



Triton

TG.10R.A.0113

Specification

Part No.	TG.10R.A.0113
Product Name	Triton 2G/3G/4G Terminal Antenna for Cellular Modules with Assisted GPS Hinged SMA(M)
Feature	Dipole Terminal Antenna Hinged SMA(M) Connector Length 168mm,Φ13mm AntD© Shunt 10k Ohm Chip Resistor Inside RoHS compliant



1. Introduction

The TG.10R Triton dipole Antenna with AntD[©] Resistor – is primarily designed for use with CDMA modules with assisted GPS. It does not require a ground-plane to connect to. It has a quality robust PUS housing for use with wireless terminals. The antenna has a SMA(M) connector. It can be used straight or

hinged 90 degrees. The antenna has a wide-band response and can also be used for other cellular and wireless applications such as GSM, LTE, UMTS, and WI-FI.

AntD[©] allows connected radio products using the latest cellular modules and recommended circuits from Telit and uBlox

to perform diagnostics on the antenna. This includes detection that the proper antenna is connected and that the connection isn't shorted or broken.

Contact Taoglas engineering for examples on how to implement AntD[©] antenna diagnostics in your product.

2. Specification

Electrical

Frequency (MHz)	700~800	824~960	1575.42	1710 ~ 1880	1850 ~ 1990	1710 ~ 2170	2490~500
Peak Gain (dBi)							
Straight	-0.5	-0.5	-0.5	1.0	2.0	1.5	3.0
Bend	-1.5	-3.0	1.5	2.5	2.5	2.5	4.0
Efficiency							
Straight	38%	30%	40%	58%	65%	55%	75%
Bend	35%	25%	60%	69%	75%	70%	85%
Impedance	50 Ω						
Integrated Resistor	Integrated AntD® Resistor Shunt 10K Ohm (+/- 5%) to Ground						
Polarization	Linear						
Radio Pattern	Omni						
Input Power	50 W						

Mechanical

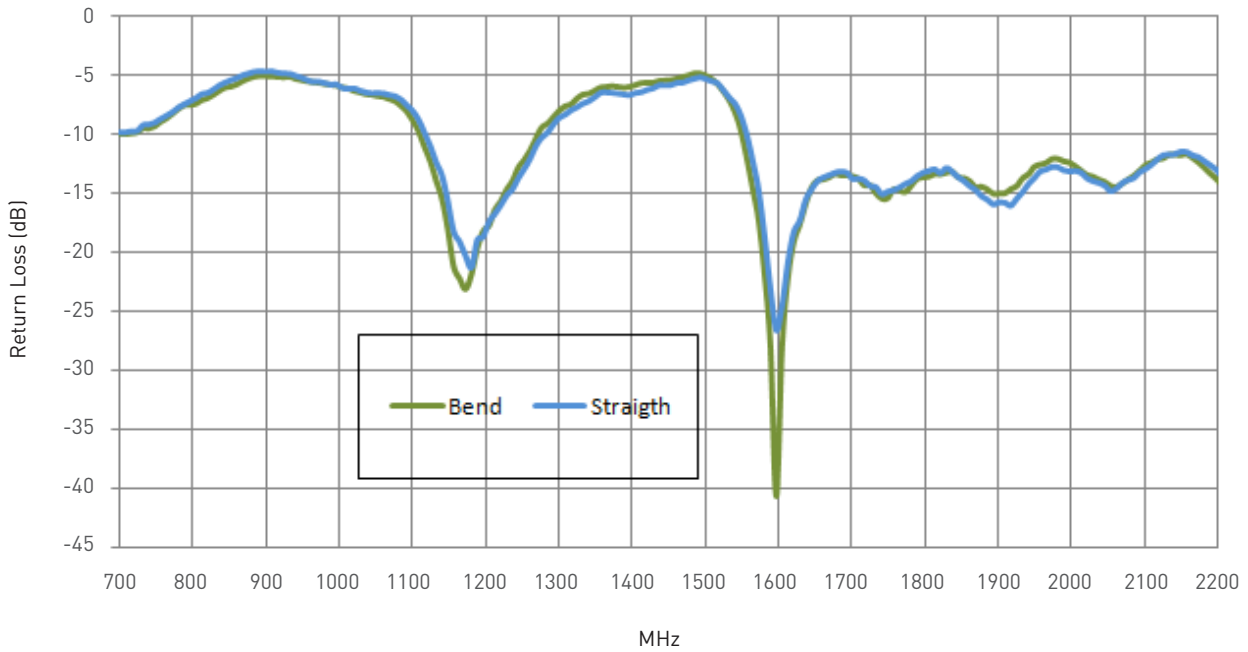
Dimensions	Length 168mm, Φ13mm
Connector	Hinged SMA Male
Casing	PU

Environmental

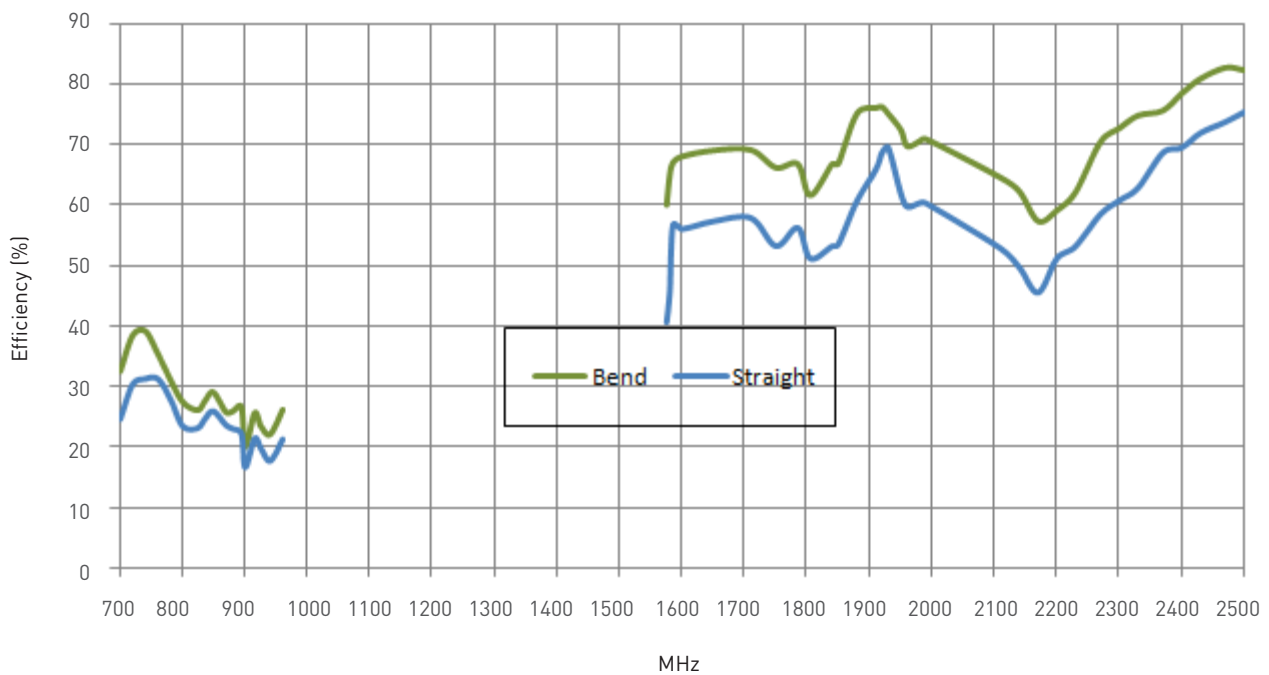
Temperature Range	-40°C ~ +85°C
Humidity	Non-condensing 65°C 95% RH

