

Testing report

Part No. : **TL.01.1F11**

Product Name : 2G/3G/4G/GPS/WiFi
Ultra-wideband Antenna

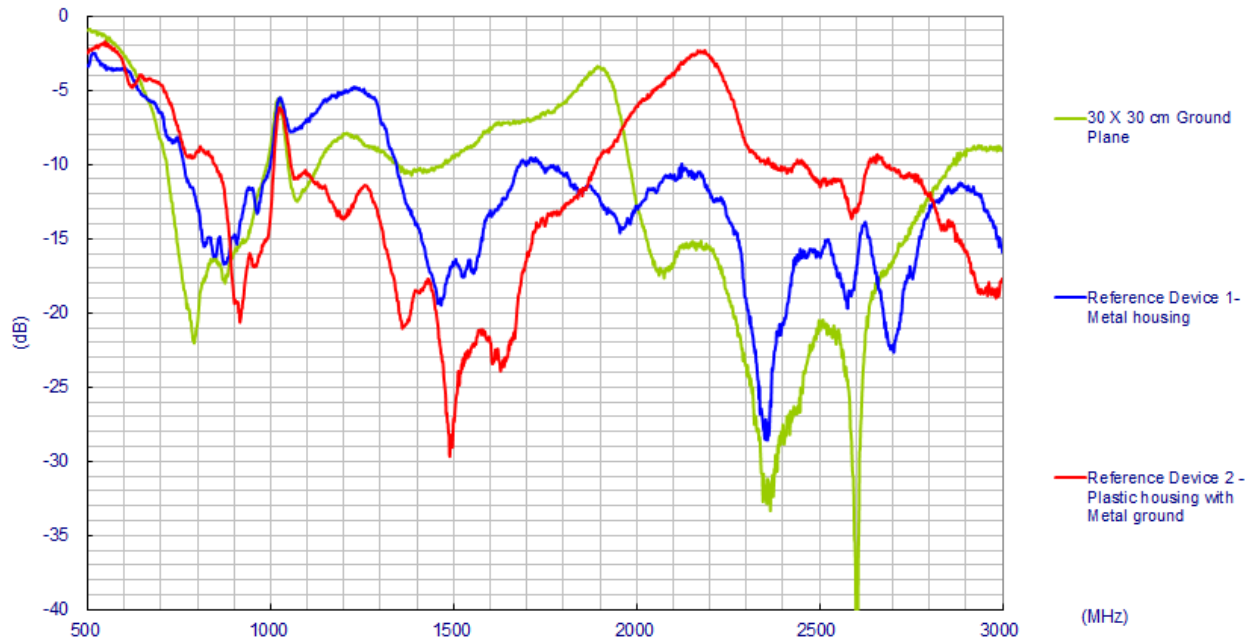
Feature : LTE / GSM / CDMA /DCS /PCS / WCDMA /
UMTS / HSDPA / GPRS / EDGE /GPS /Wi-Fi
698MHz to 960MHz, 1575.42MHz,
1710MHz to 2700Mhz,
High Efficiency and Peak Gain – up to 90%
N type (M) Connector
RoHS Compliant

I. Specification

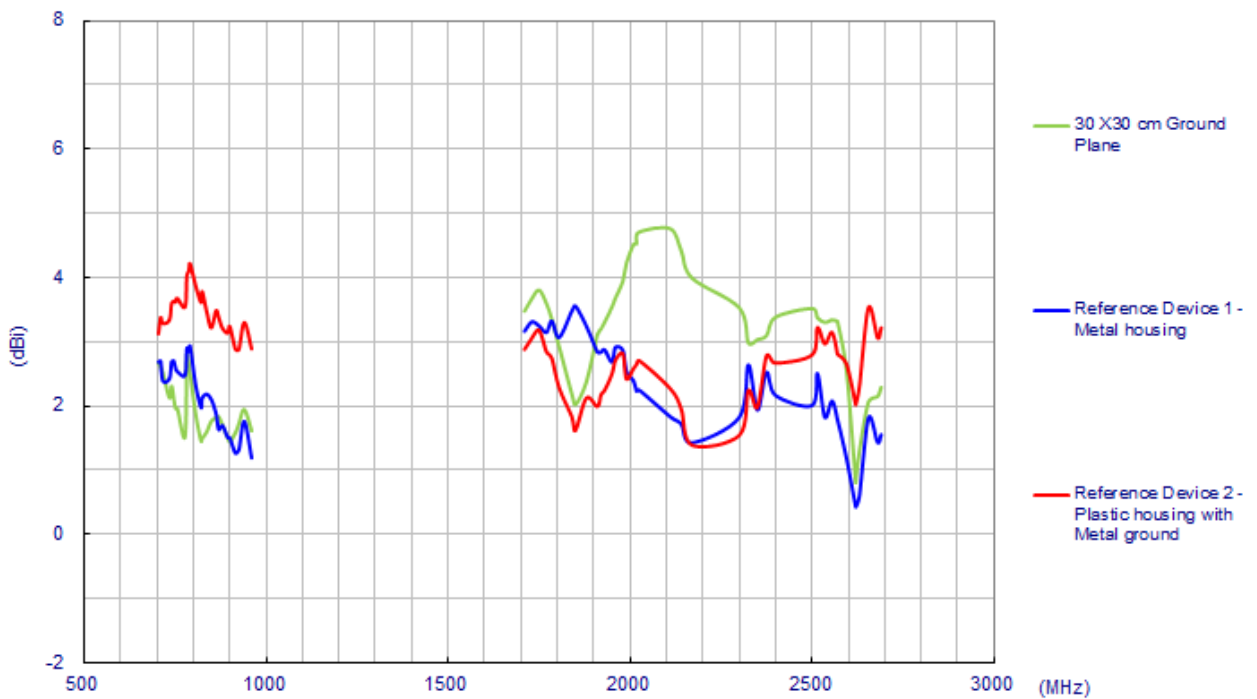
ELECTRICAL							
Frequency (MHz)	700~800	824~960	1575.42	1710 ~ 1880	1850 ~ 1990	1710 ~ 2170	2400~2700
Peak Gain (dBi)							
30x30cm GP center	2.8	1.9	1.5	3.8	4.2	4.8	3.5
Metal enclosure	2.6	2.2	2.5	3.6	3.3	3.6	2.5
Plastic enclosure with metal ground	3.6	3.8	1.8	3.2	2.8	3.2	3.5
Average Gain							
30x30cm GP center	-0.2	-1.6	-2.3	-1.1	-1.2	-1.1	-1.8
Metal enclosure	-0.3	-0.7	-1.1	-1.1	-0.8	-0.8	-0.8
Plastic enclosure with metal ground	-2.1	-1.3	-1.8	-0.6	-1.2	-0.6	-0.5
Efficiency							
30x30cm GP center	95%	70%	58%	78%	76%	78%	66%
Metal enclosure	89%	85%	77%	82%	84%	84%	83%
Plastic enclosure with metal ground	62%	70%	65%	87%	75%	87%	90%
Impedance	50Ω						
Polarization	Vertical						
Radiation Pattern	Omni						
MECHANICAL							
Casing	PC,ABS						
Connector	N type Male						
ENVIRONMENTAL							
Temperature Range	-40°C to 85°C						
Humidity	Non-condensing 65°C 95% RH						

