

AMC-ANT-2J8750BGFb

Cellular/LTE, GNSS and 2.4/5GHz MIMO screw mount antenna

Features:

- Cable 1: Cellular / LTE
 - 698-960 MHz
 - 1710-2170 MHz
 - 2500-2700 MHz
- Cable 2 & 3: 2.4/5.0 GHz ISM
 - 2410-2490 MHz
 - 4920-5925 MHz
- Cable 3: GPS/GLONASS/QZSS/Galileo
 - 1575-1606 MHz
- Screw mount
- Anti-rotation mechanism
- Ground plane dependent
- Dimensions: 102 x 63 x 63mm
- Certificates: IP67, IP69, IK09
- Customisable cable and connectors



1. Antenna and electrical specifications

Cable 1 – Cellular/LTE

Standards	2G, 3G, 4G		
Band (MHz)	700/850/900	1700/1800/1900/2100	2600
Frequency (MHz)	698 - 960	1710 - 2170	2500 - 2700
Return Loss (dB)	~-10.9	~-11.2	~-17.9
VSWR	~2.0:1	~1.8:1	~1.3:1
Efficiency (%)	~50.9	~38.6	~42.0
Peak Gain (dBi)	~1.2	~1.2	~2.4
Average Gain (dB)	~-3.6	~-5.2	~-3.8
Impedance (Ohms)	50		
Polarisation	Linear		
Radiation Pattern	Omni-directional		
Max. Input Power (W)	25		
Connector Type	SMA male standard (other connectors available)		
Cable Length	300cm standard (other lengths available)		
Cable Type	DACAR 302 standard (other types available)		



Cable 2 – 2.4/5.0GHz ISM

Standards	Wi-Fi, Bluetooth, ZigBee, ISM	
Band (GHz)	2.4	5.0
Frequency (MHz)	2410 - 2490	4920 - 5925
Return Loss (dB)	~-21.7	~-11.2
VSWR	~1.2:1	~1.9:1
Efficiency (%)	~38.9	~20.8
Peak Gain (dBi)	~1.7	~1.1
Average Gain (dB)	~-4.6	~-8.7
Impedance (Ohms)	50	
Polarisation	Linear	
Radiation Pattern	Omni-directional	
Max. Input Power (W)	25	
Connector Type	RP-SMA male standard (other connectors available)	
Cable Length	300cm standard (other lengths available)	
Cable Type	DACAR 100 standard (other types available)	

Antenna measurement conditions:

Mounted on 30 x 30 ground plane

200cm of DACAR 302 cable

Measured in certified CTIA 3D anechoic chamber



Cable 3 – 2.4/5.0GHz ISM

Standards	Wi-Fi, Bluetooth, ZigBee, ISM	
Band (GHz)	2.4	5.0
Frequency (MHz)	2410 - 2490	4920 - 5925
Return Loss (dB)	~-19.9	~-18.1
VSWR	~1.3:1	~1.4:1
Efficiency (%)	~35.1	~22.0
Peak Gain (dBi)	~1.5	~1.1
Average Gain (dB)	~-4.6	~-9.0
Impedance (Ohms)	50	
Polarisation	Linear	
Radiation Pattern	Omni-directional	
Max. Input Power (W)	25	
Connector Type	RP-SMA male standard (other connectors available)	
Cable Length	300cm standard (other lengths available)	
Cable Type	DACAR 100 standard (other types available)	



Cable 4 – GPS/GLONASS

Standards	GPS/QZSS/Galileo	GLONASS
Band (MHz)	1575	1602
Frequency (MHz)	1575.42	1598 - 1606
Patch Size (mm)	25 x 25 x 4	
Return Loss (dB)	<=15.0	
VSWR	<=1.4:1	
Impedance (Ohms)	50	
Polarisation	RHCP	
Radiation Pattern	Hemispherical	
SAW Filter	Pre-filter	
Active Gain (dB)	28 @ 2.7V	
Noise Figure (dB)	1.5 (typ.)	
Voltage (V)	1.5 – 3.6	
Current (mA)	9 (typ.)	
Power Consumption (mW)	24.3 (typ.)	
ESD Protection (kV)	2	
Connector Type	SMA male standard (other connectors available)	
Cable Length	300cm standard (other lengths available)	
Cable Type	DACAR 100 standard (other types available)	

Antenna measurement conditions:

