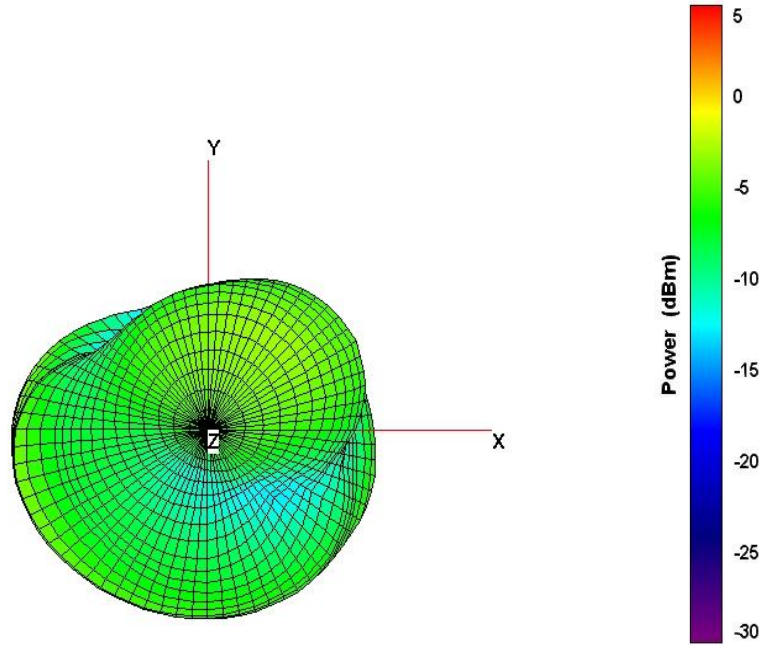




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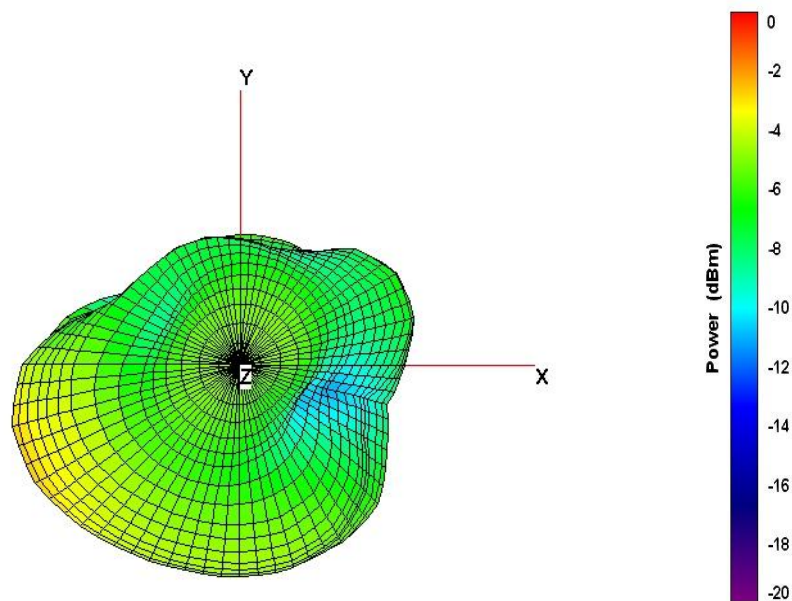
HORIZONTAL MOUNTING