3. Antenna Characteristics

3.1 Return Loss

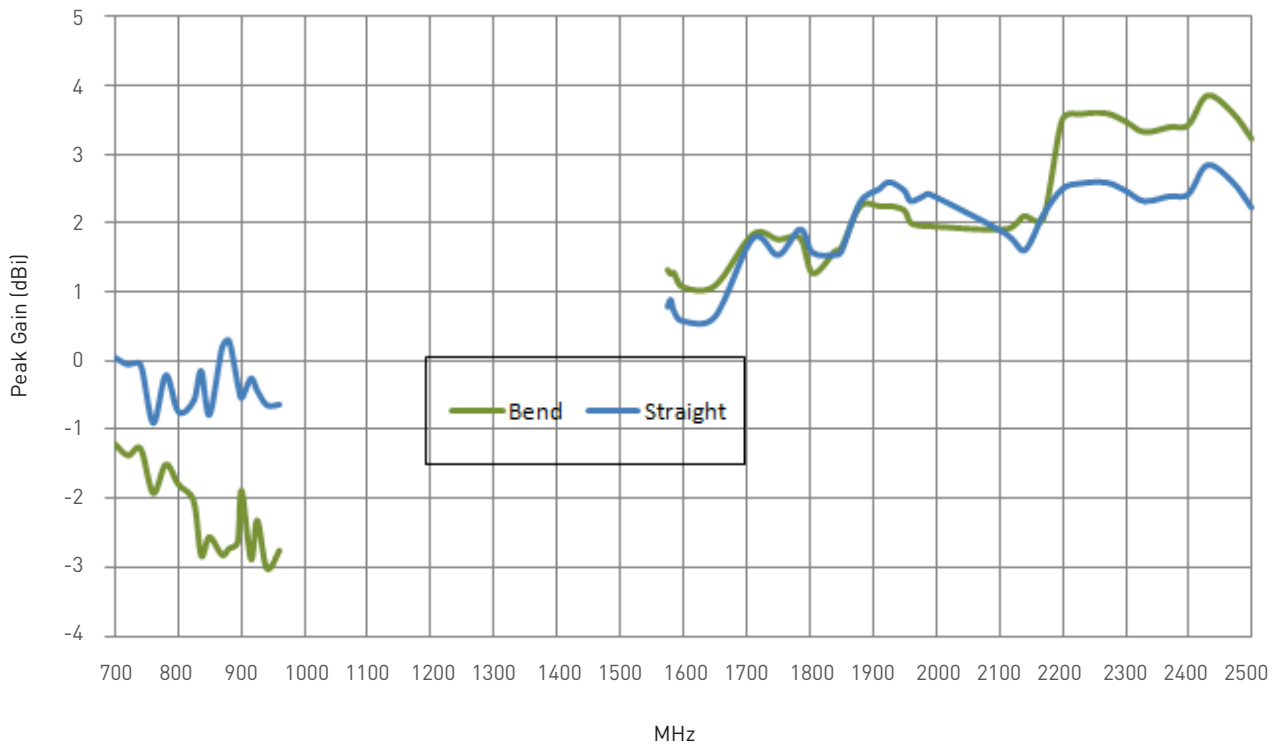


3.2 Antenna Efficiency



3. Antenna Characteristics

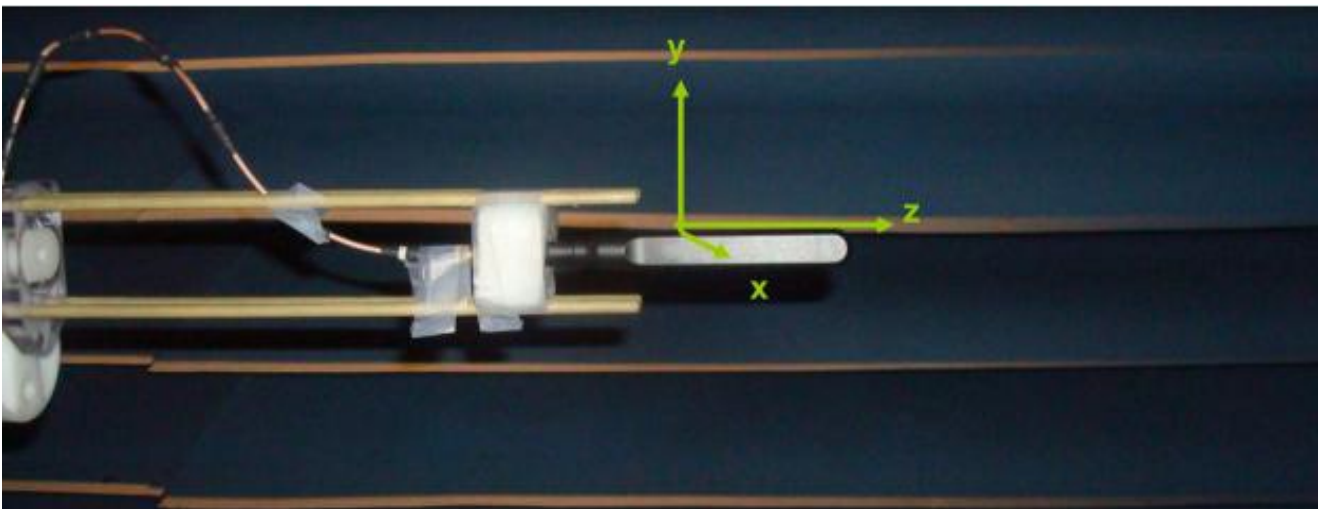
3.3 Peak Gain



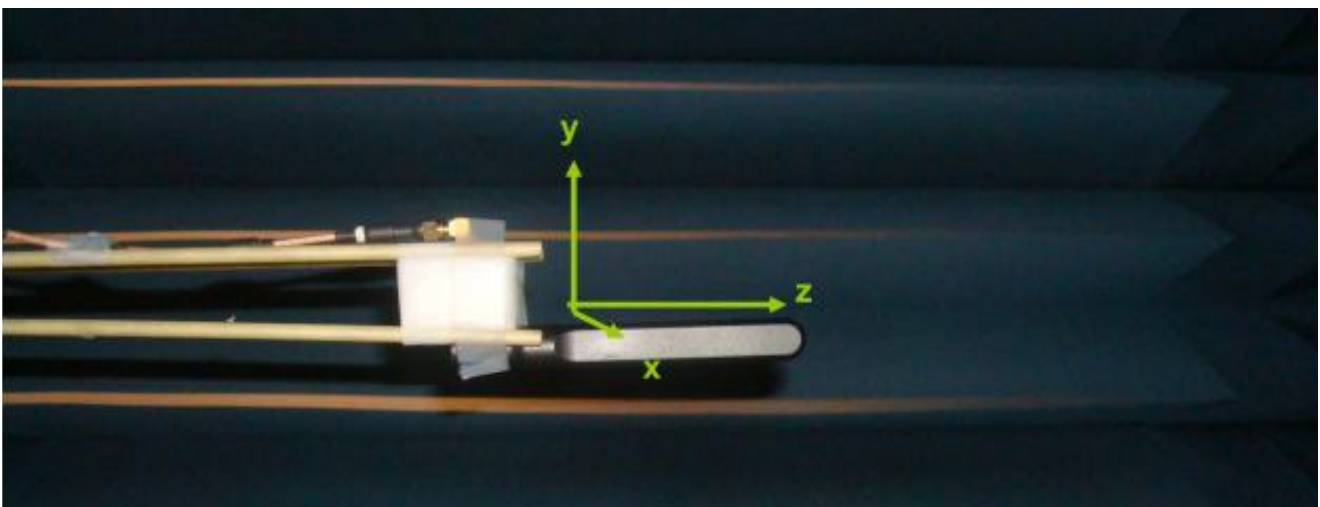
4. Antenna Radiation Patterns

4.1 Antenna Setup

4.1.1 Straight



4.1.2 Bend



4.2 Radiation Patterns

4.2.1 Straight (Cellular)

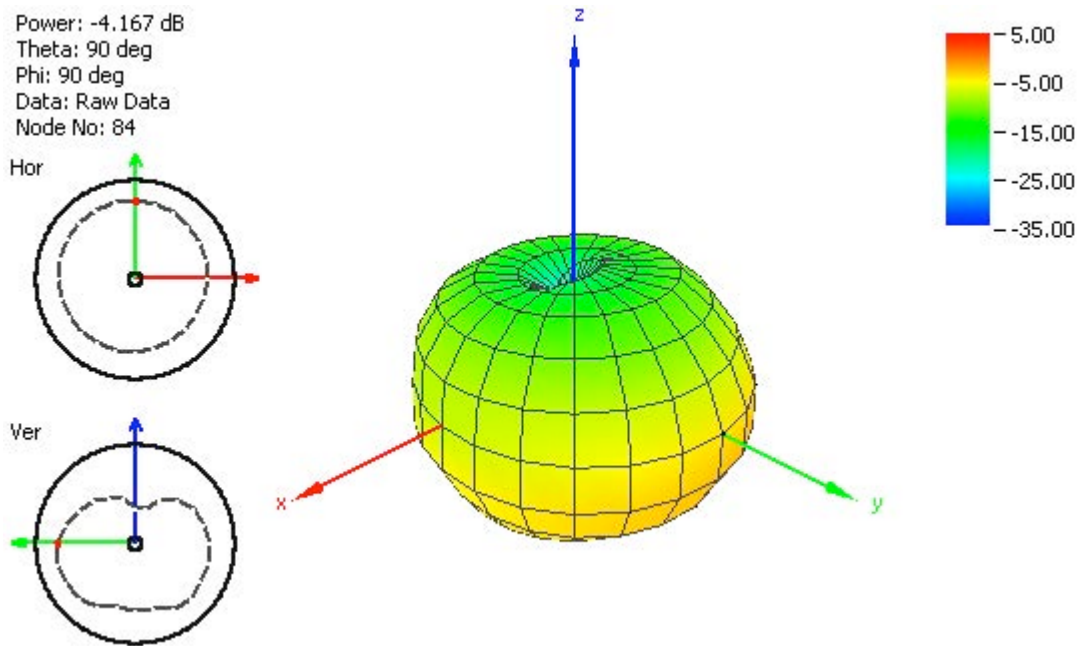


Figure 1. Radiation Pattern at 700 MHz.