Mounted on 30 x 30 metal plate

200cm of DACAR 302 cable for LTE

200cm of DACAR 100 cable for 2.4/5.0GHz

Measured in certified CTIA 3D anechoic chamber

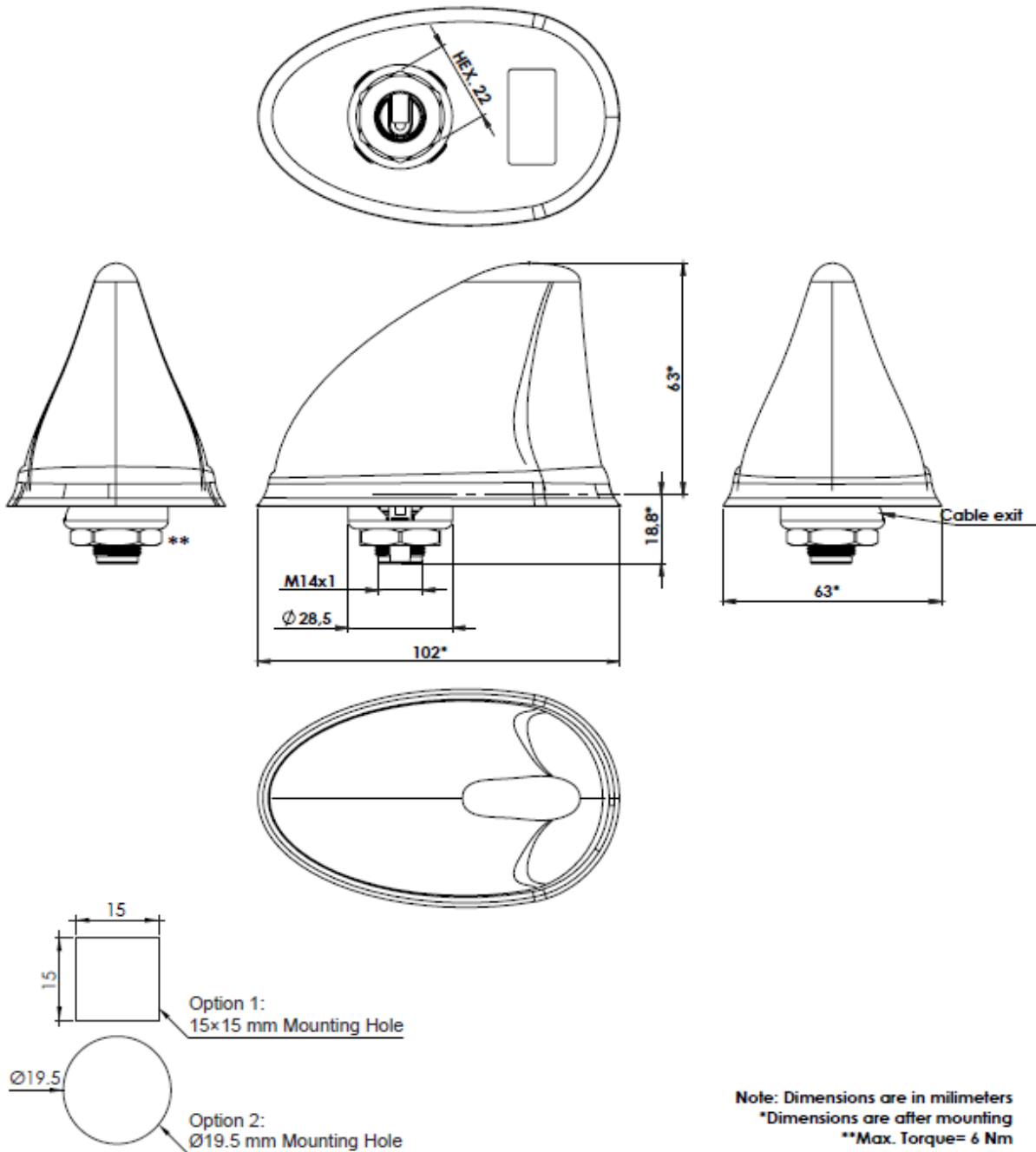


2. Mechanical and environmental specifications

Mounting Type	Screw mount
Dimensions (mm)	102 x 63 x 63
Max. Tighten Torque (Nm)	6
Radome Type	PC/ABS UV stable
Radome Colour	Black
Antenna Base	Zamak
Gasket	TPE
Operating Temperature (°C)	-40 to +85
Storage Temperature (°C)	-40 to +85
Substance Compliance	RoHS
Certificates	IP67, IP69, IK09

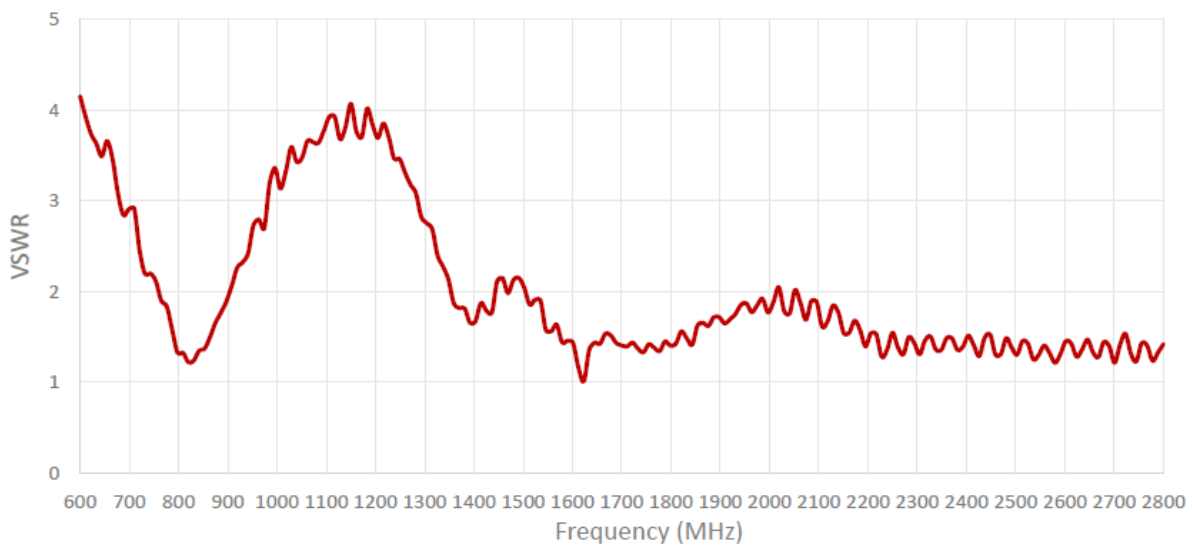
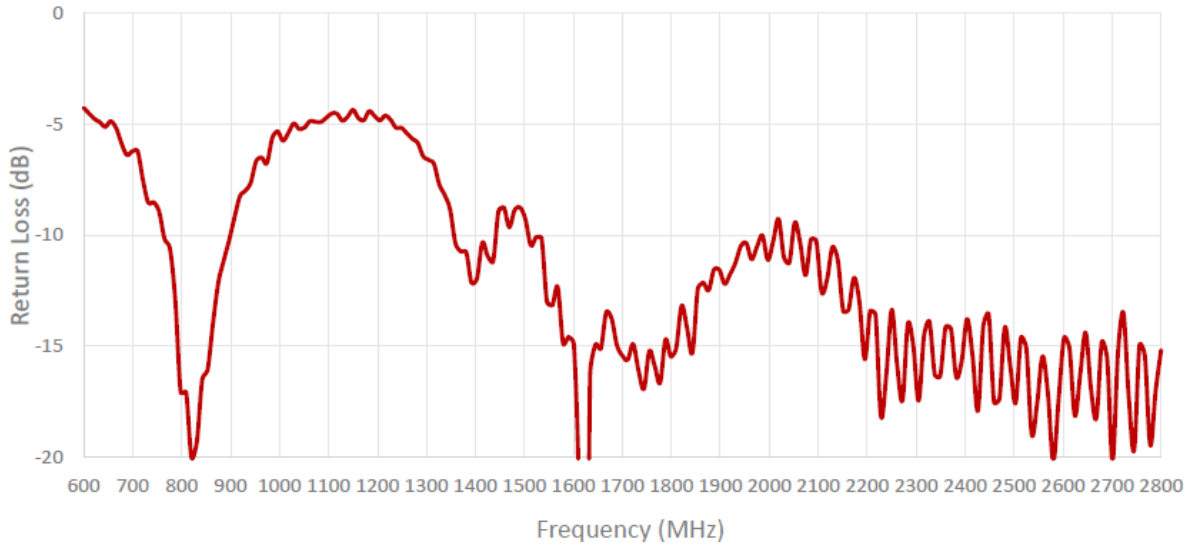