II. Antenna Characteristics

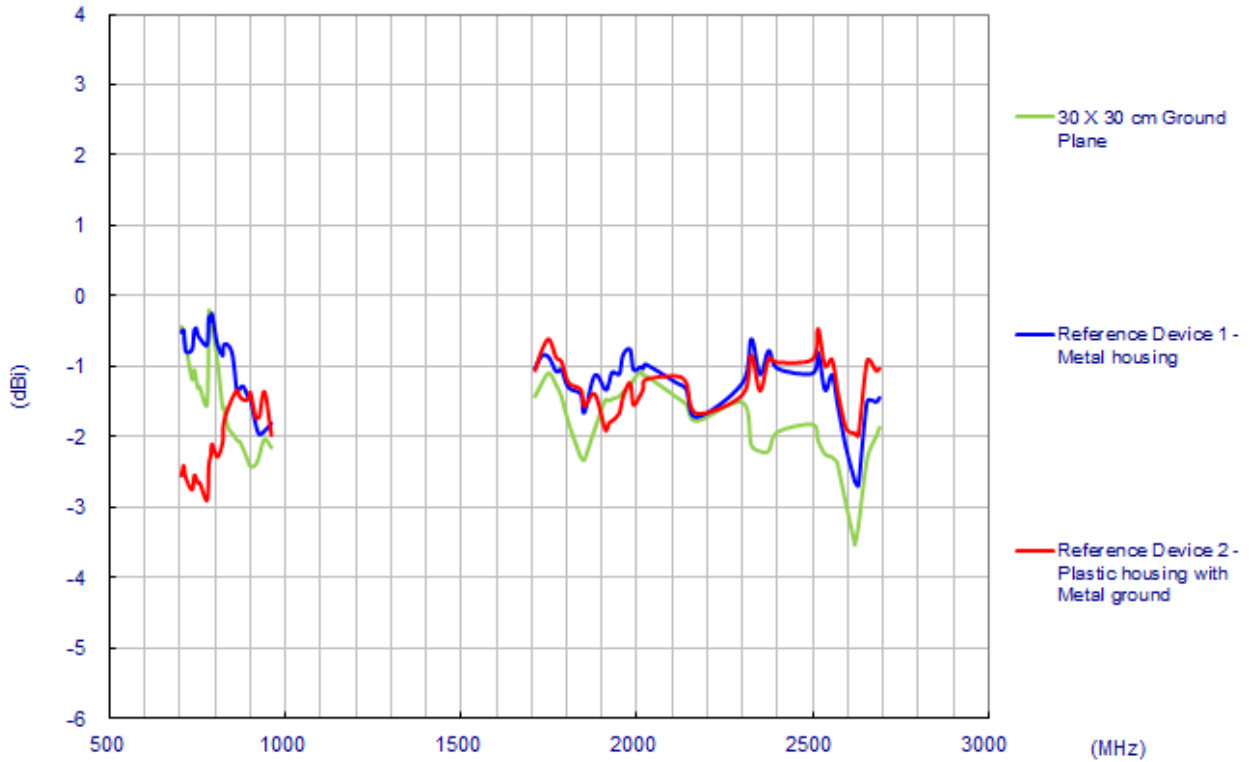
II.1 Return Loss



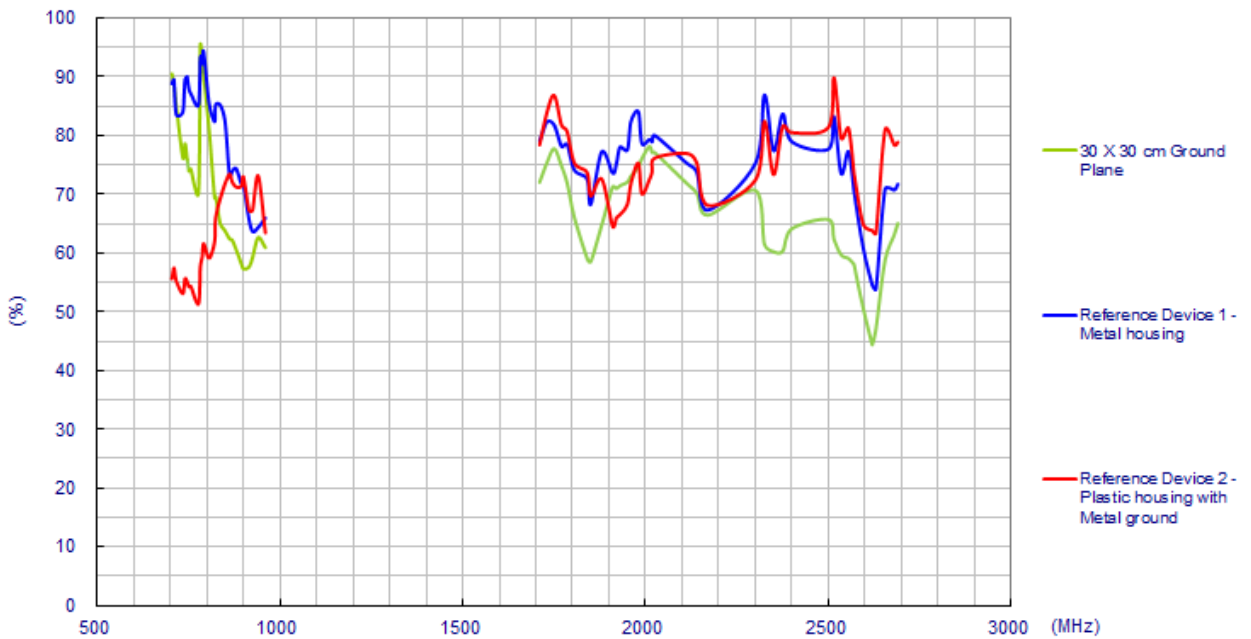
II.2 Maximum Gain



II.3 Average Gain

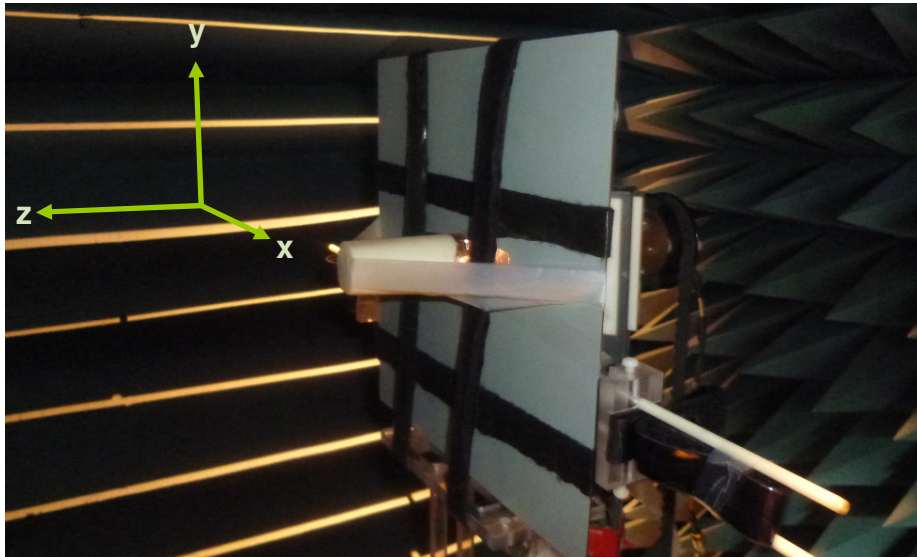


II.4 Efficiency



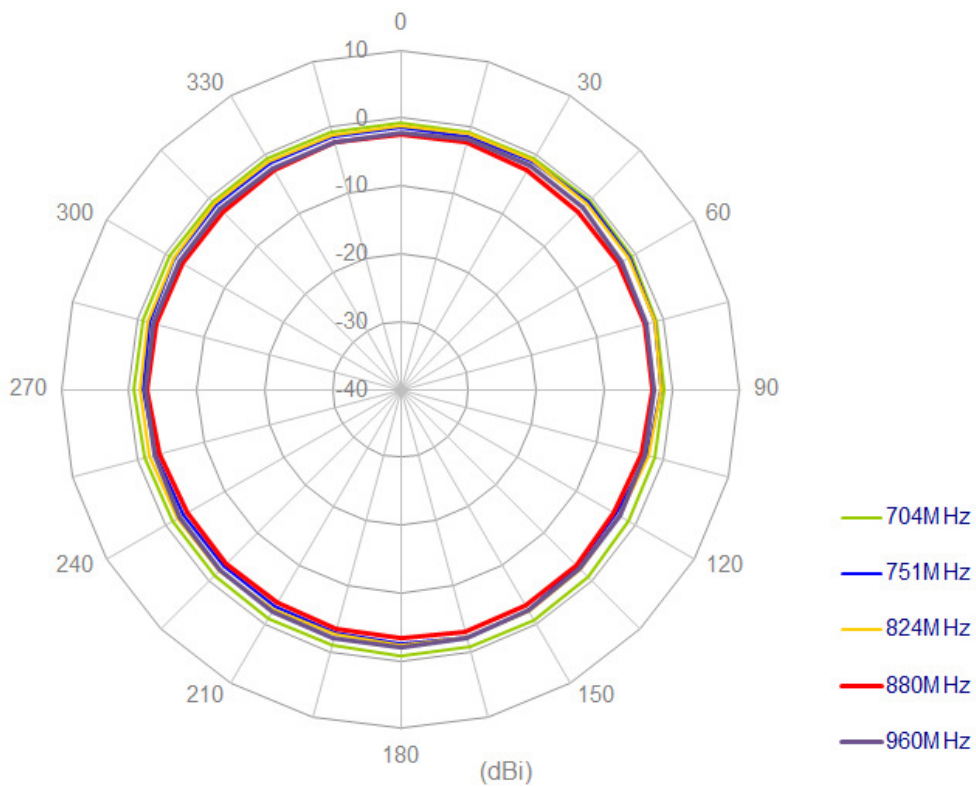