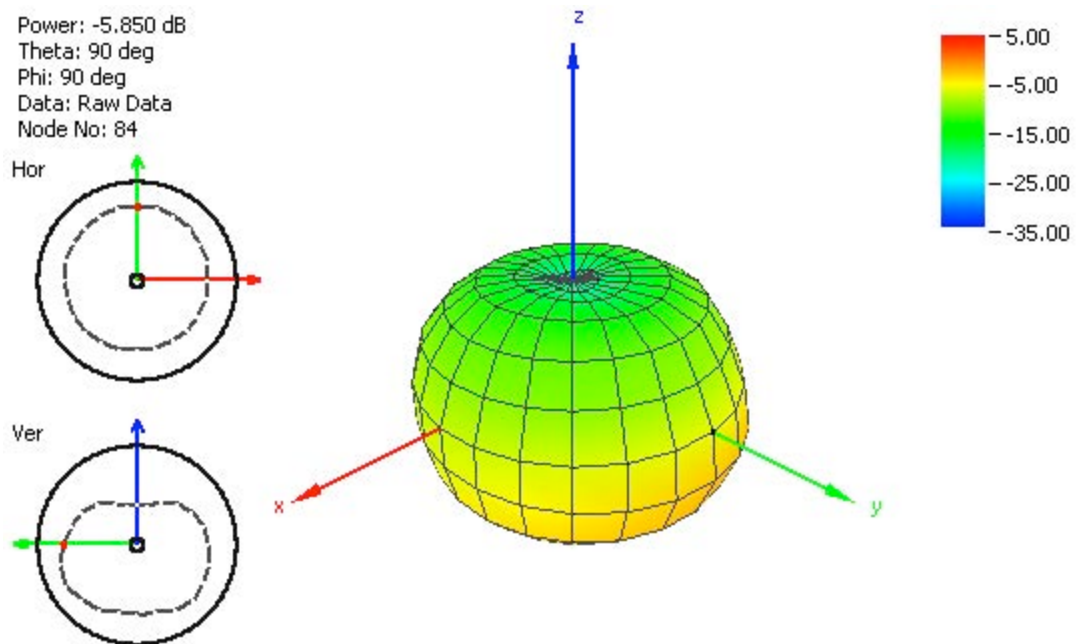


Figure 2. Radiation Pattern at 824 MHz.

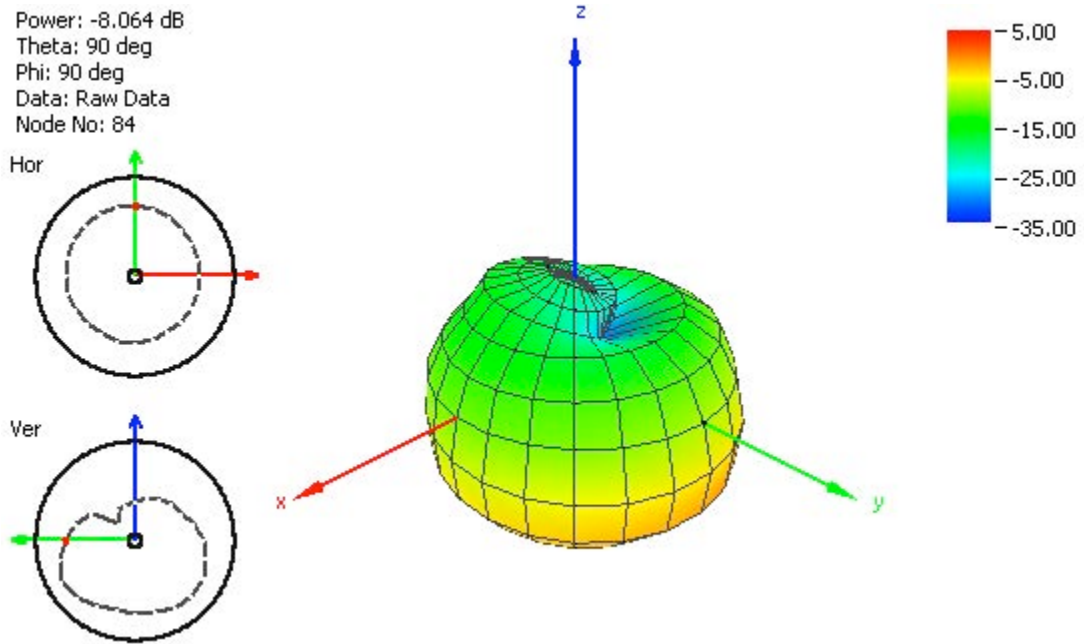


Figure 3. Radiation Pattern at 960 MHz.

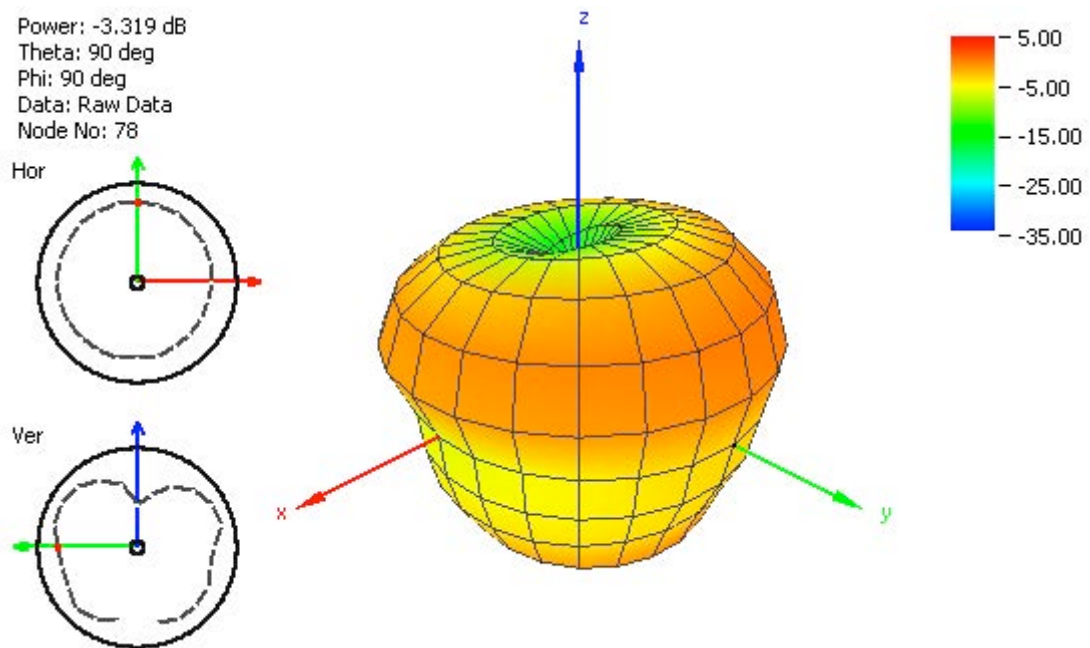


Figure 4. Radiation Pattern at 1700 MHz.

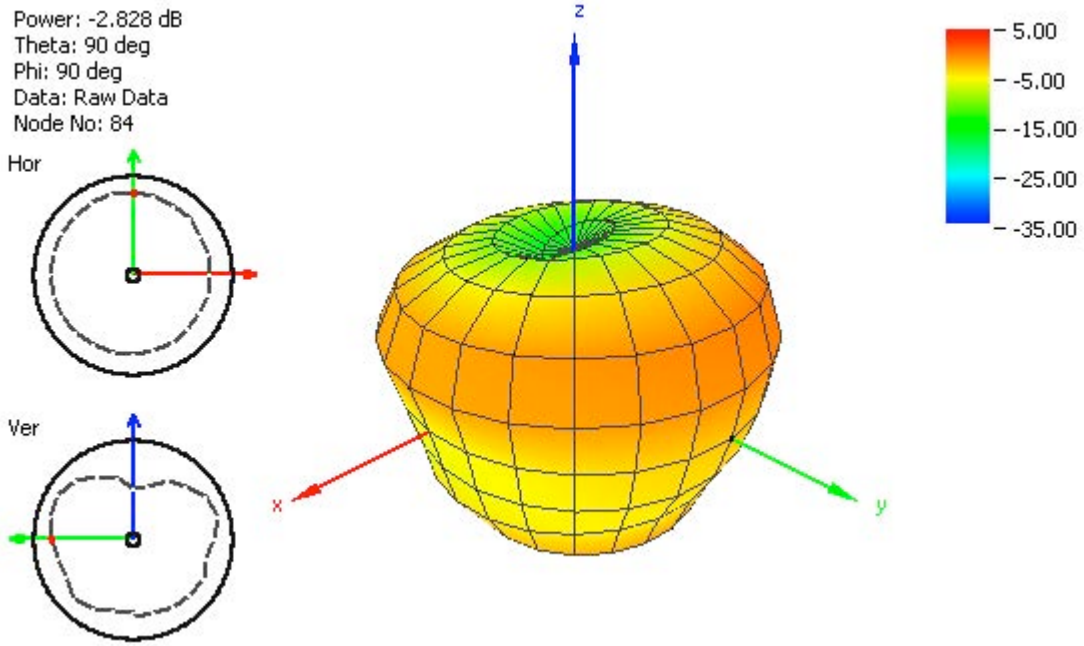


Figure 5. Radiation Pattern at 1880 MHz.