1800 MHz



HORIZONTAL MOUNTING

1900 MHz

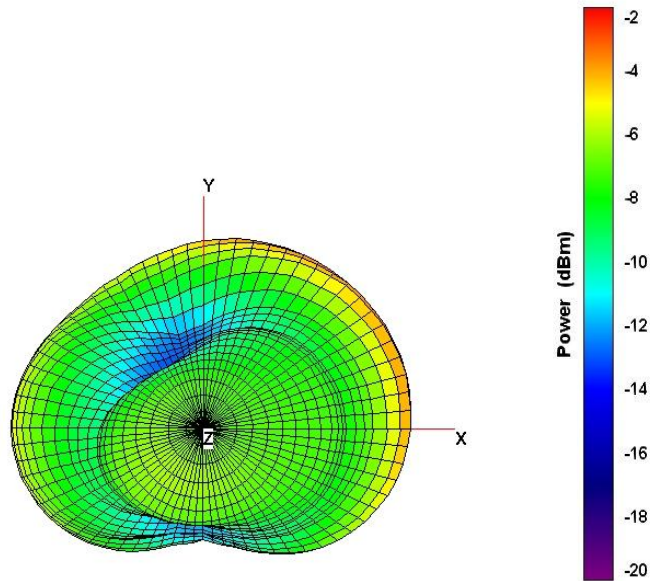




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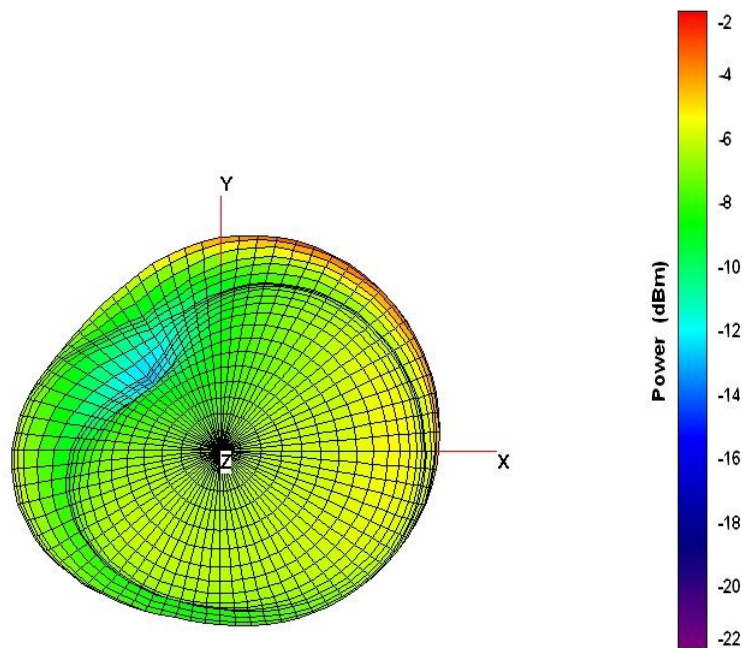
VERTICAL MOUNTING

850 MHz



VERTICAL MOUNTING

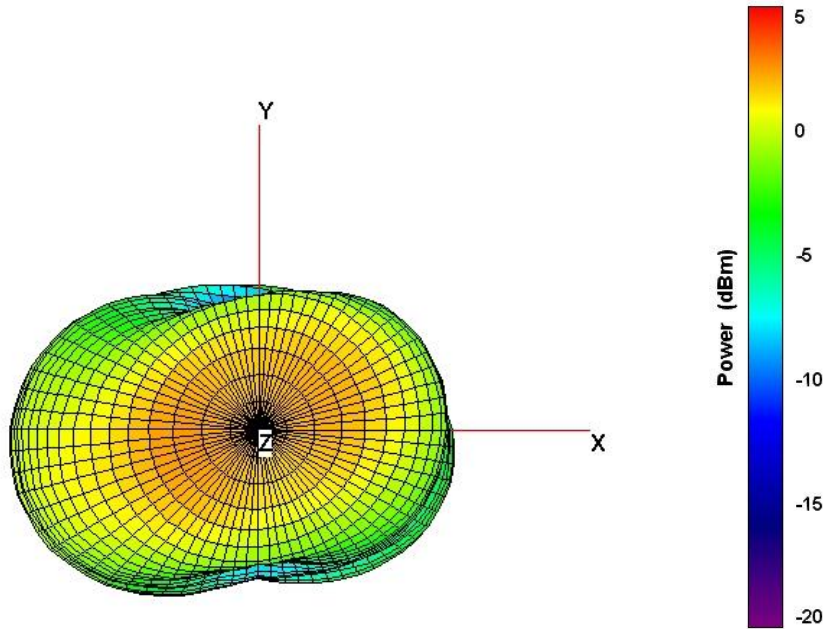
900 MHz



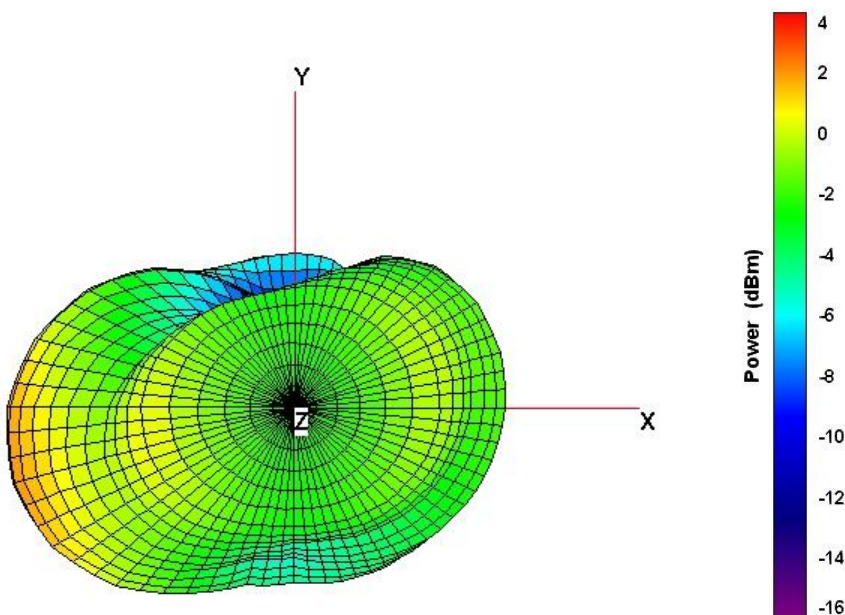


VERTICAL MOUNTING

1800MHz



VERTICAL MOUNTING 1900 MHz





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8.0 Antenna Packaging