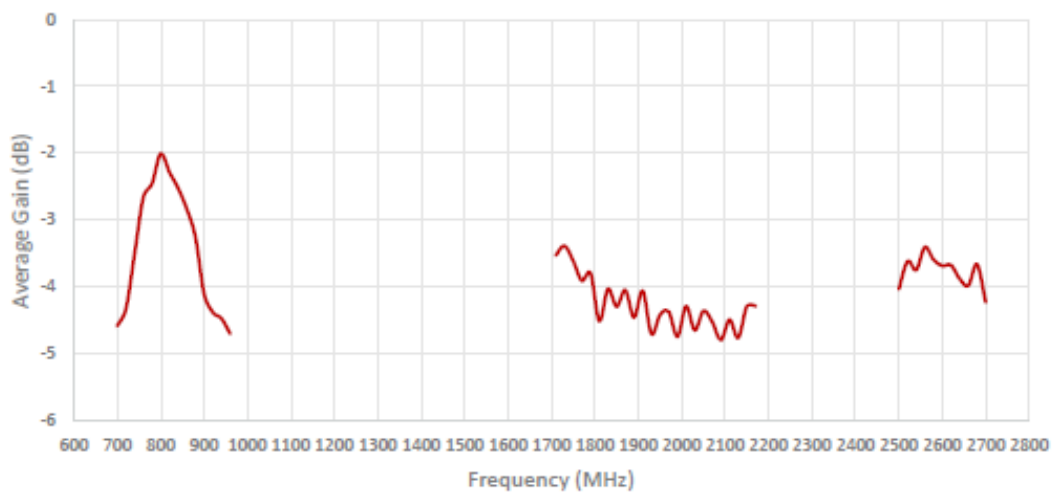
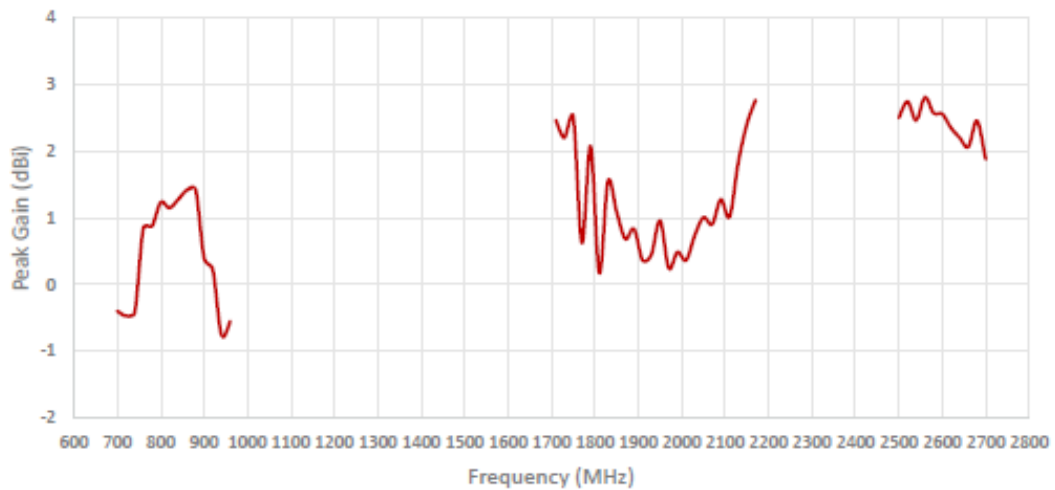
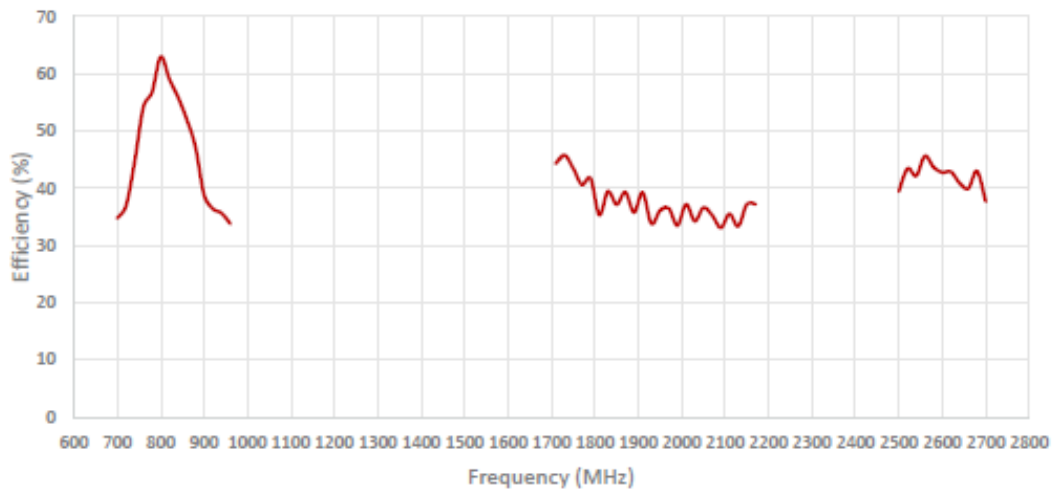
3. Antenna drawings



