

Datasheet

0.69~0.96GHz, 1.7~3.8GHz
External / In-building



Stick Antenna

Features:

High performing 4G LTE antenna with SMA/RP-SMA connector for indoor applications

Applications:

- CPE – Router, Set-top boxes, Gateway
- IoT devices
- 4G LTE Mesh
- Smart Metering
- Robotics



Electrical Specifications

Antenna Characteristics

Antenna Type	Radiation Pattern	Polarization	Max. Input Power	Impedance
Stick Antenna	Omni	Linear	10W	50Ω

Free Space

Frequency (GHz)	Appearance status	0.69~0.96	1.72~2.17	2.3~2.69	3.3 – 3.8
Return Loss (dB)	Straight	< -3	< -3	< -3	< -4
	Bend	< -3	< -4	< -3	< -5
Gain, Peak / Average (dB)	Straight	1.9/ -6.7	3.4/ -5.2	1.8 / -4.6	4.7 / -1.2
	Bend	3.5 / -6.9	6.6 / -3.2	4.7/ -3.4	4.8 / -1.1
Efficiency / Average (%)	Straight	22	31	35	76
	Bend	21	48	46	78

300mm × 300mm Plane

Frequency (GHz)	Appearance status	0.69~0.96	1.72~2.17	2.3~2.69	3.3~3.8
Return Loss (dB)	Straight	< -1	< -9	< -7	< -7
	Bend	< -1	< -10	< -8	< -8
Gain, Peak / Average (dB)	Straight	3.6 / -2.2	4.1 / -1.2	4.7 / -1.7	3.5 / -2.7
	Bend	2.1 / -4.6	4.4 / -1.1	4.8 / -1.5	3.4 / -1.7
Efficiency / Average (%)	Straight	60	75	68	54
	Bend	34	78	71	67

Mechanical Specifications

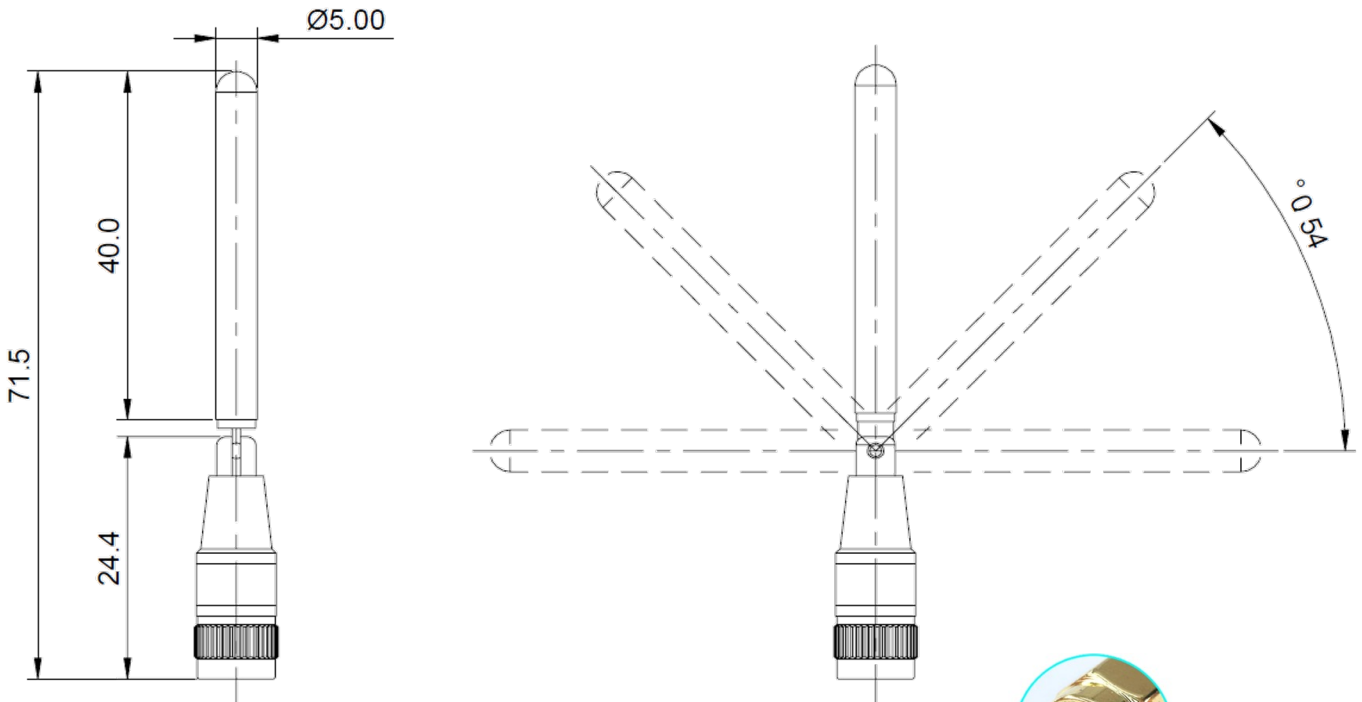
Environmental

Temperature Range (°C)	-40 to 85
Humidity	Non-condensing 65°C 95% RH

RoHS Compliant

Part Number	Length (mm)	Weight (g)	Connector Type	Radome
ST0457-20-001-A	71.5	8.33	SMA Plug	POM
ST0457-20-501-A	71.5	8.33	RP-SMA Plug	POM