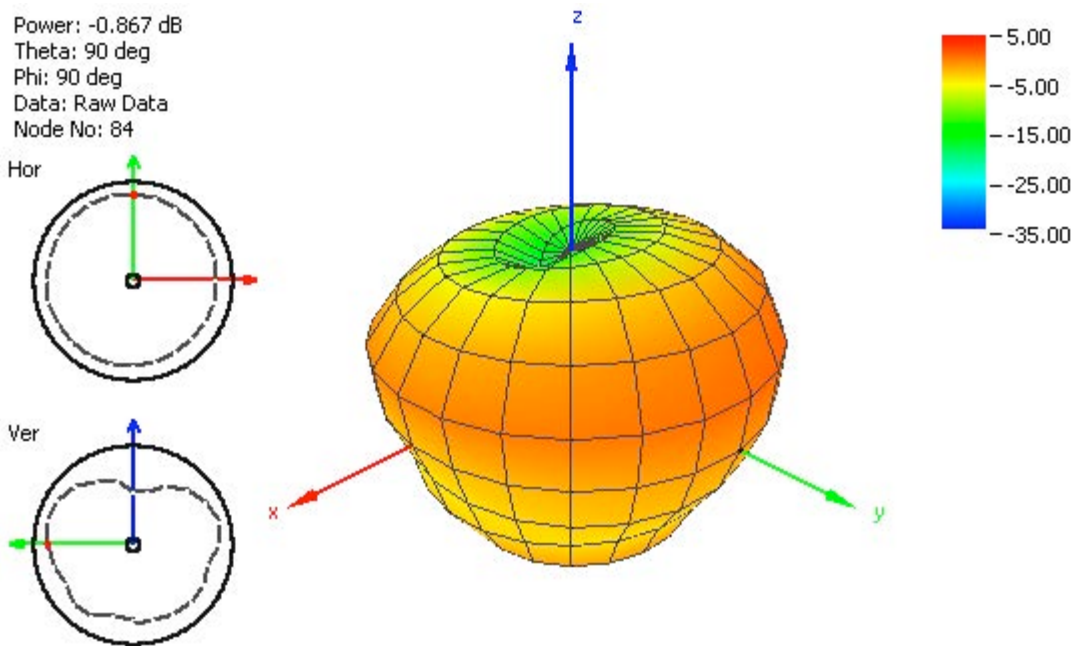


Figure 6. Radiation Pattern at 1910 MHz.

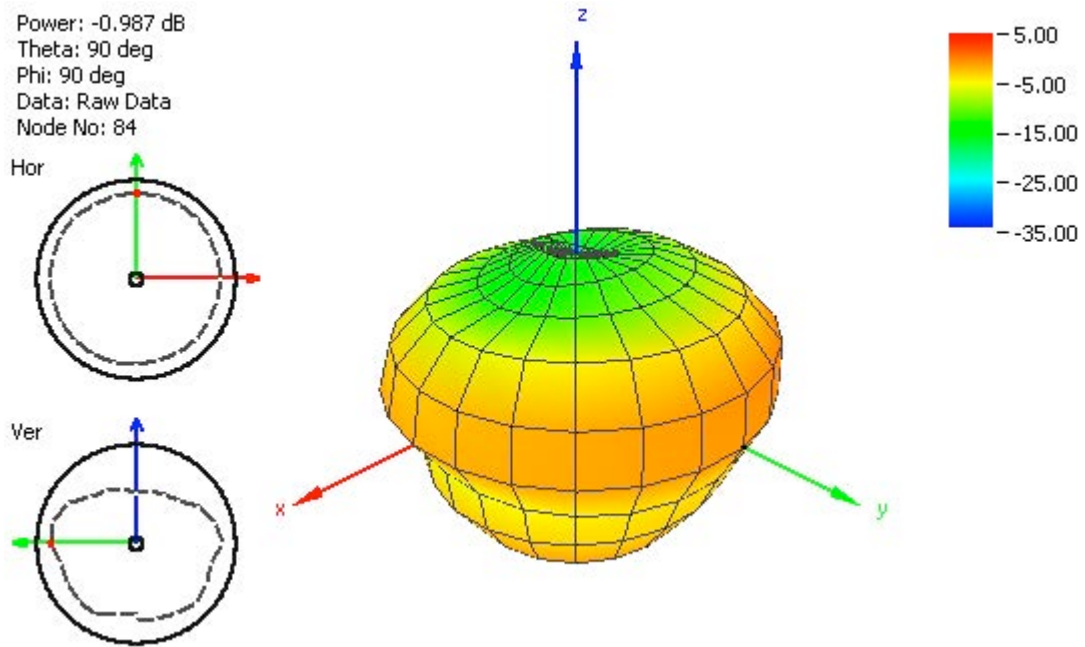


Figure 7. Radiation Pattern at 2170 MHz.

4.2.2 Straight (GPS & WiFi)

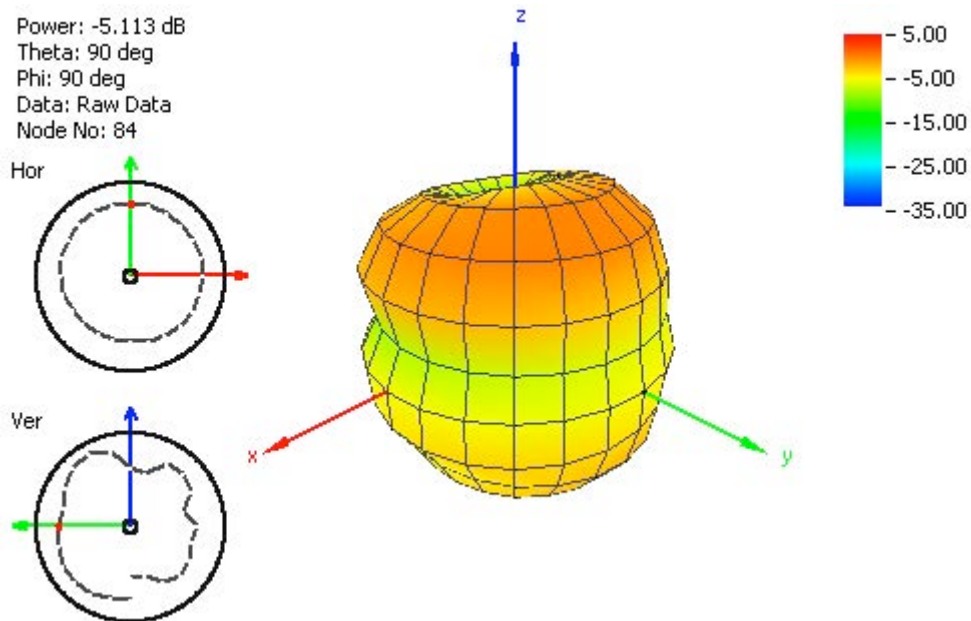


Figure 8. Radiation Pattern at 1575 MHz.

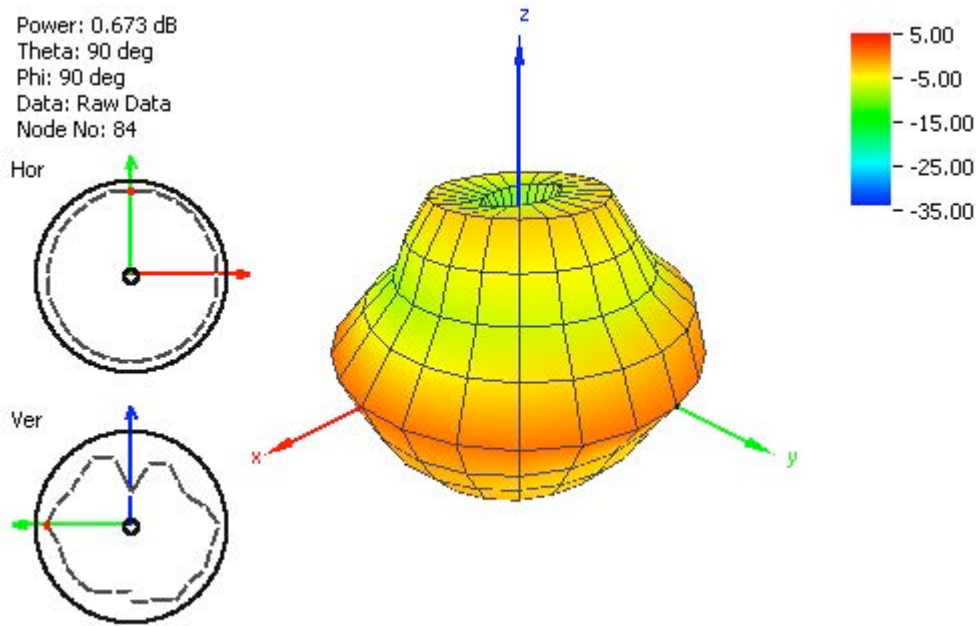


Figure 9. Radiation Pattern at 2400 MHz.