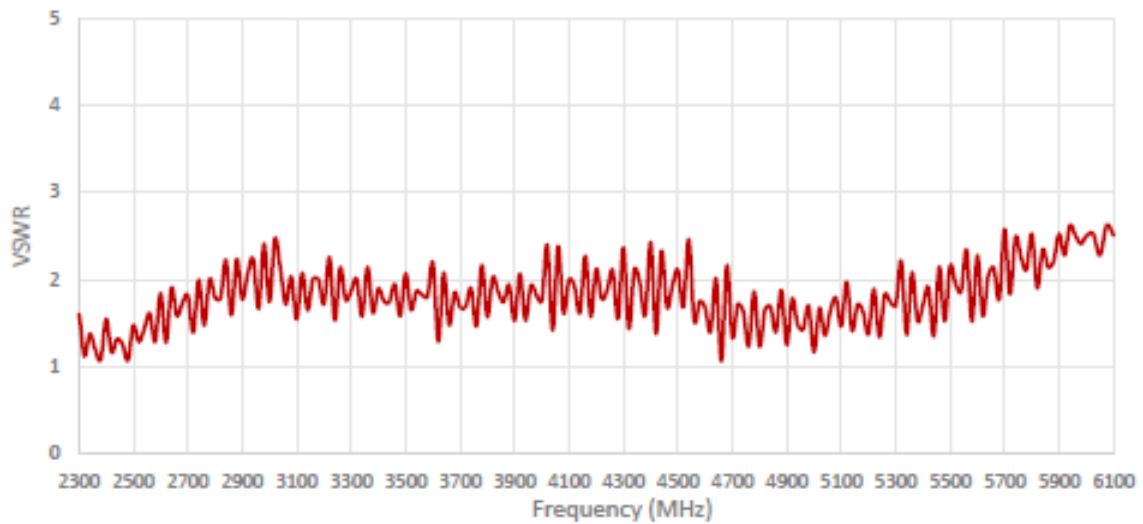
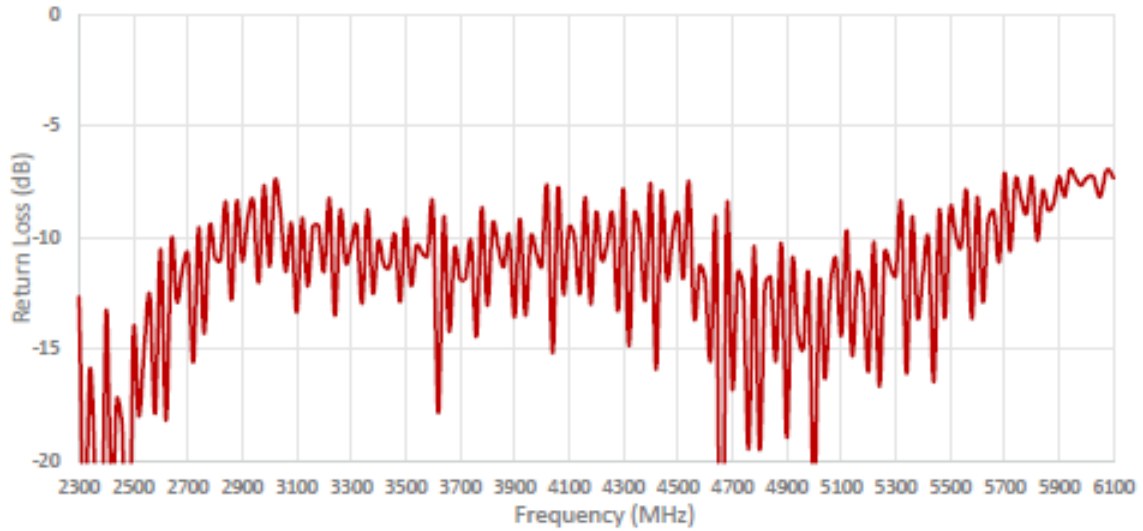
4. Antenna parameters

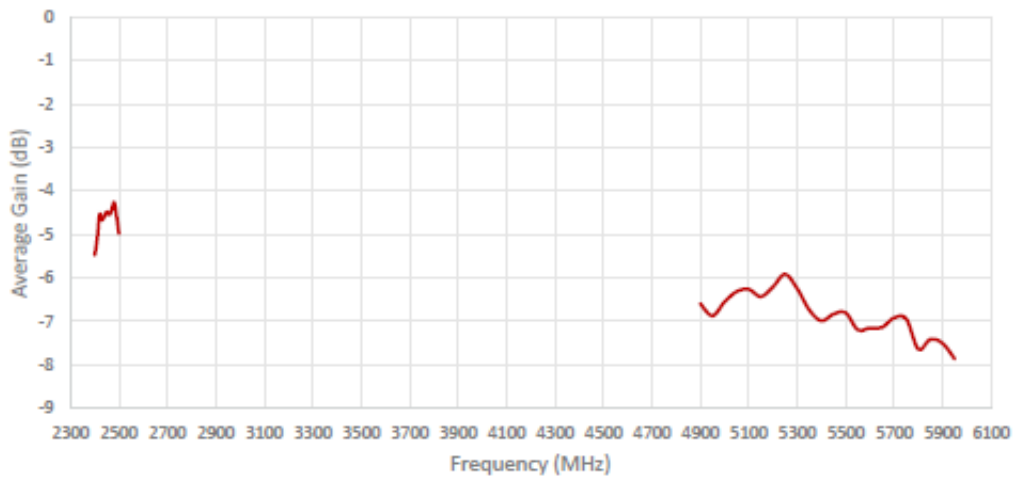
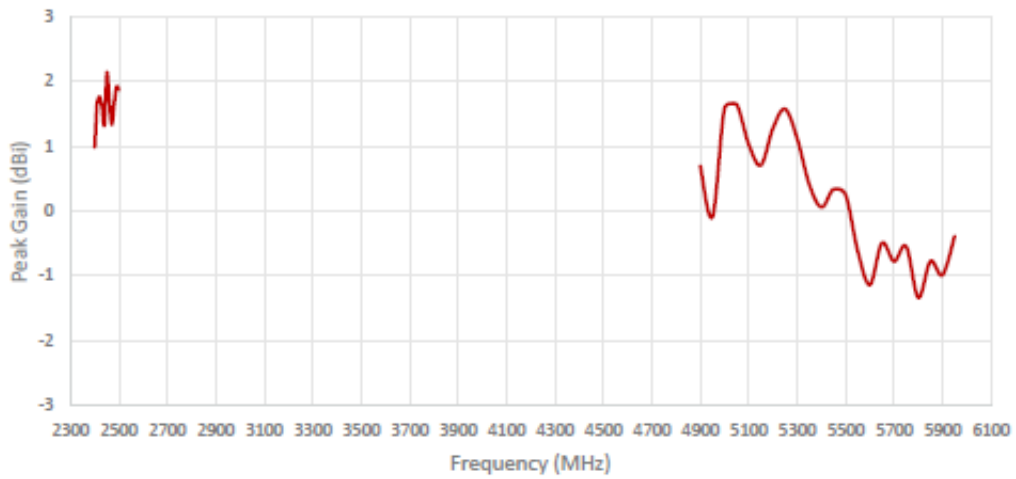
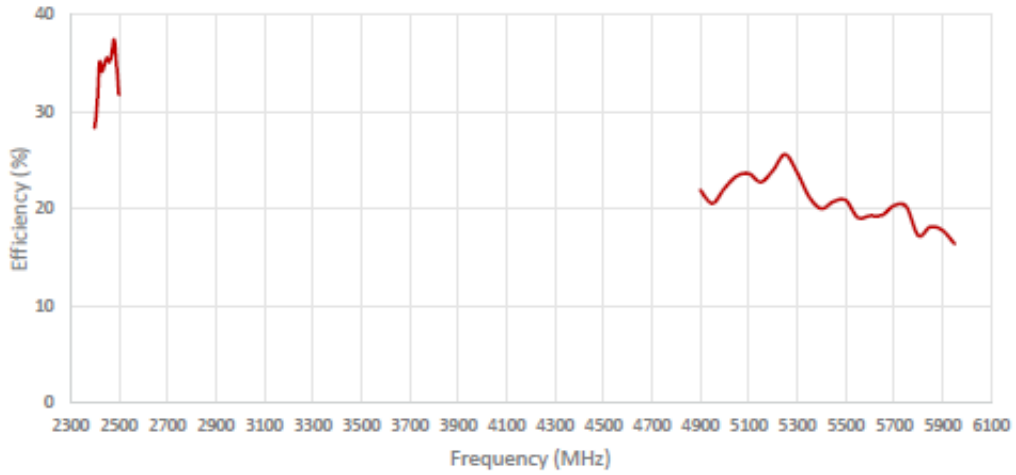
Cable 1: Cellular/LTE