III. Antenna Radiation Patterns

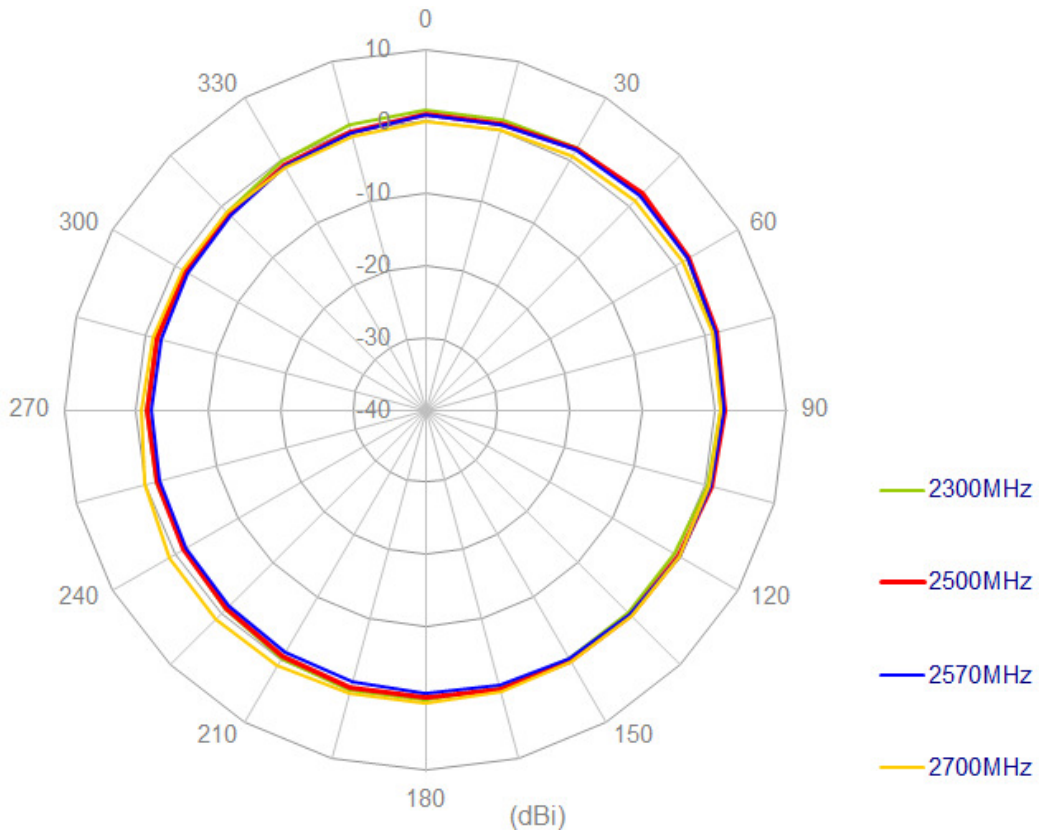
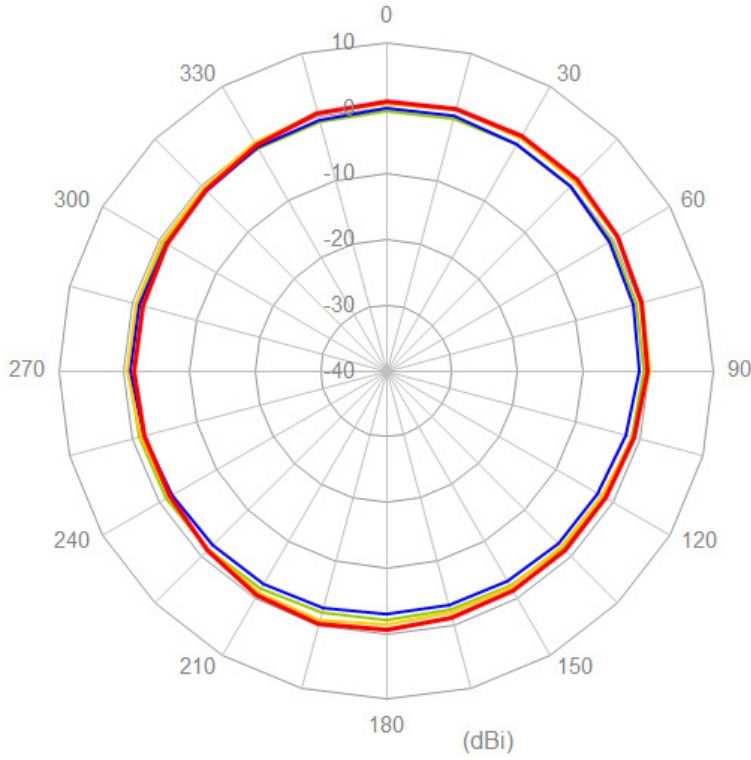
III.1 Antenna setup (Metal Ground Plane)



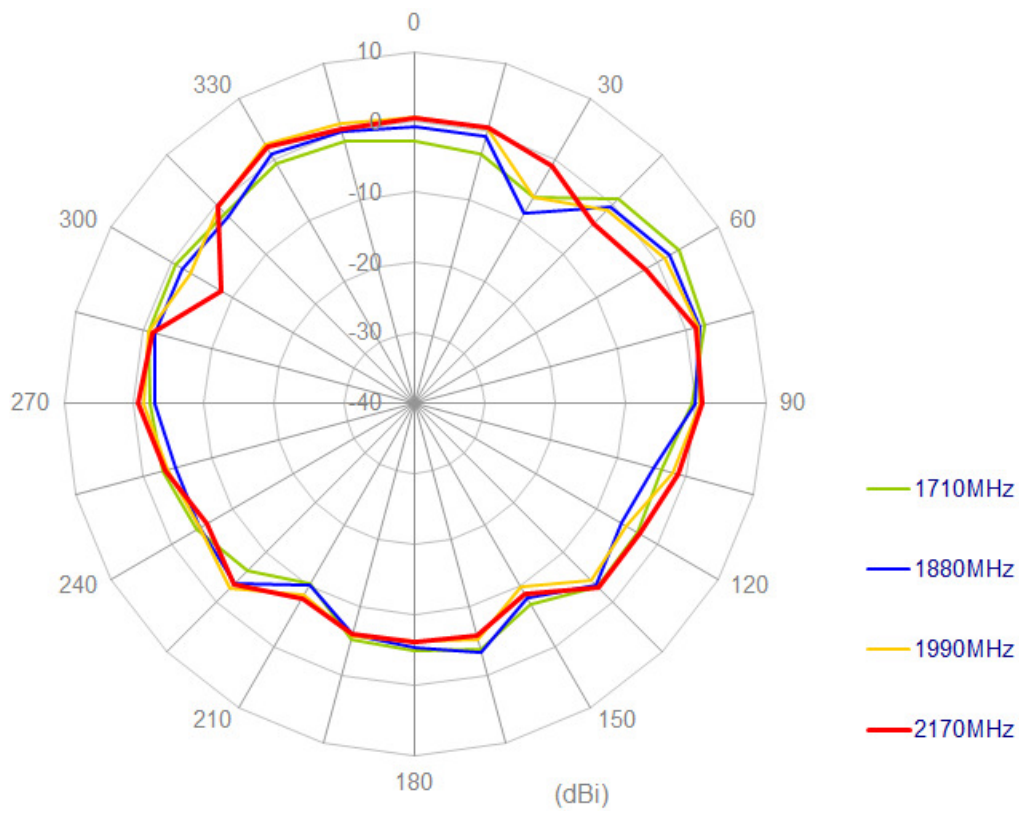
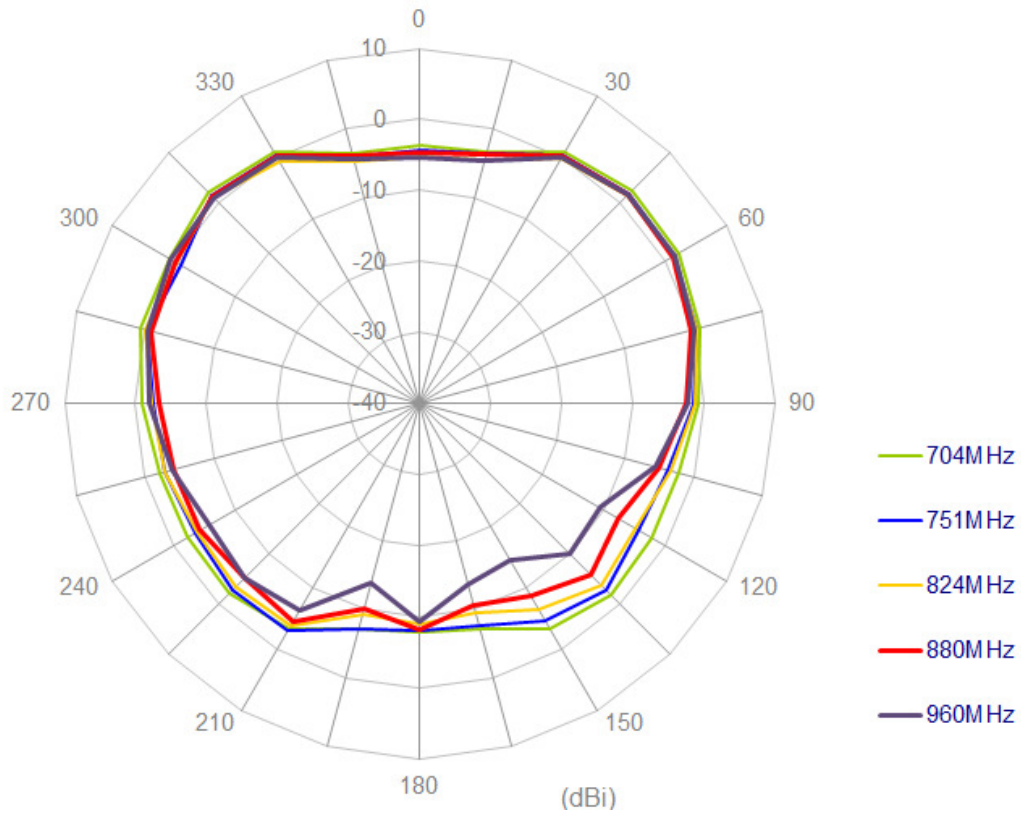
Radiation Patterns