Mechanical Drawing



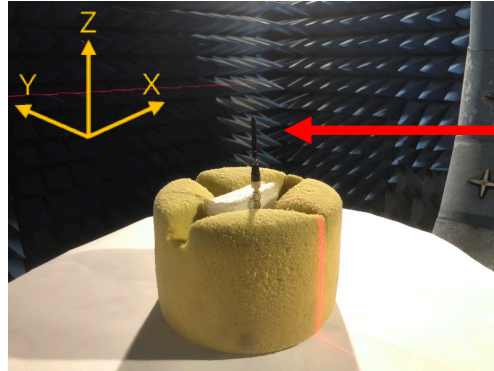
ST0457-20-001-A



ST0457-20-501-A

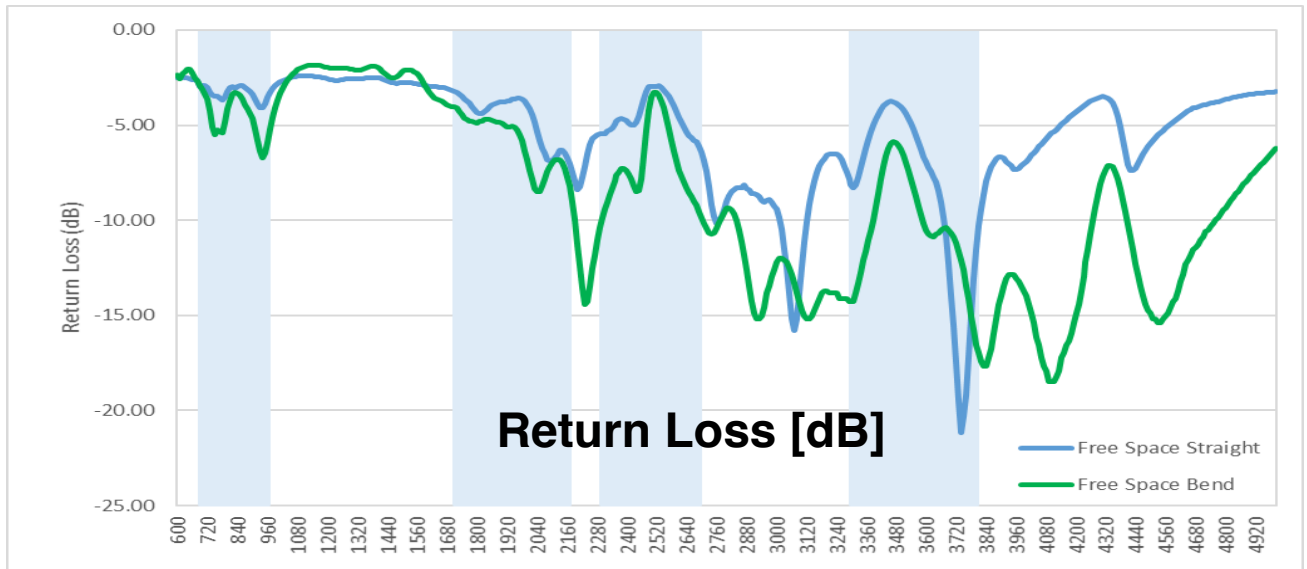


Charts in Free Space

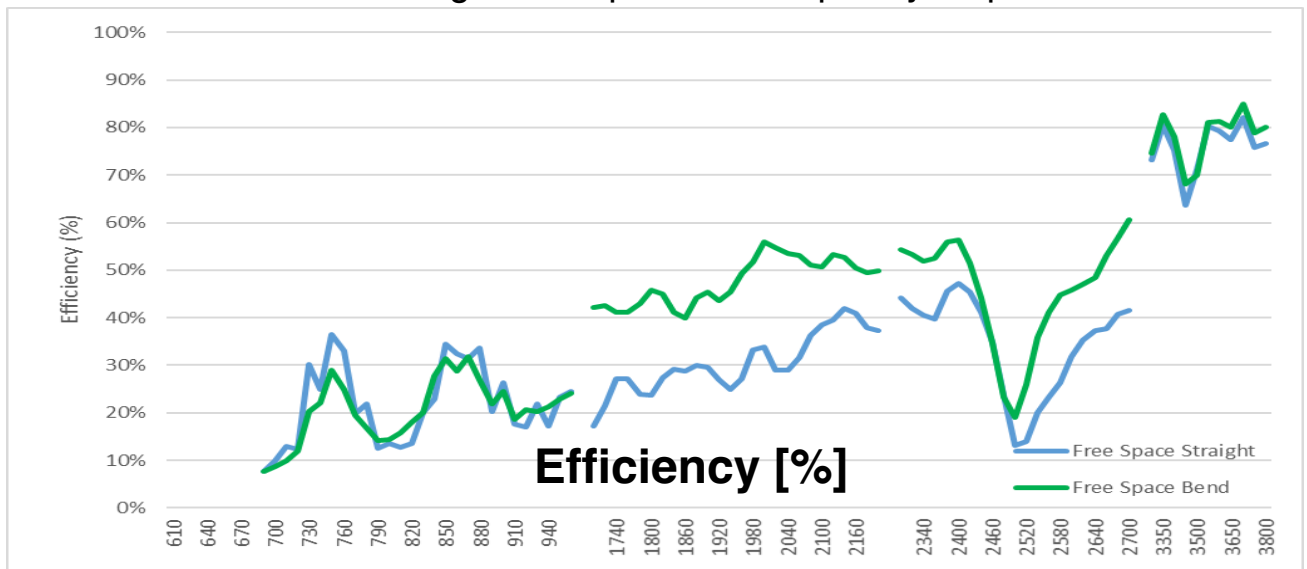