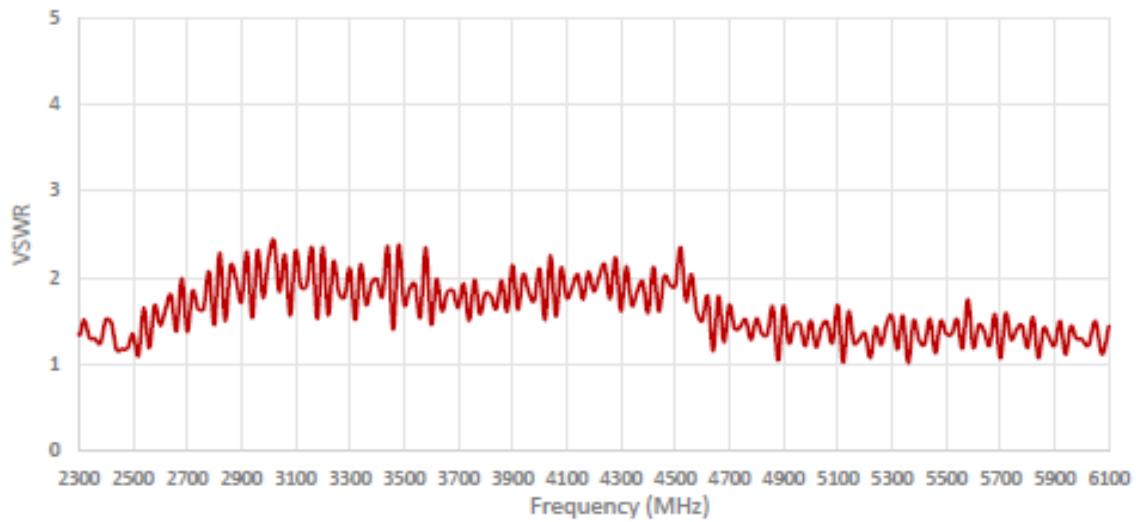
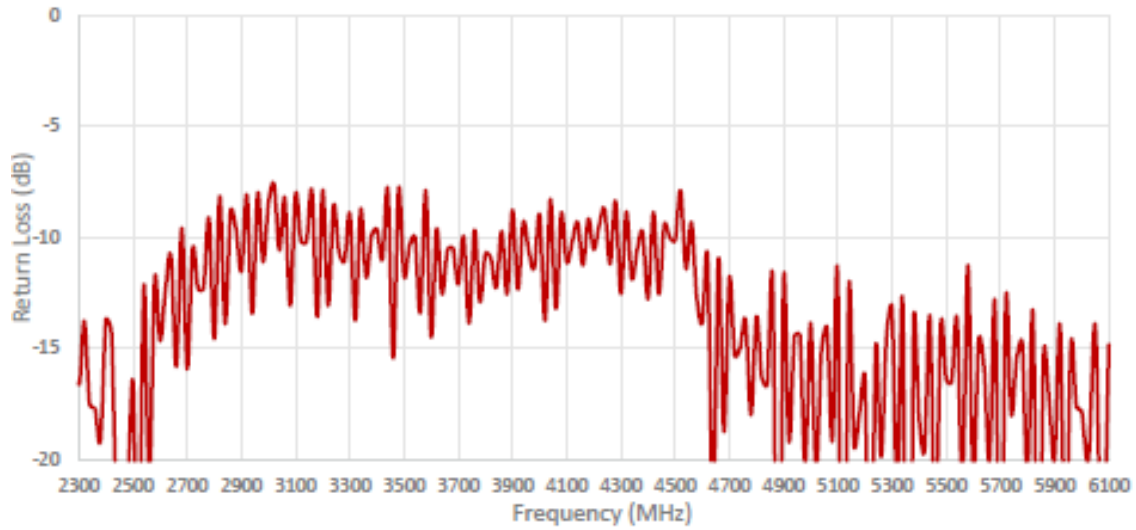