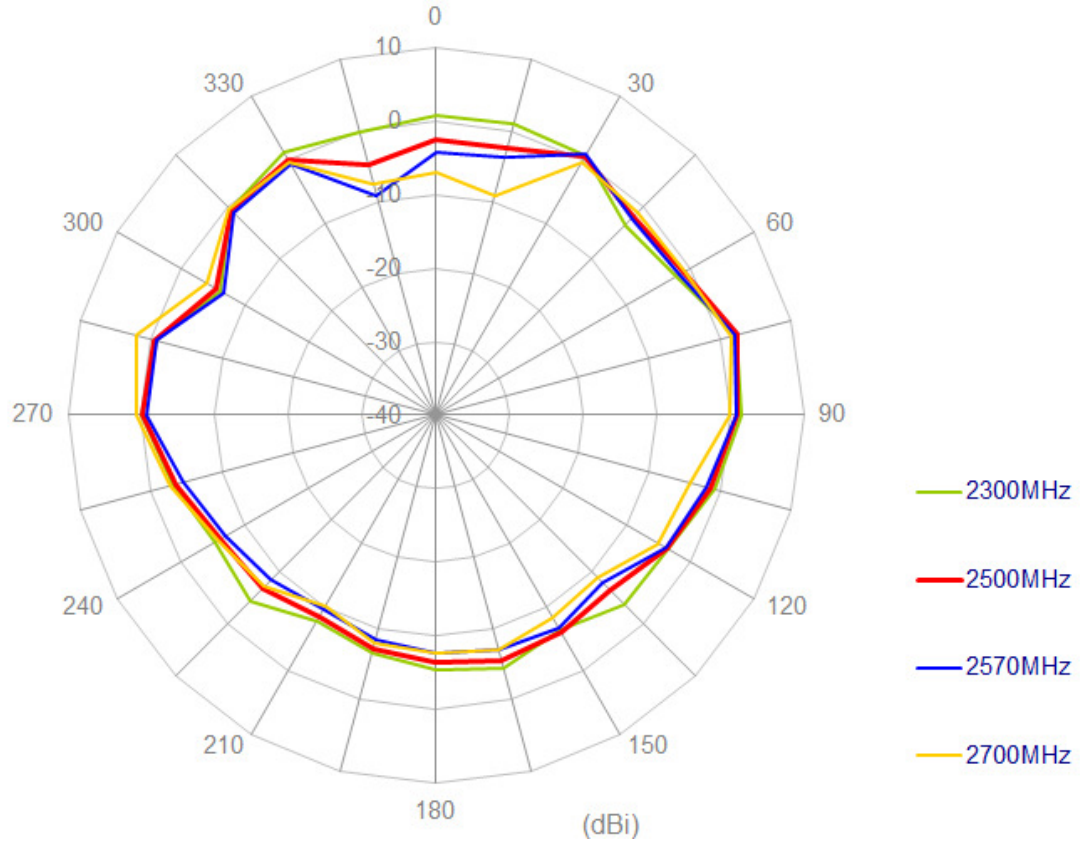
XY plane



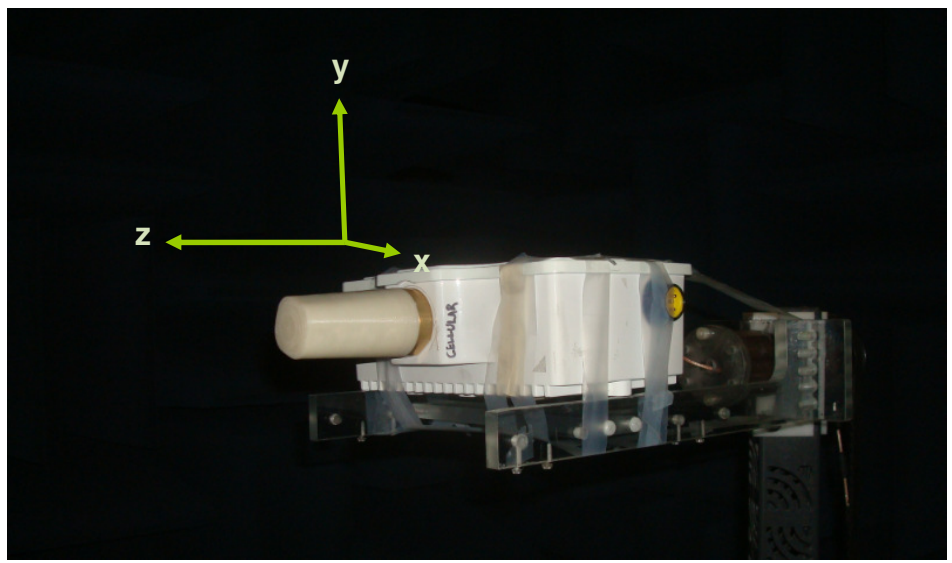


XZ plane



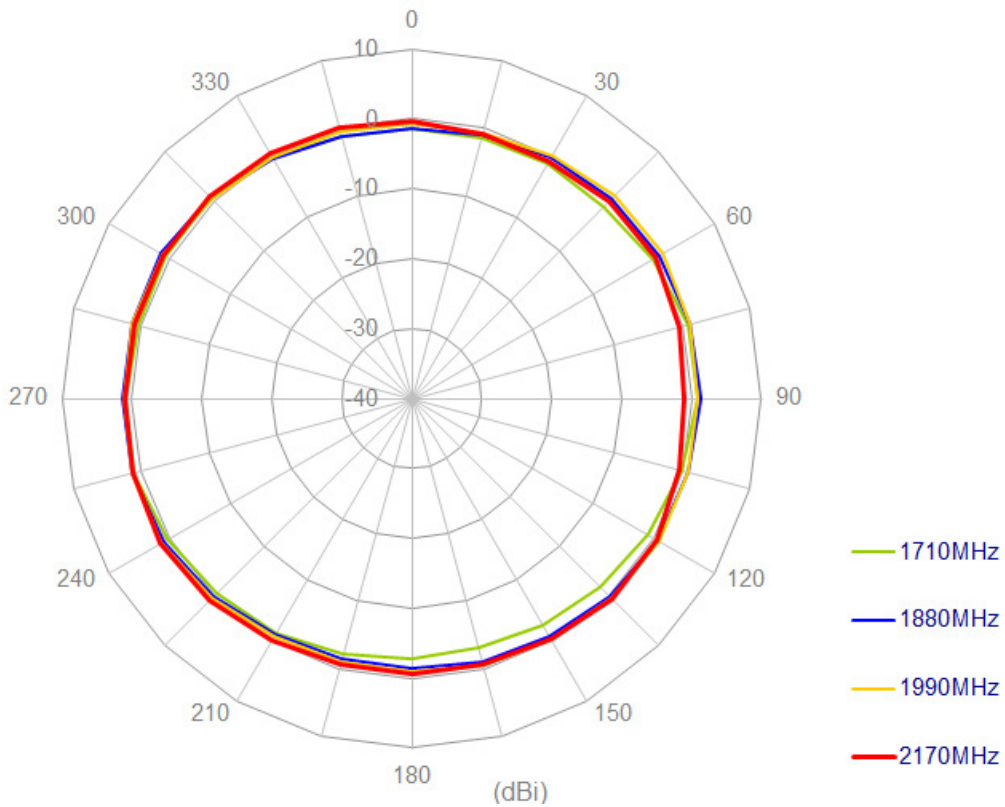
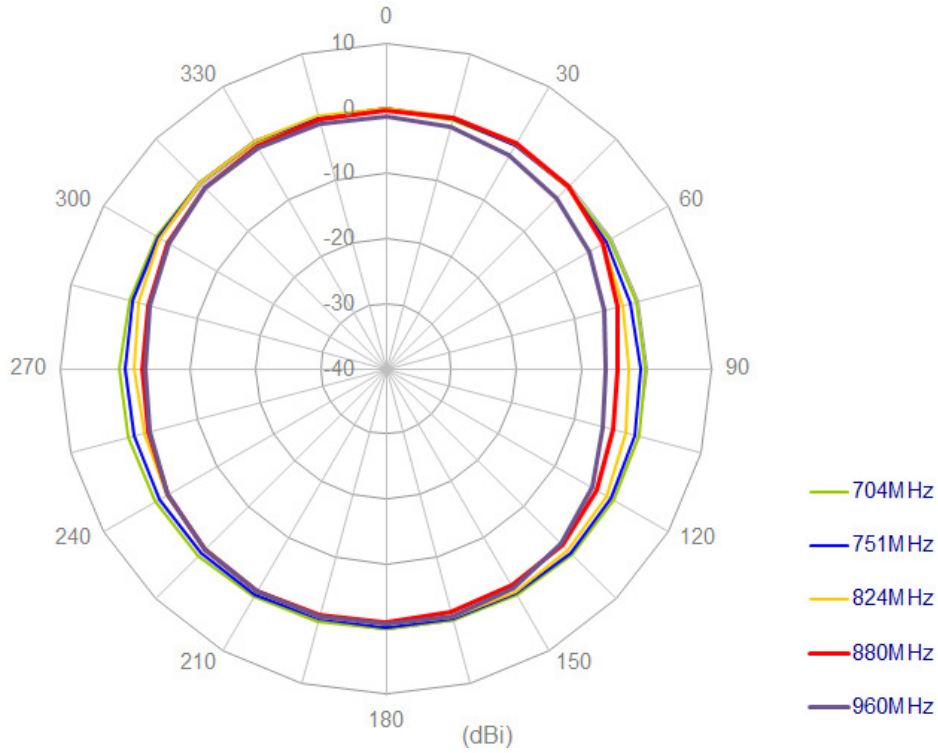