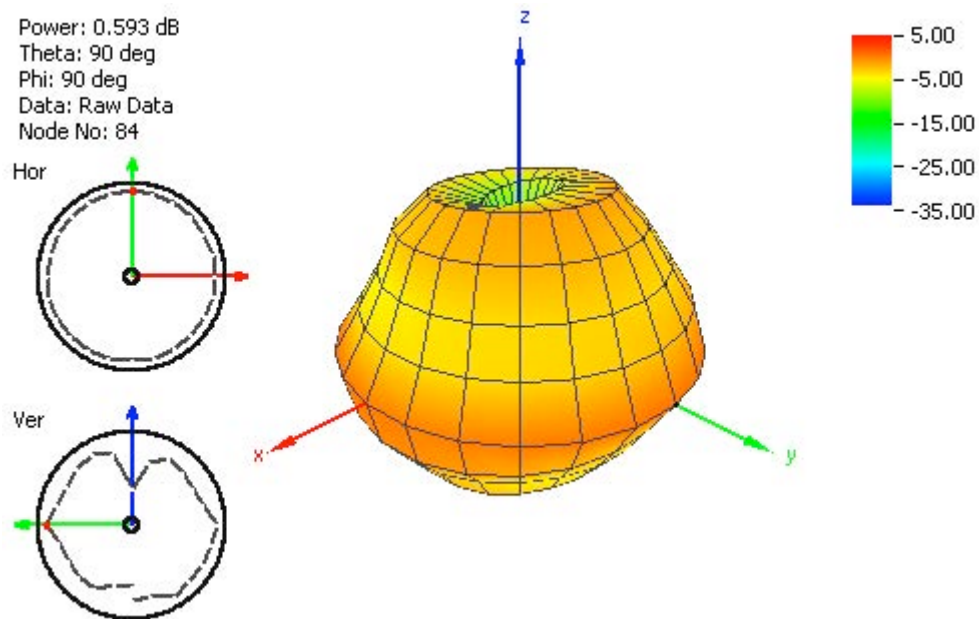


Figure 10. Radiation Pattern at 2460 MHz.

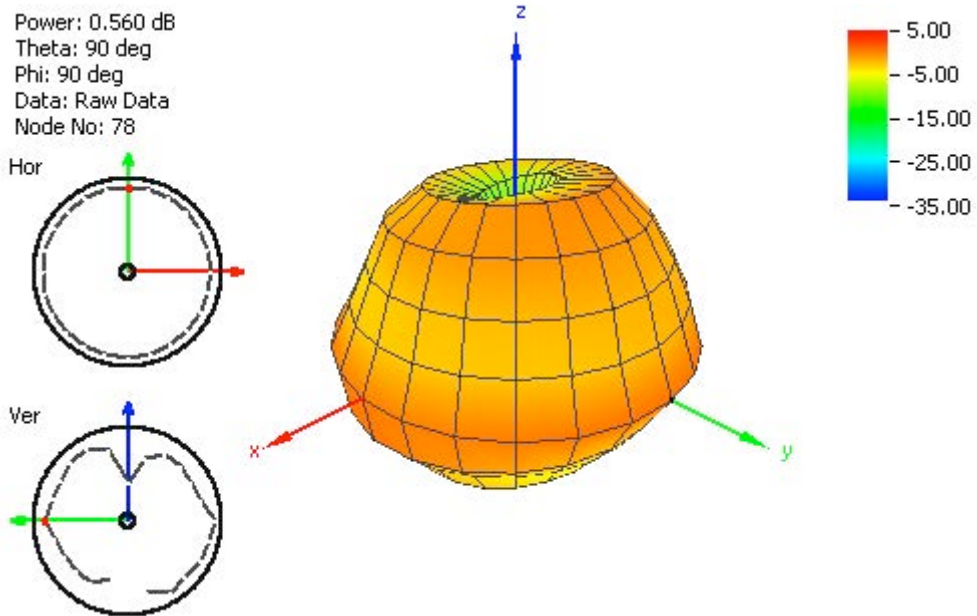


Figure 11. Radiation Pattern at 2460 MHz.

4.2.3 Bend (Cellular)

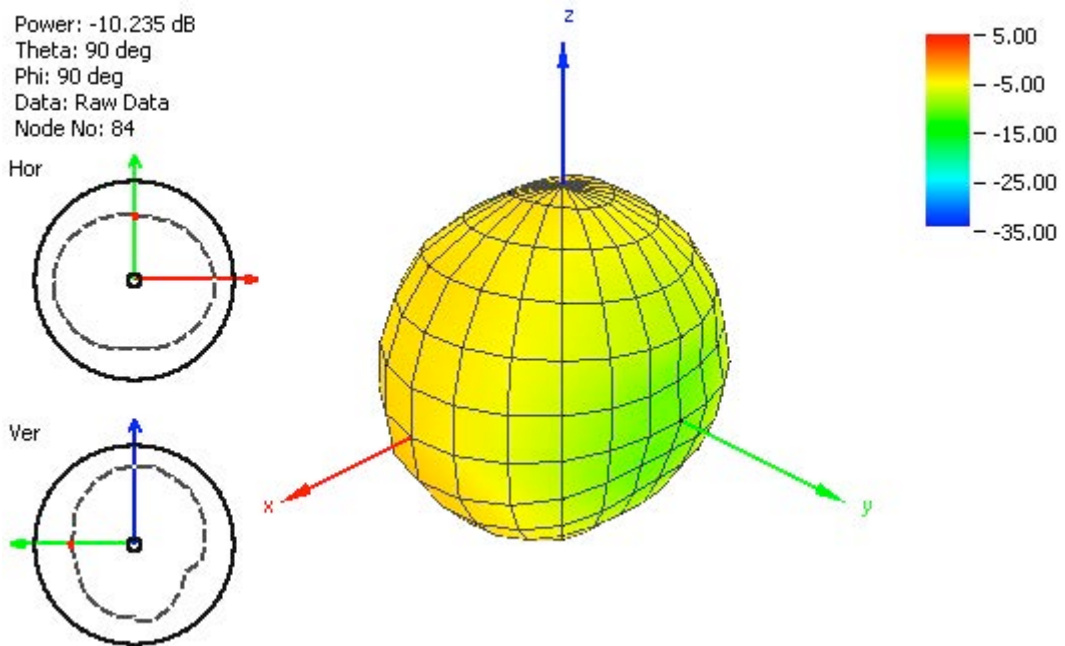


Figure 12. Radiation Pattern at 700 MHz.

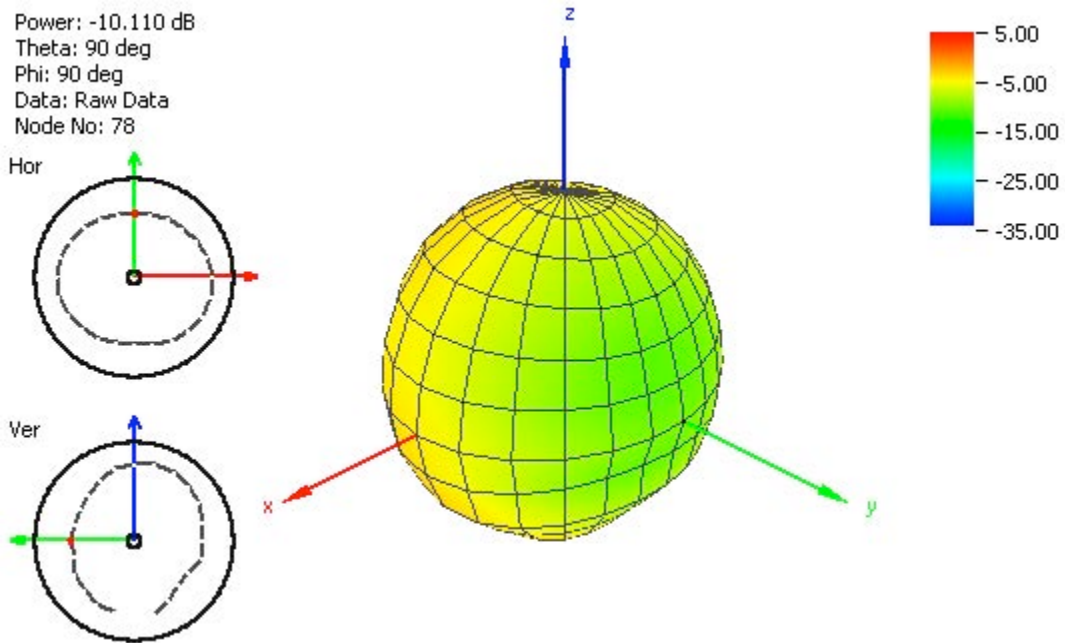


Figure 13. Radiation Pattern at 824 MHz.