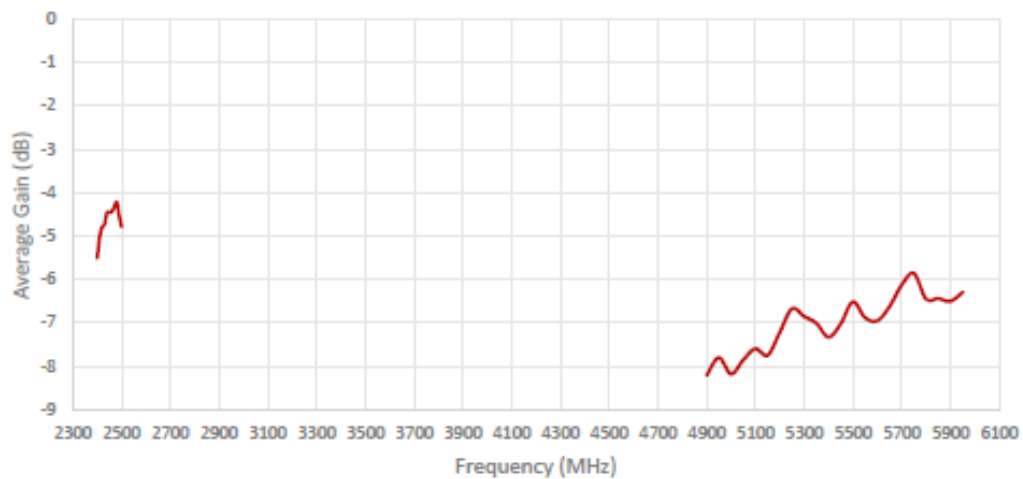
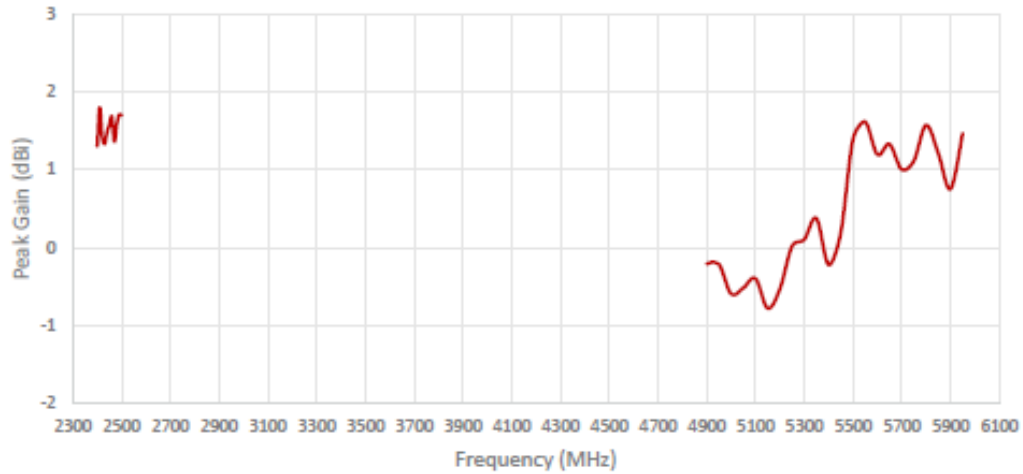
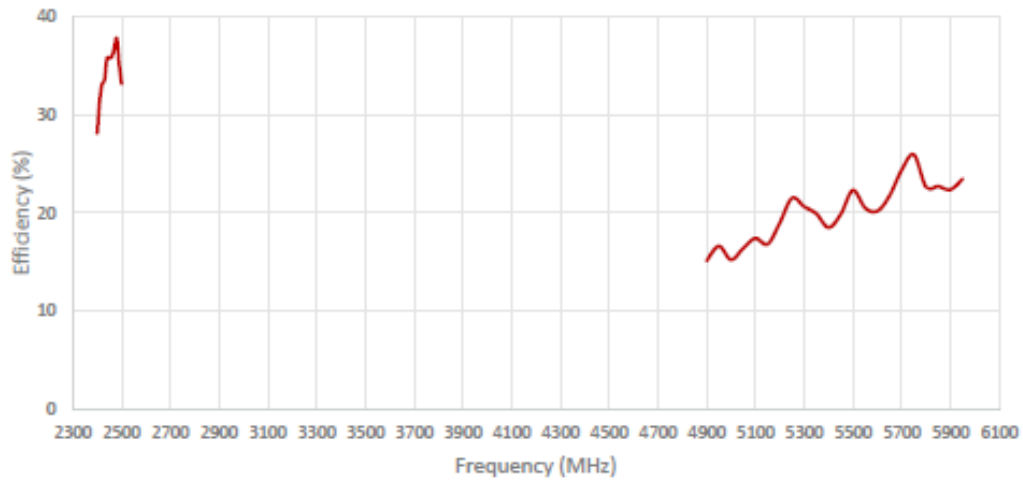
Cable 2: 2.4/5.0GHz ISM