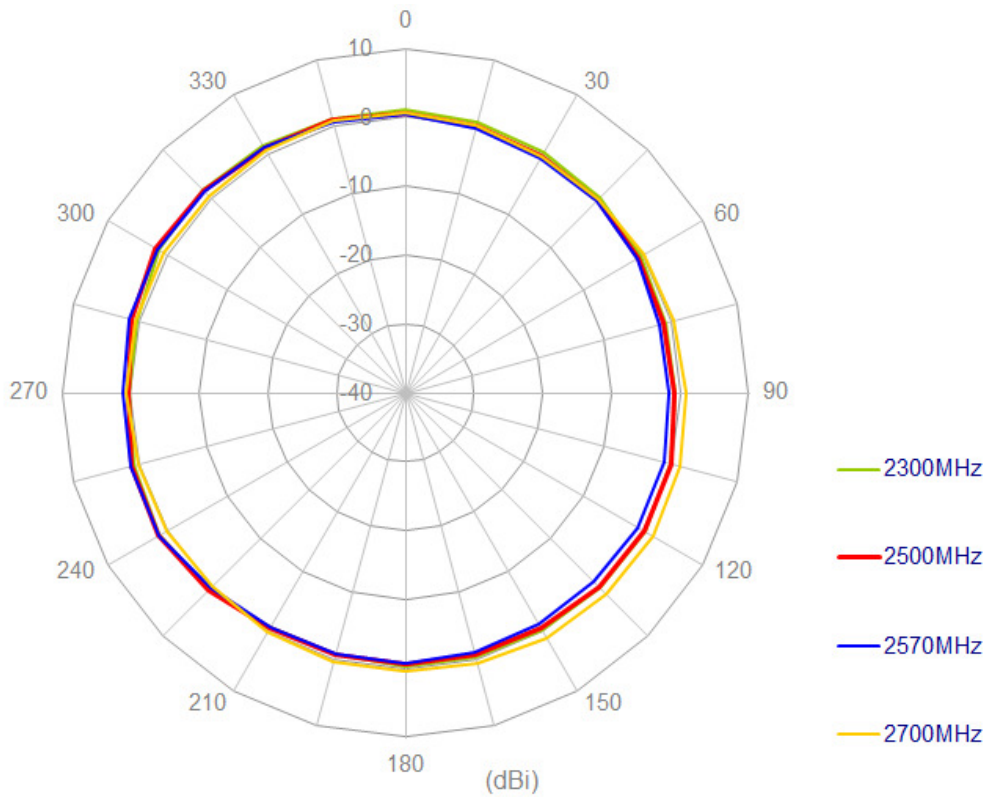
III.2 Antenna setup (Reference device 1 – Metal housing)



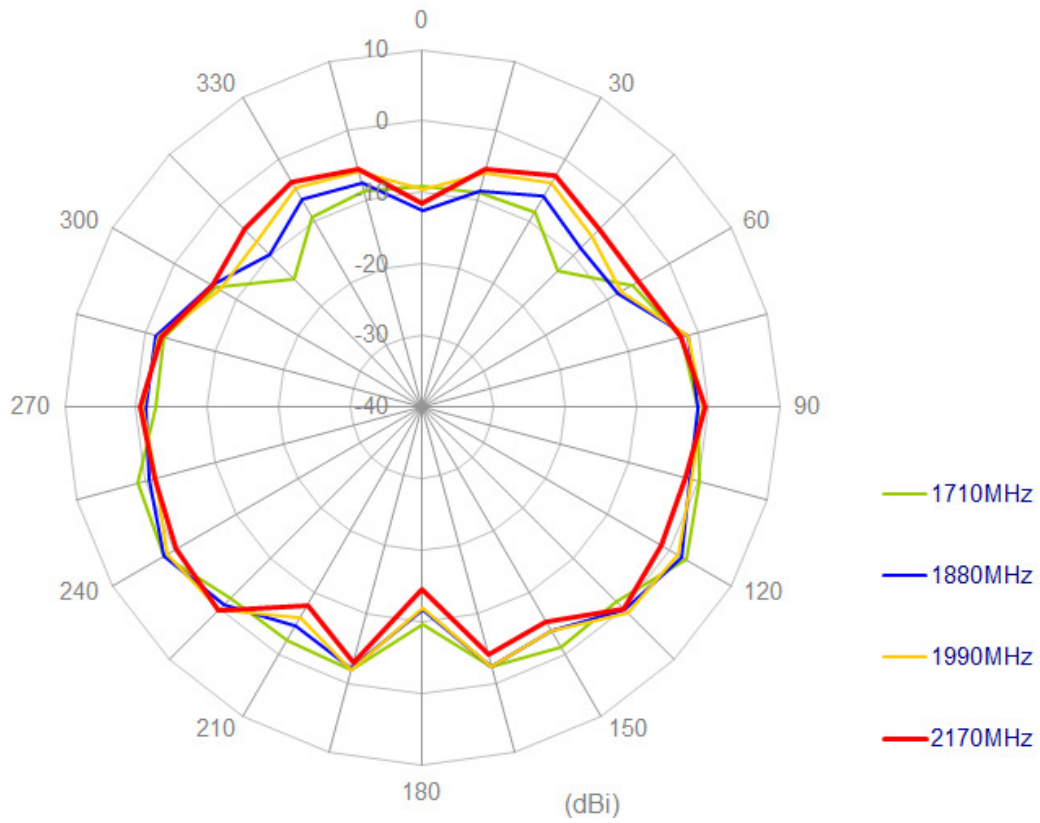
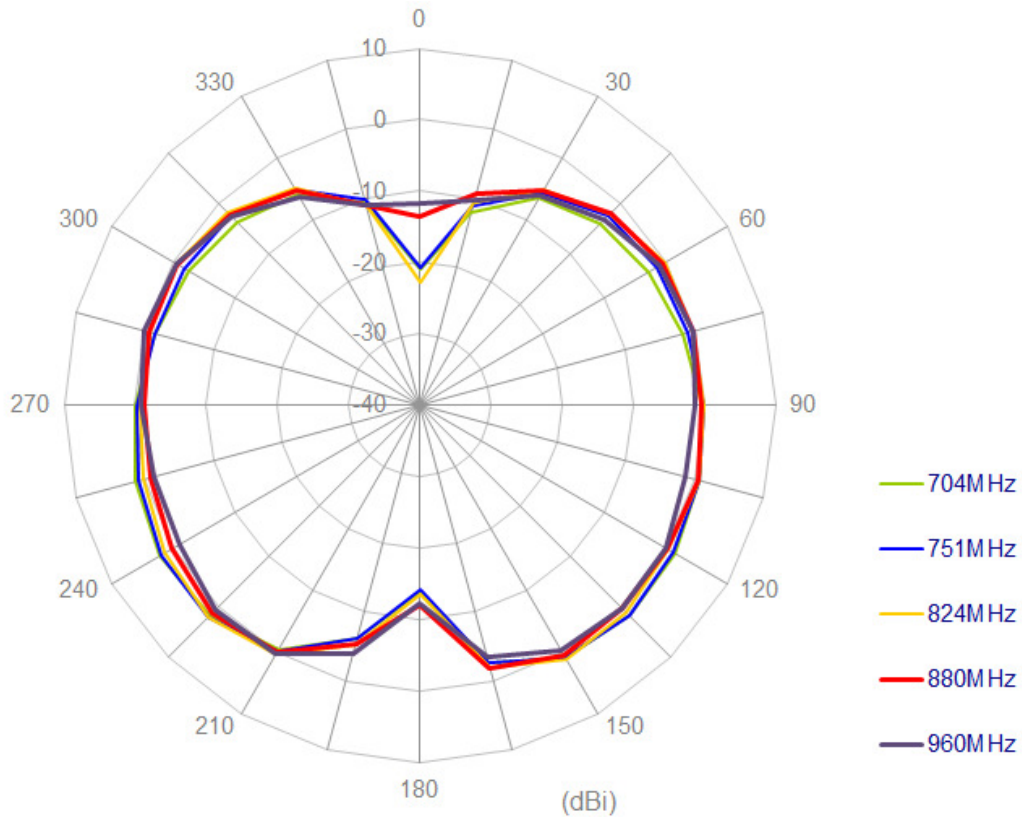
Radiation Patterns