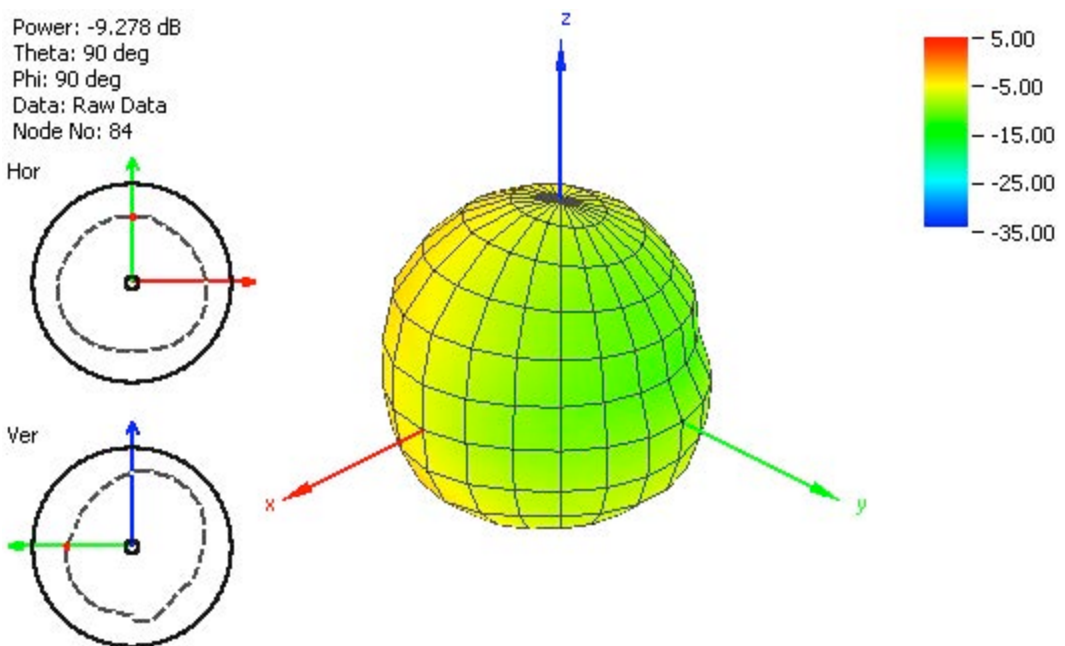


Figure 14. Radiation Pattern at 960 MHz.

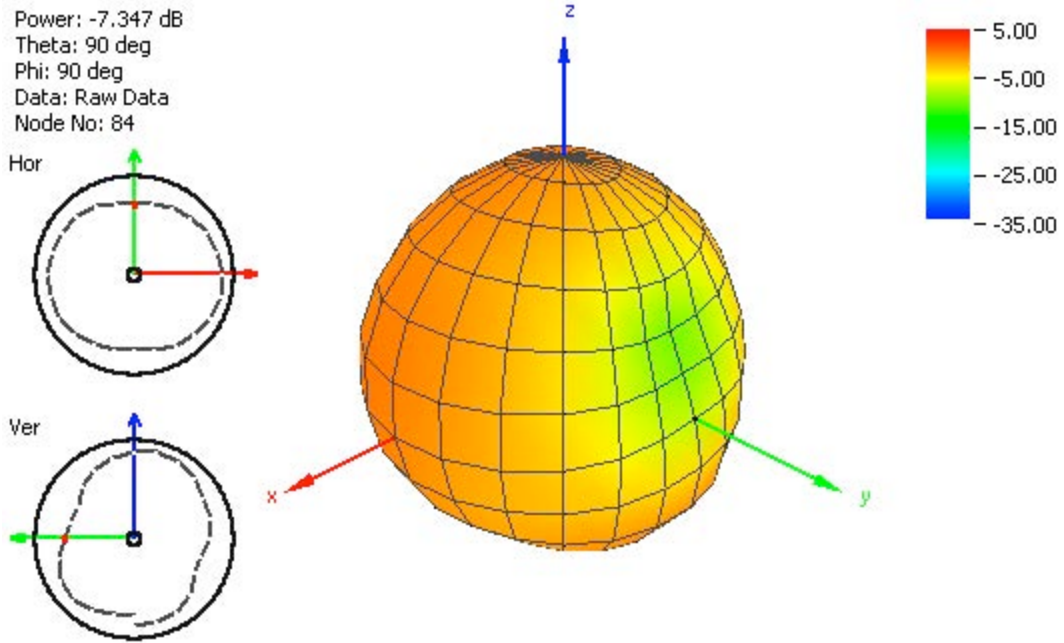


Figure 15. Radiation Pattern at 1700 MHz.

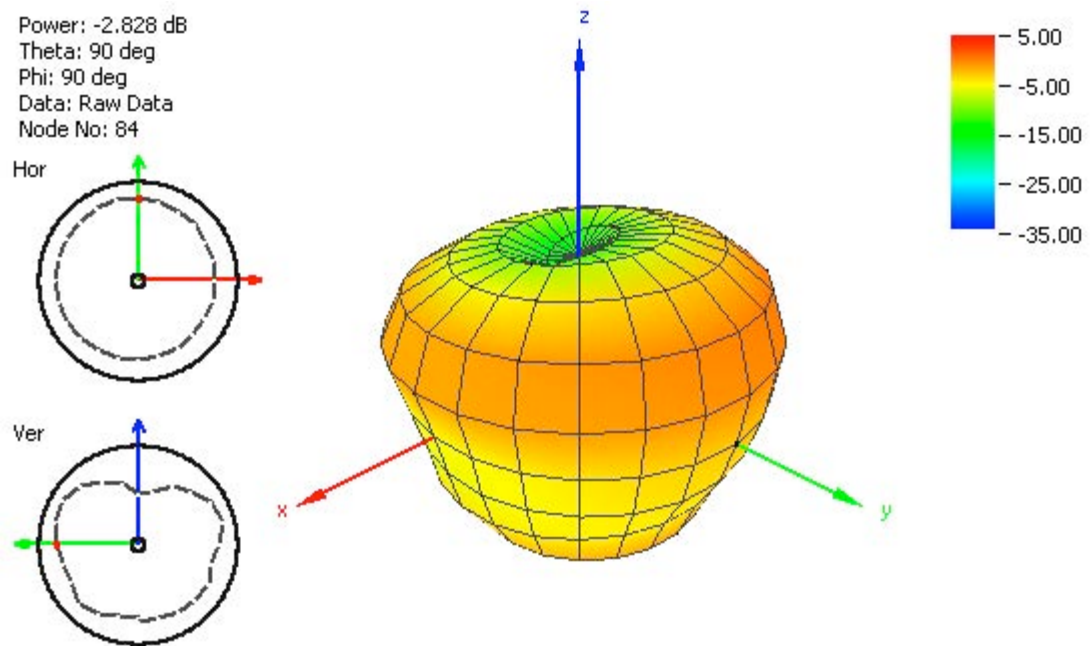


Figure 14. Radiation Pattern at 1800 MHz.

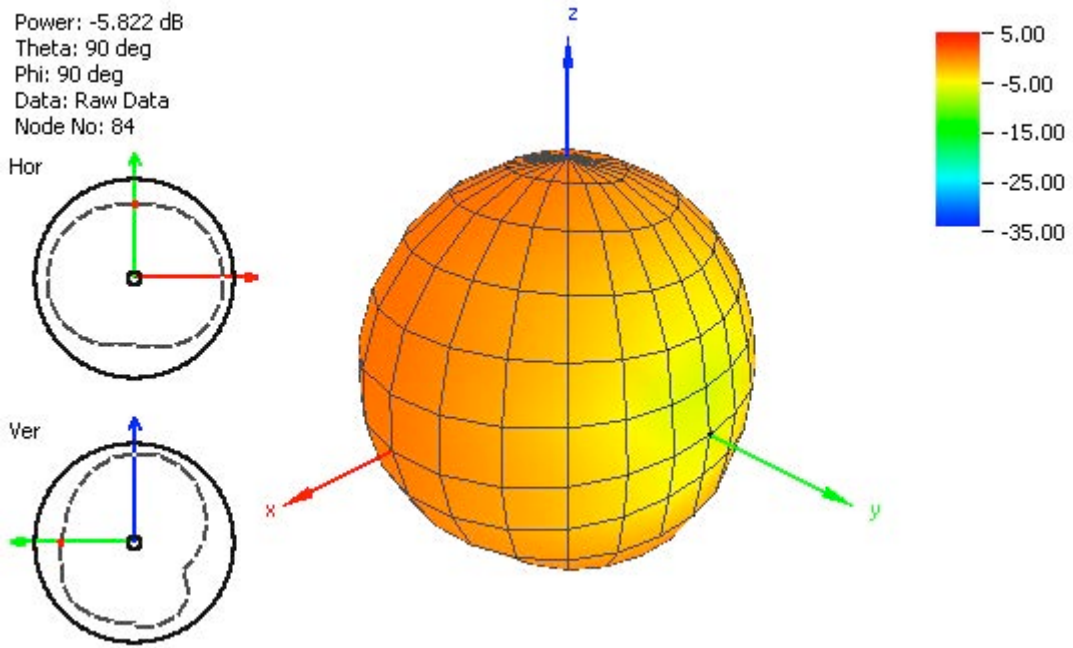


Figure 17. Radiation Pattern at 1900 MHz.