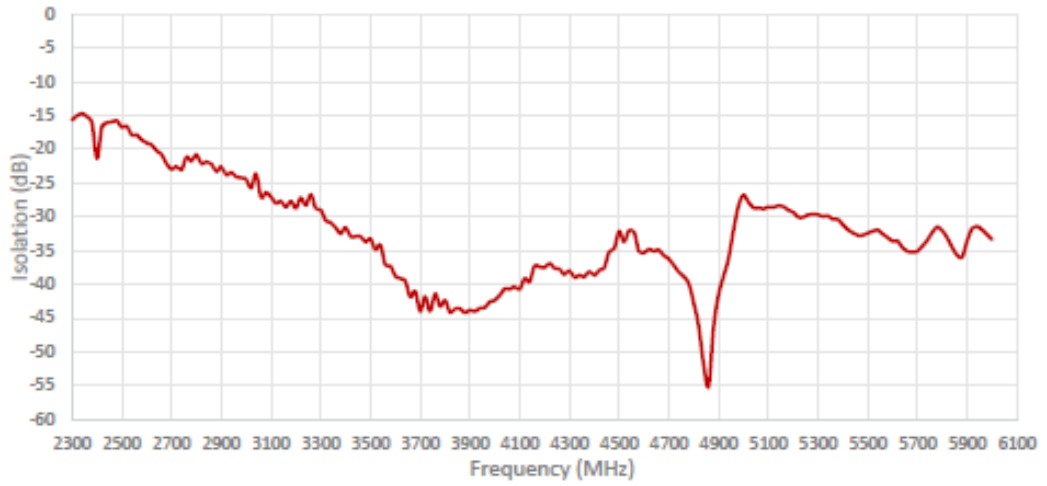


Cable 3: 2.4/5.0GHz ISM

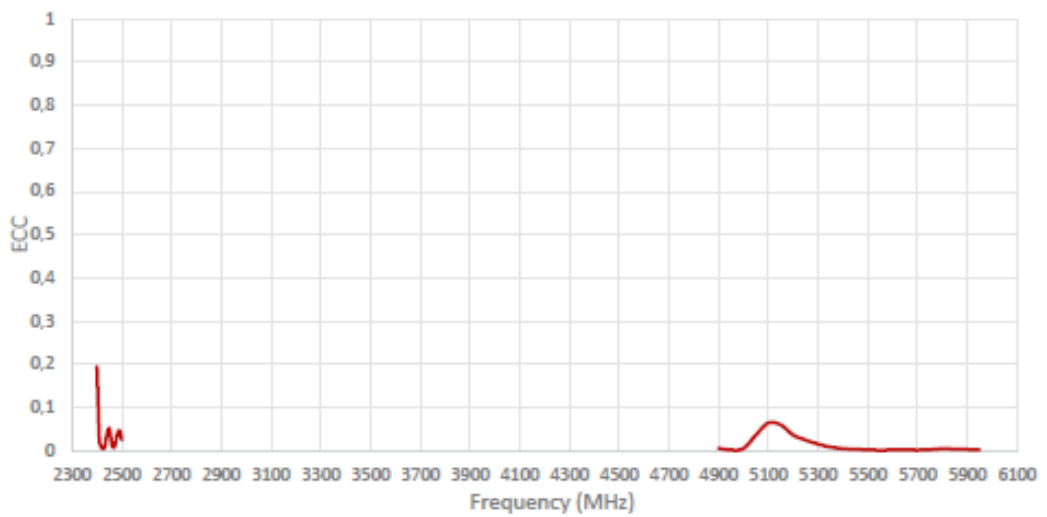


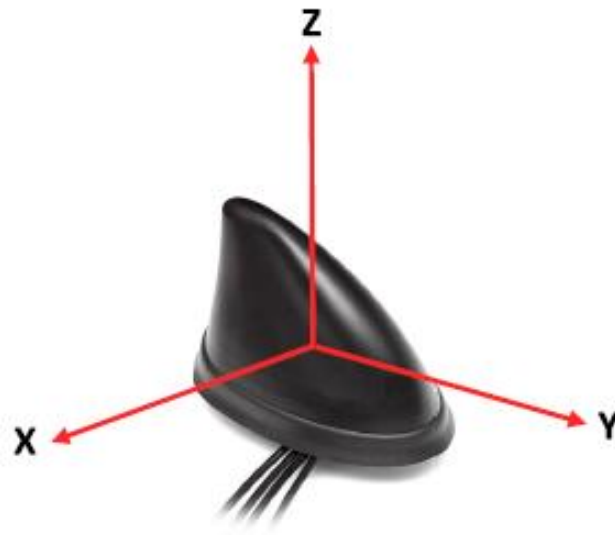


ISOLATION FOR CABLE 2 AND CABLE 3



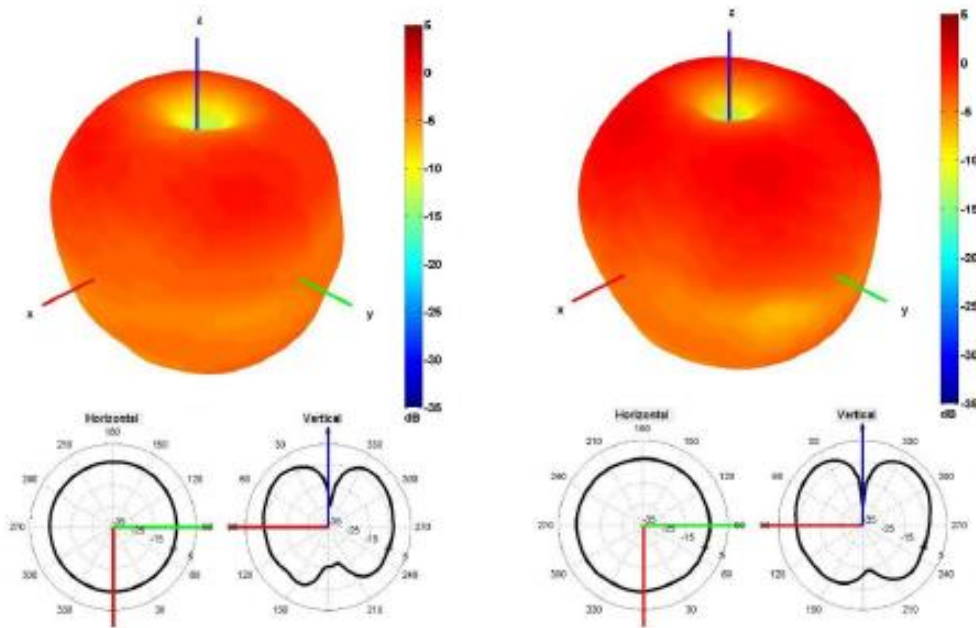
ENVELOPE CORRELATION COEFFICIENT FOR CABLES 2 AND 3