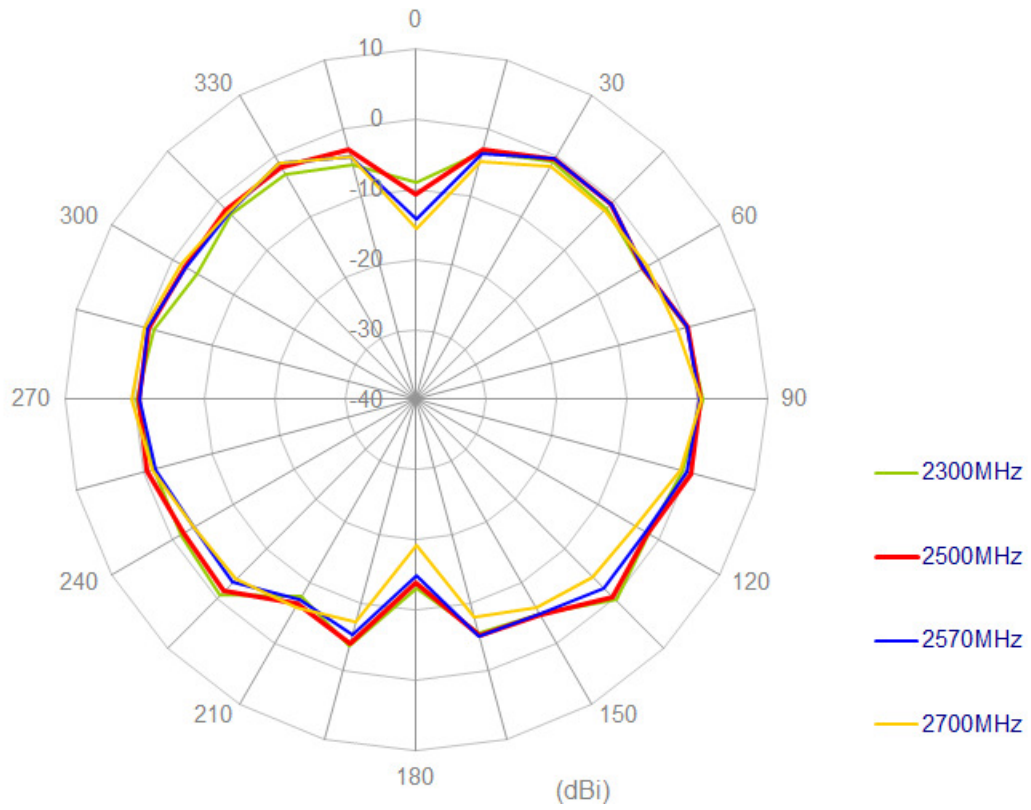
XY plane



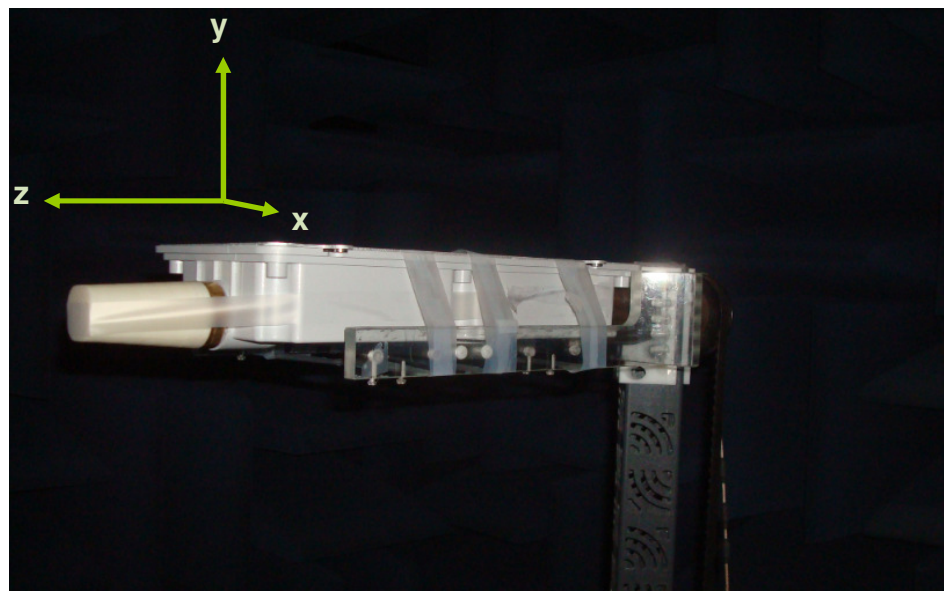


XZ plane



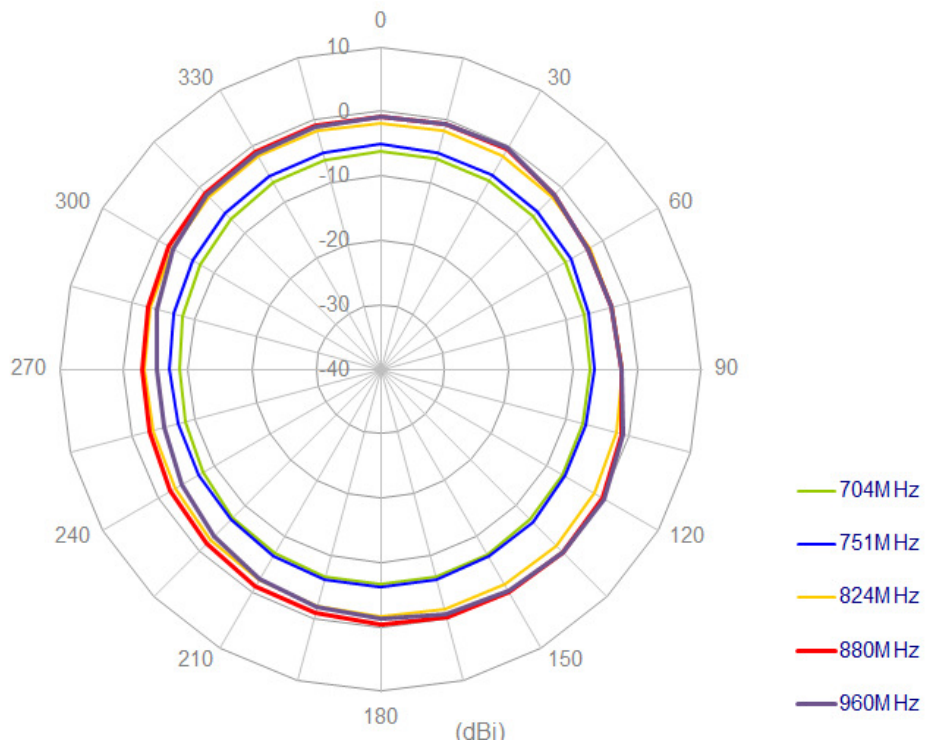


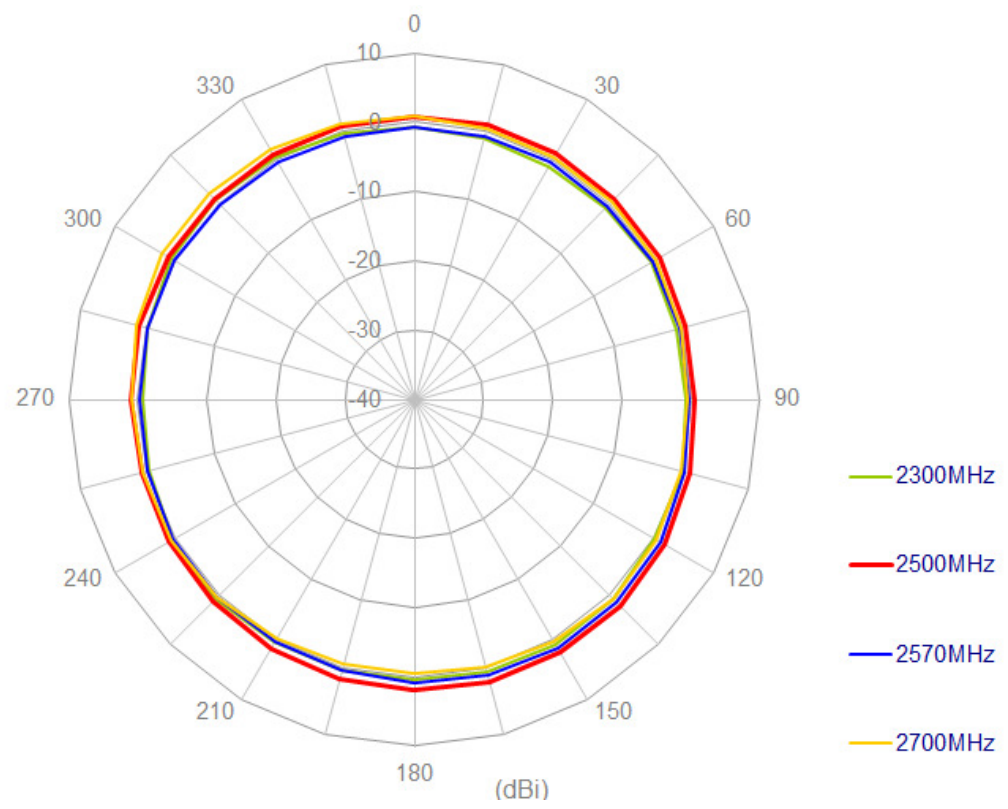