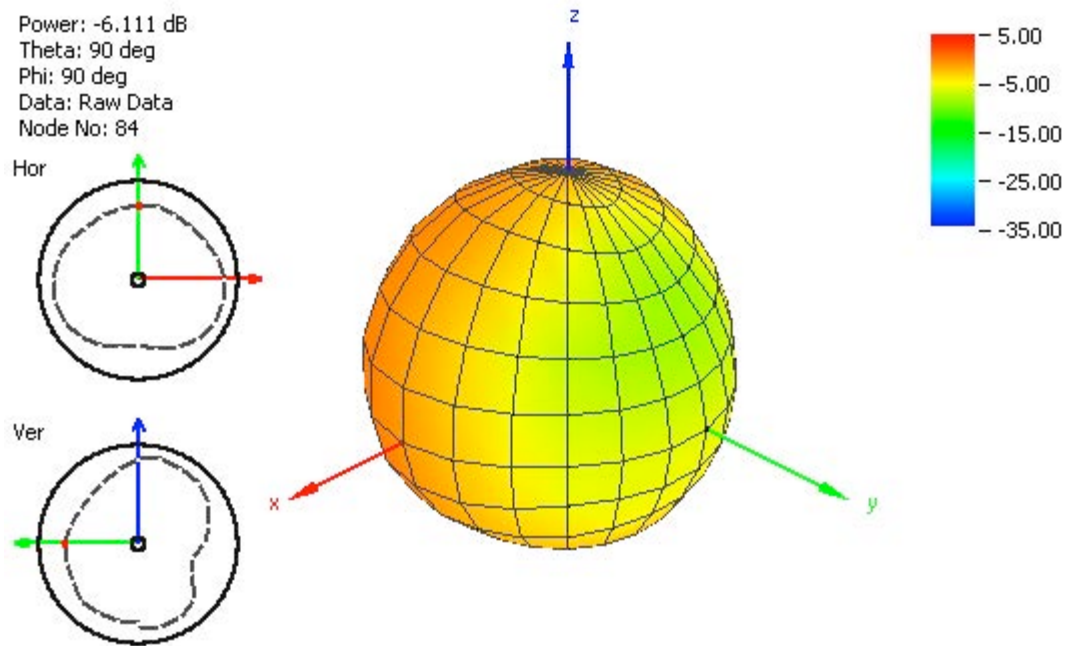


Figure 18. Radiation Pattern at 2200 MHz.

4.2.4 Bend (GPS & WiFi)

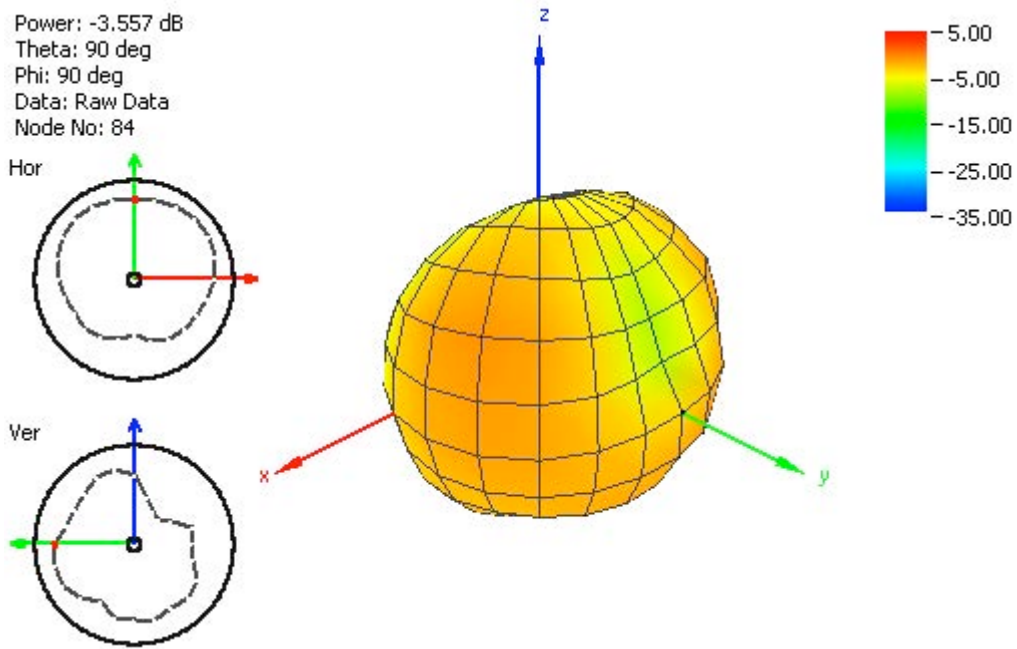


Figure 19. Radiation Pattern at 1575 MHz.

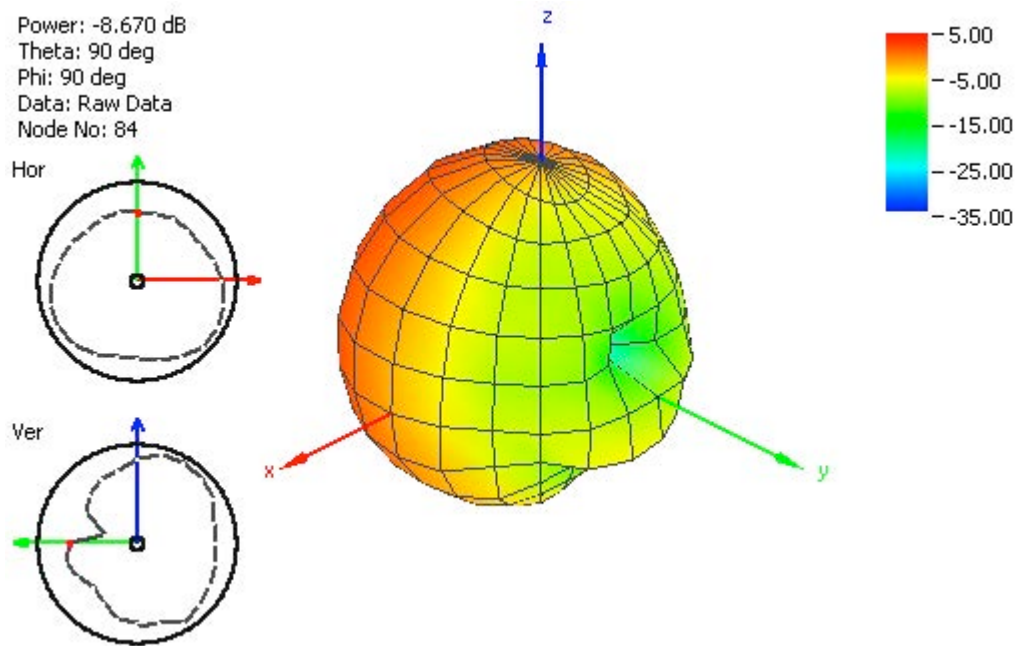


Figure 20. Radiation Pattern at 2400 MHz.

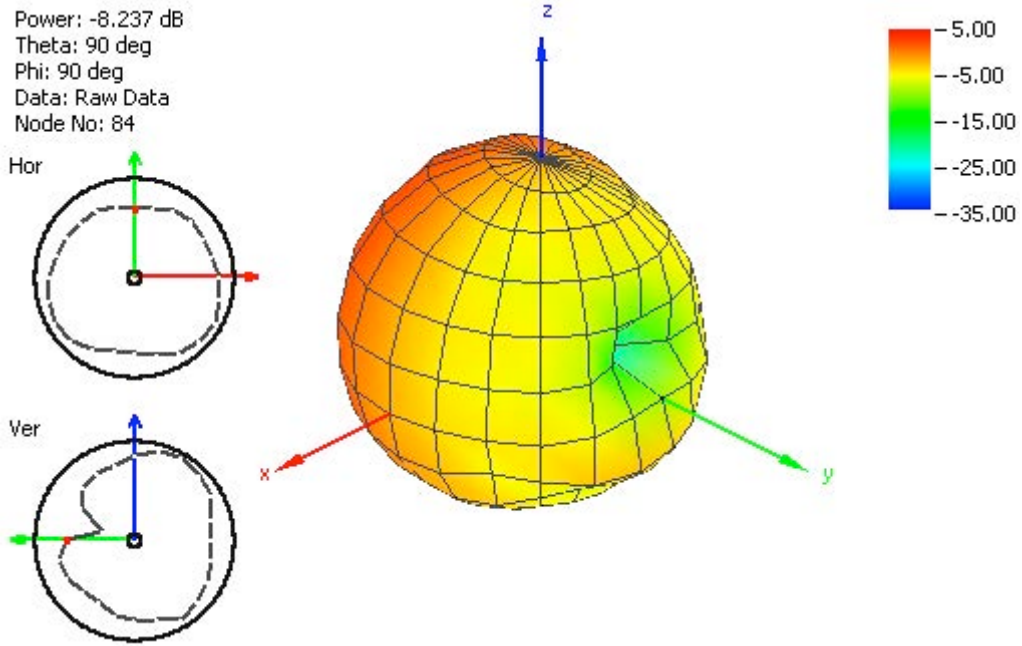


Figure 21. Radiation Pattern at 2460 MHz.