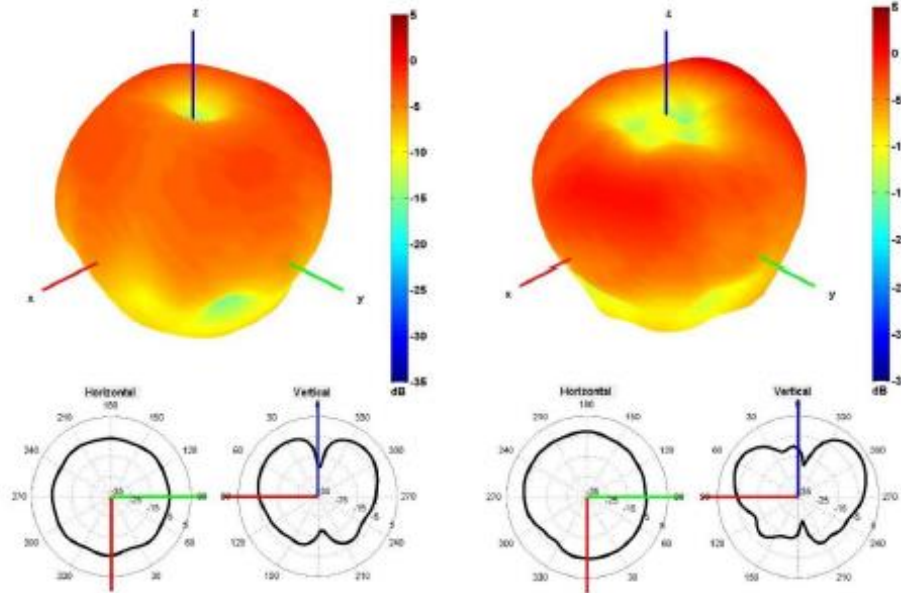
Radiation pattern reference

Cable 1: CELLULAR/LTE

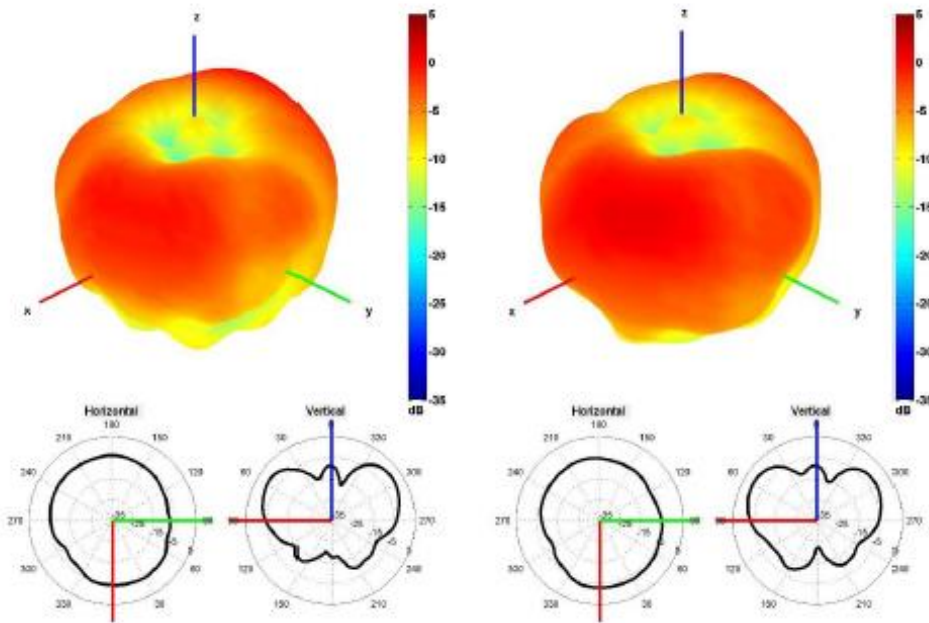


750 and 850 MHz Radiation pattern



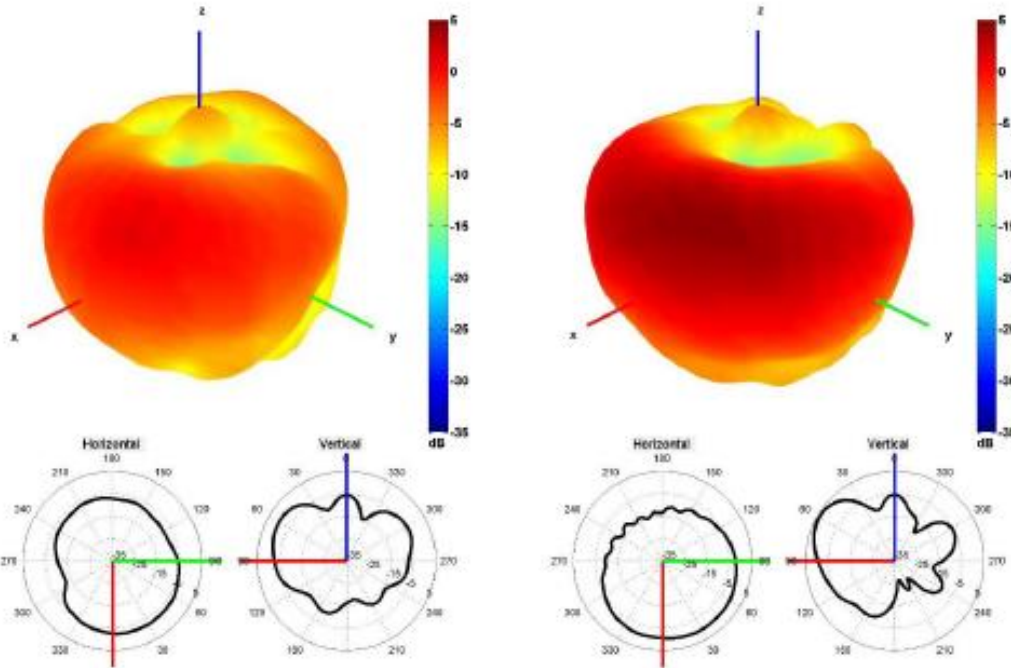


940 and 1750 MHz Radiation pattern



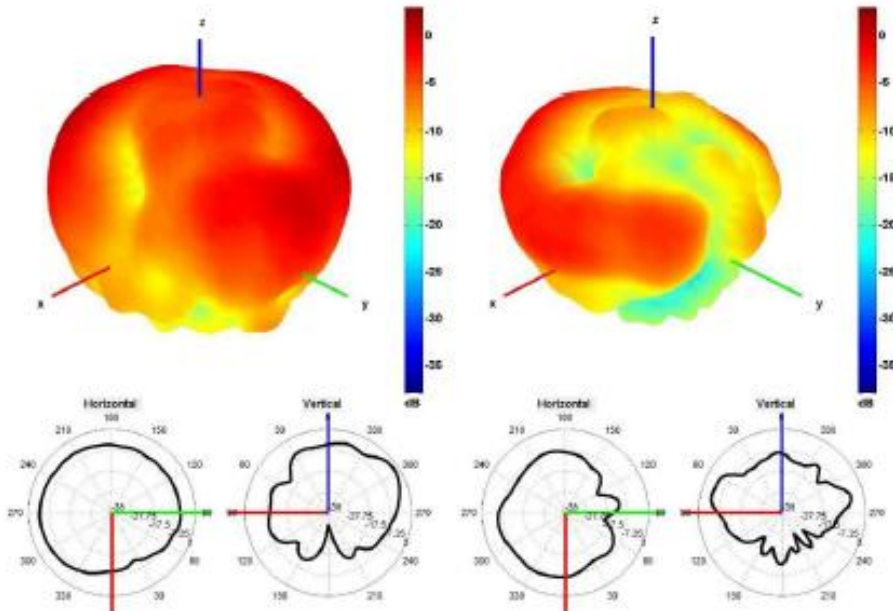
1850 and 1950 MHz Radiation pattern





2100 and 2600 MHz Radiation pattern

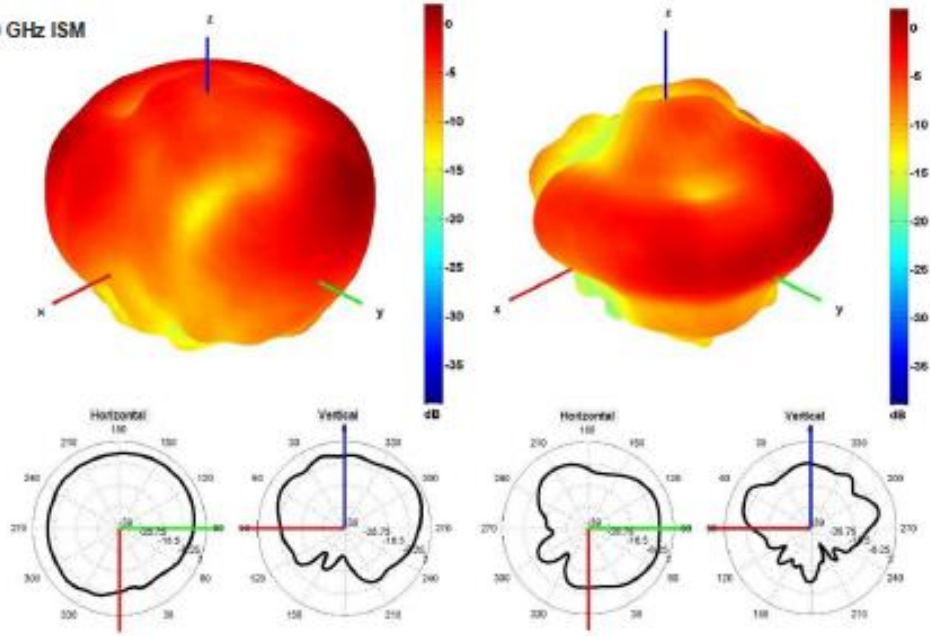
Cable 2: 2.4/5.0 GHz ISM



2450 and 5500 MHz Radiation pattern



Cable 3: 2.4/5.0 GHz ISM



2450 and 5500 MHz Radiation pattern