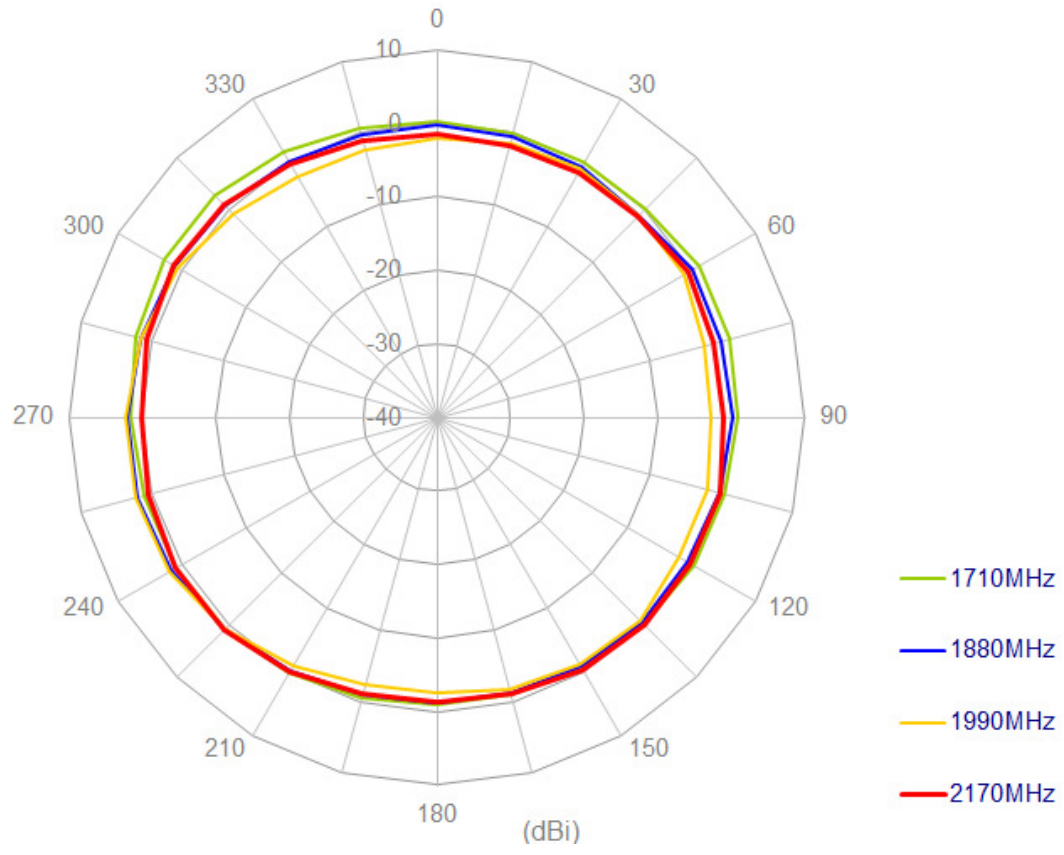
III.3 Antenna setup (Reference device 2 – Plastic housing with Metal ground)



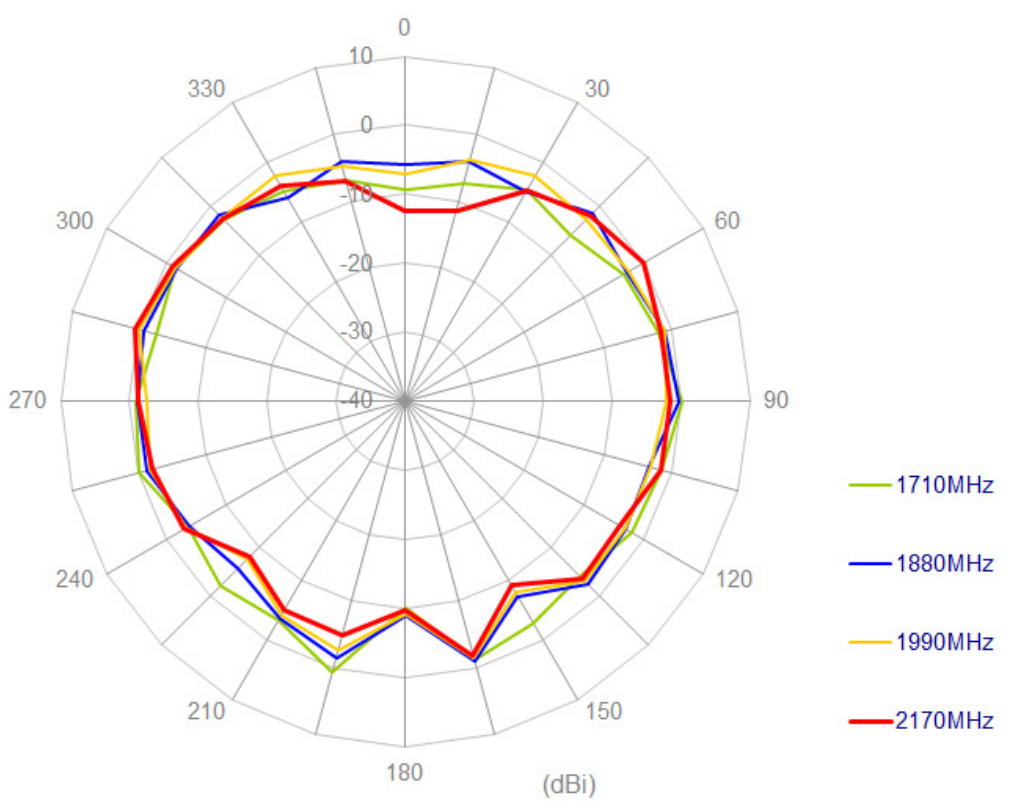
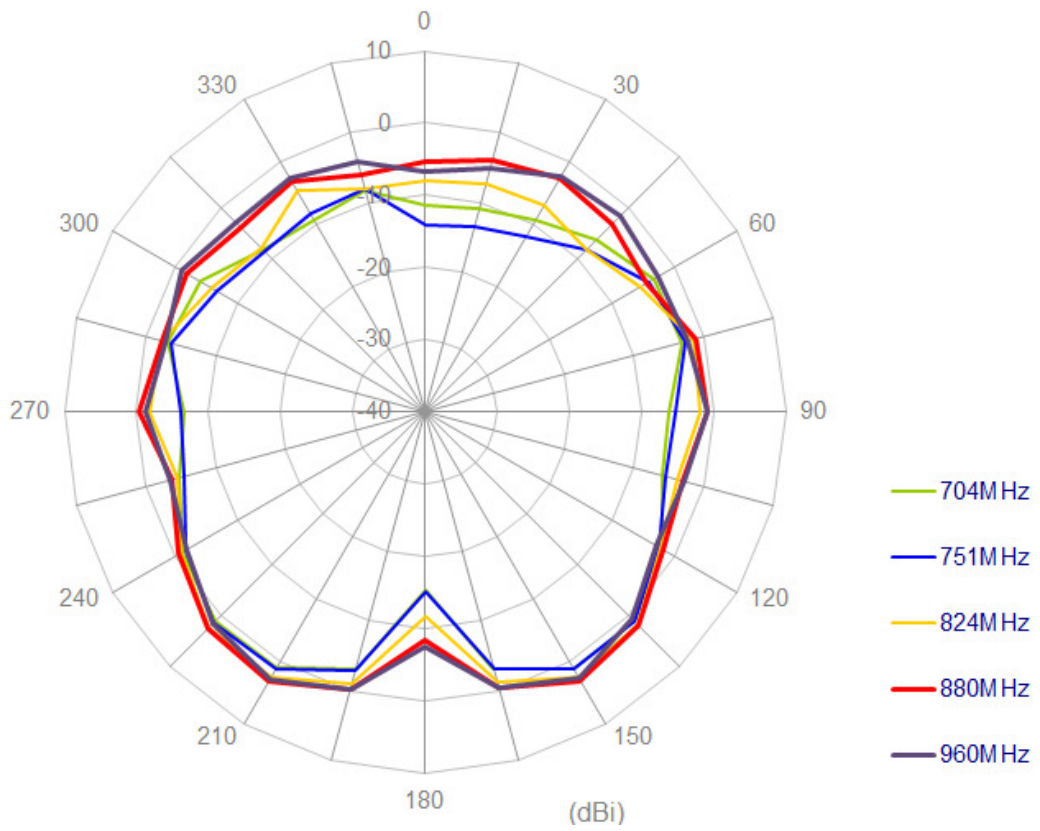
Radiation Patterns