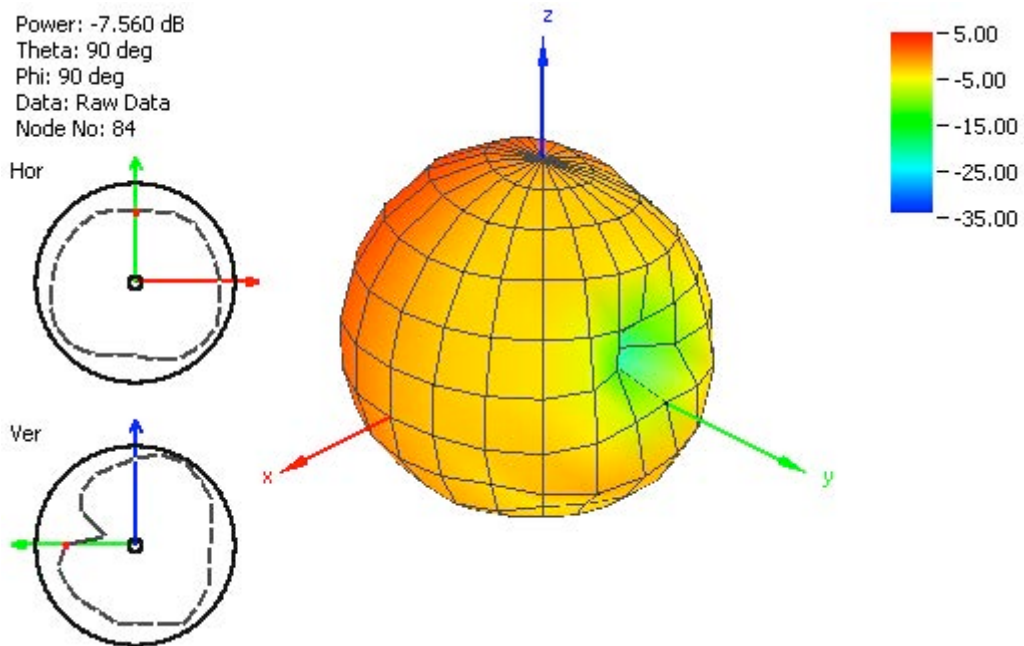
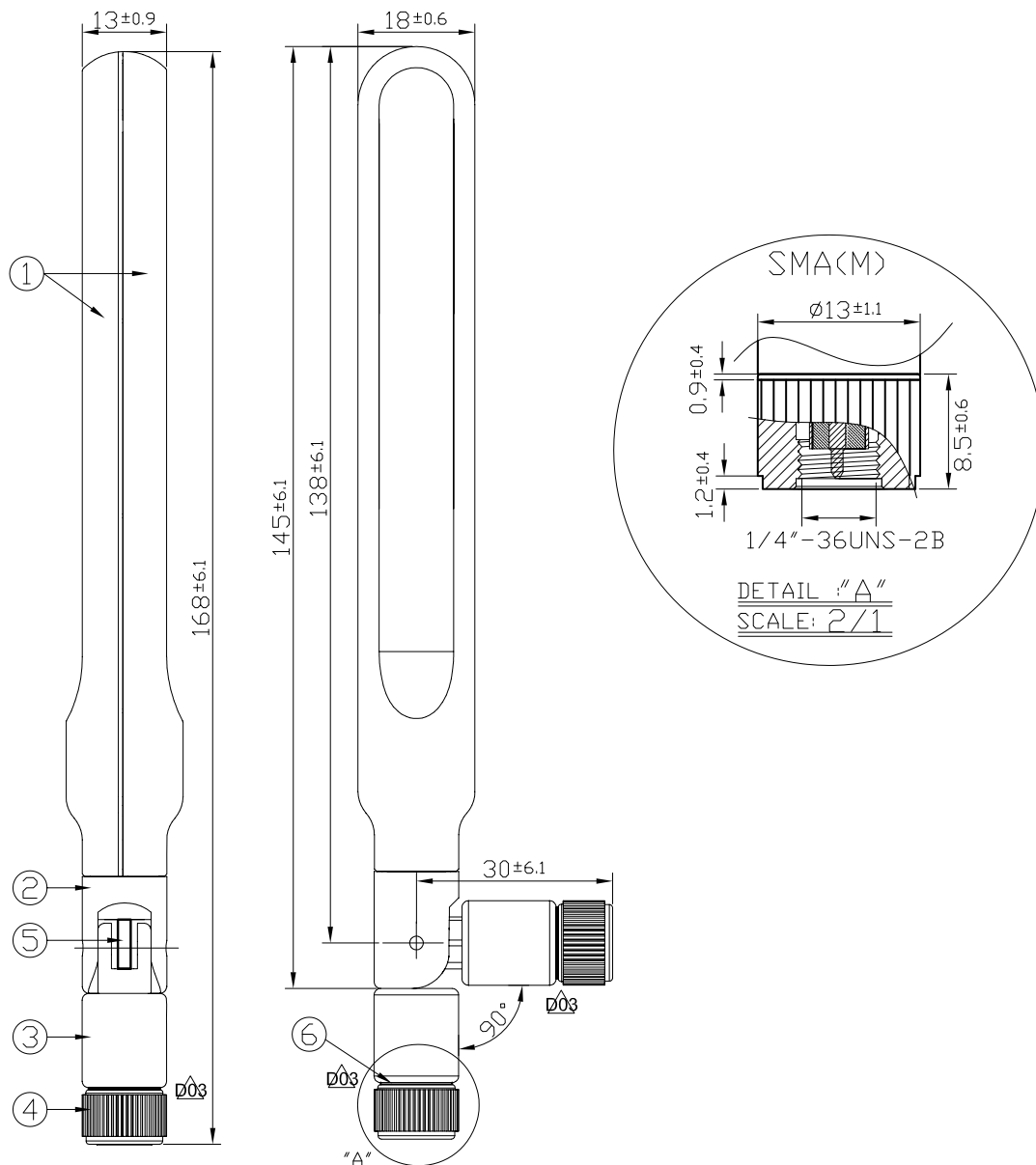


Figure 22. Radiation Pattern at 2500 MHz.

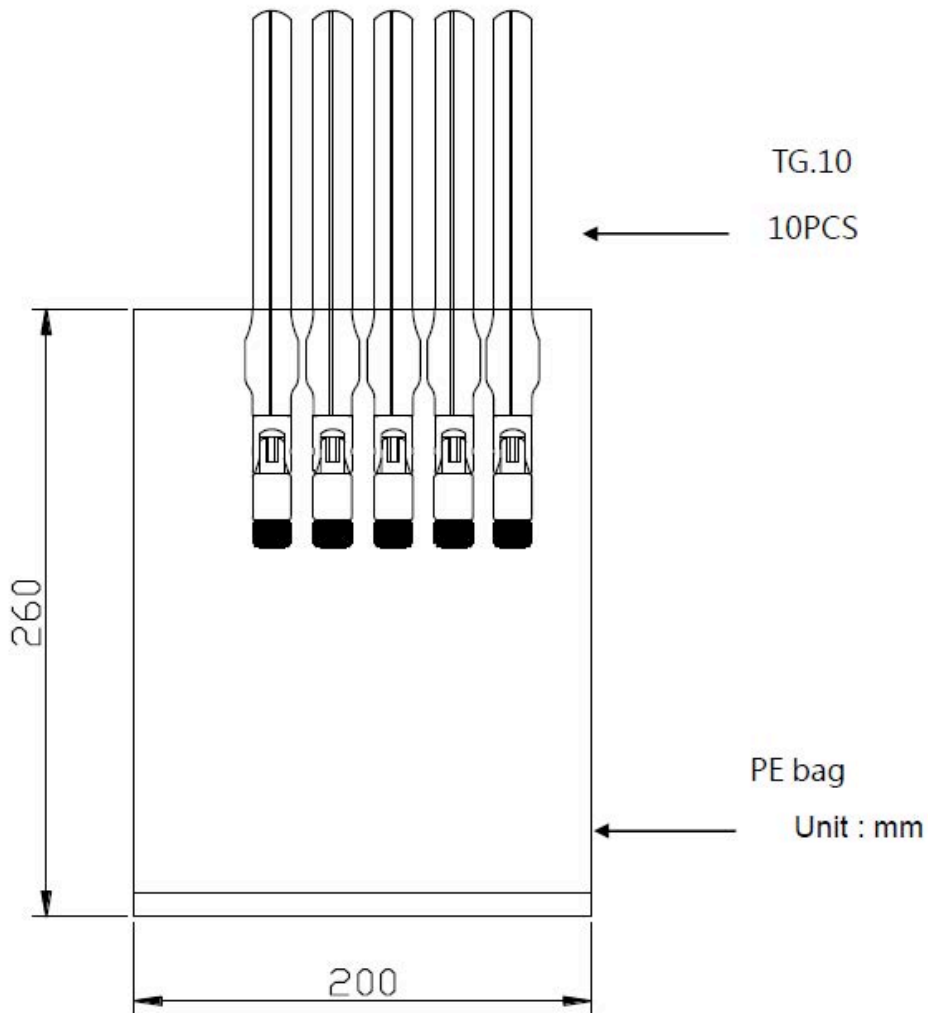
5. Drawing



	Name	Material	Finish	QTY
1	TG.10 Antenna Housing	PC+ABS	Black	2
2	TG.10 Antenna Base 1	PC+ABS	Black	1
3	TG.10 Antenna Base 2	PBT	Black	1
4	SMA(M)	Brass	Black	1
5	RG178 Cable	RG178	Brown	1
6	TG10R Washer	PP	Blue	1

6. Packaging

10pcs antenna per small PE bag



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