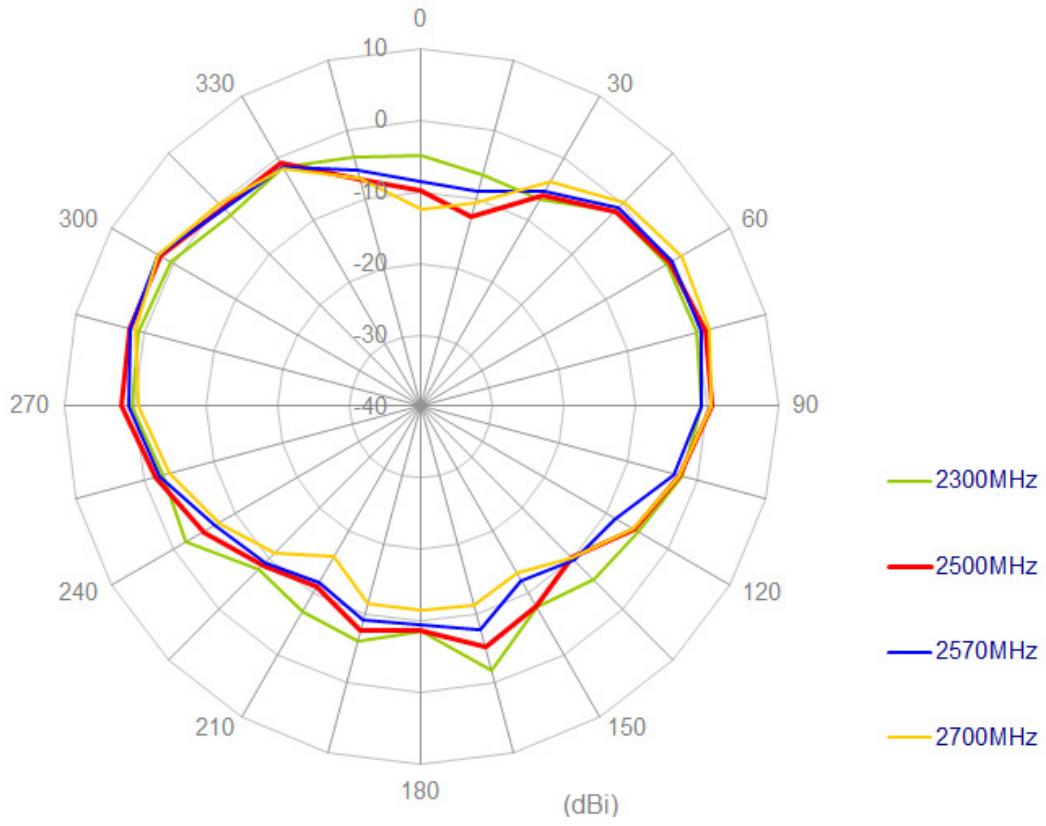
XY plane



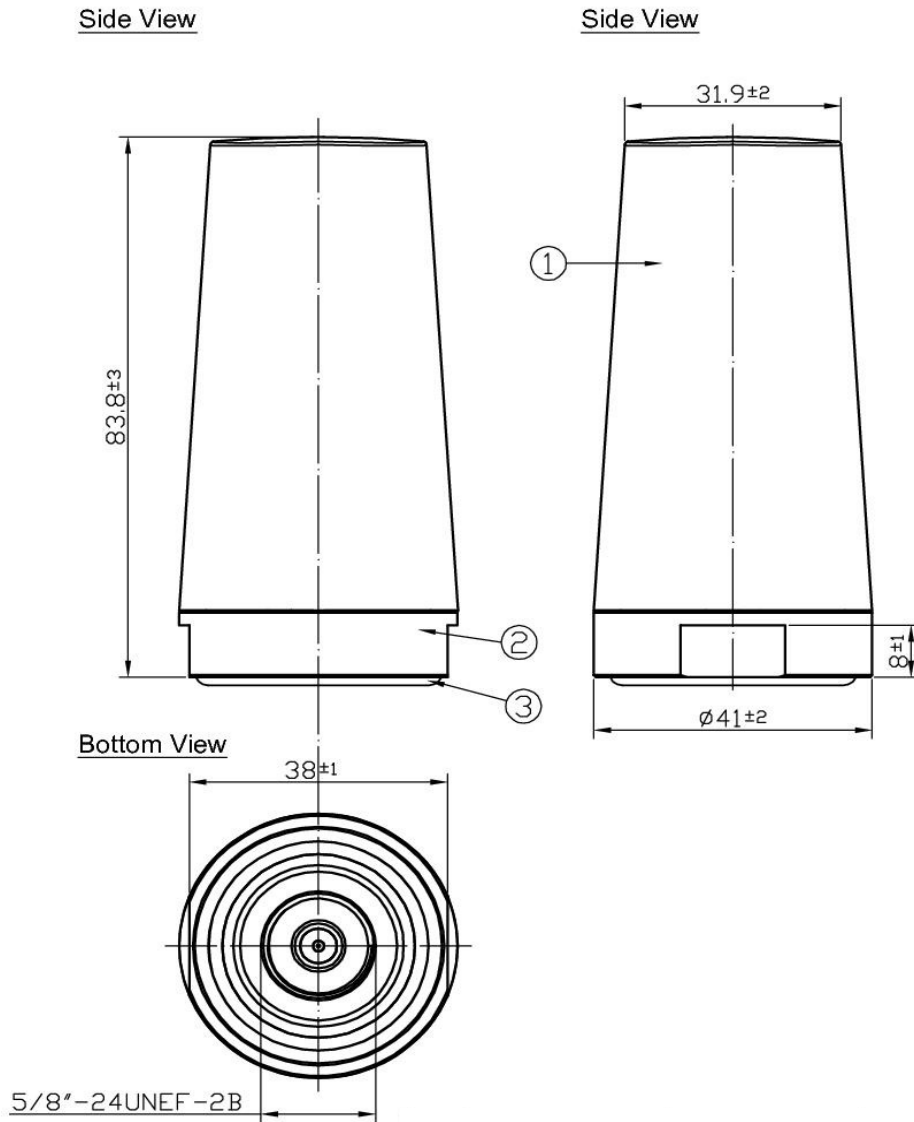


XZ plane





IV. Drawing



	Name	P/N	Material	Finish	QTY
1	Antenna Top	000112D0000XXA	PC+PBT	Black	1
2	Antenna Bottom	000612D0000XXA	Brass	Ni Plated	1
3	O-Ring	000712D0000XXA	NBR	Black	1