ST0457-20-001-A

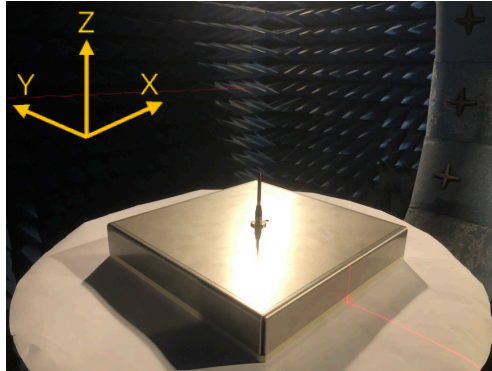
Test setup, measurement performed in 3D Anechoic Chamber



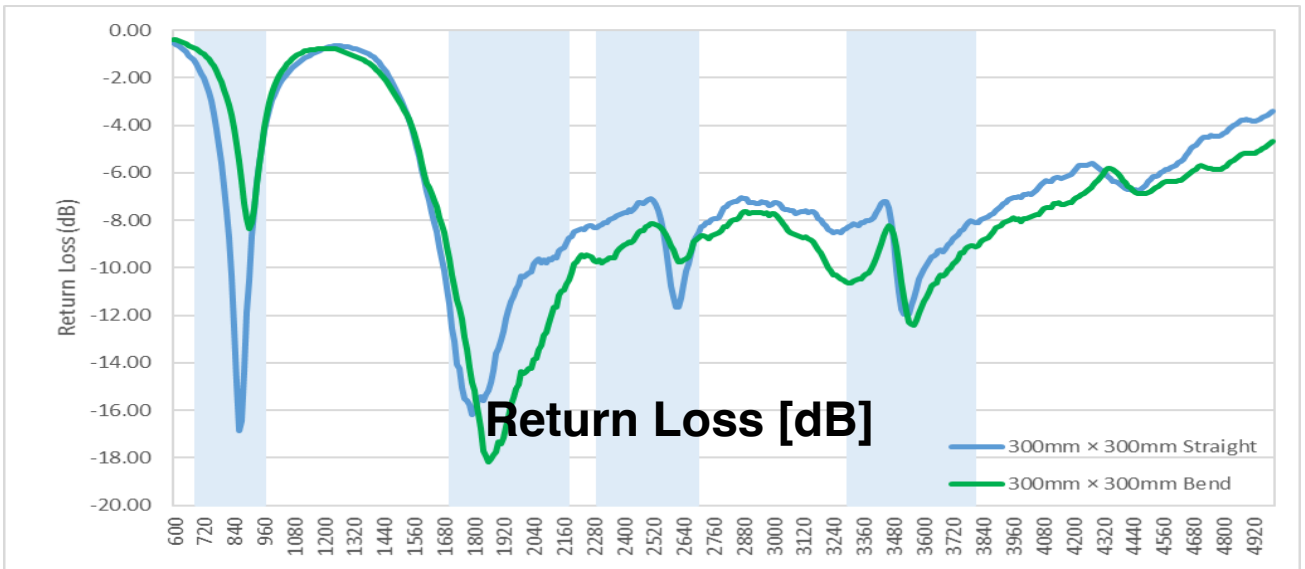
Blue background represents frequency response.



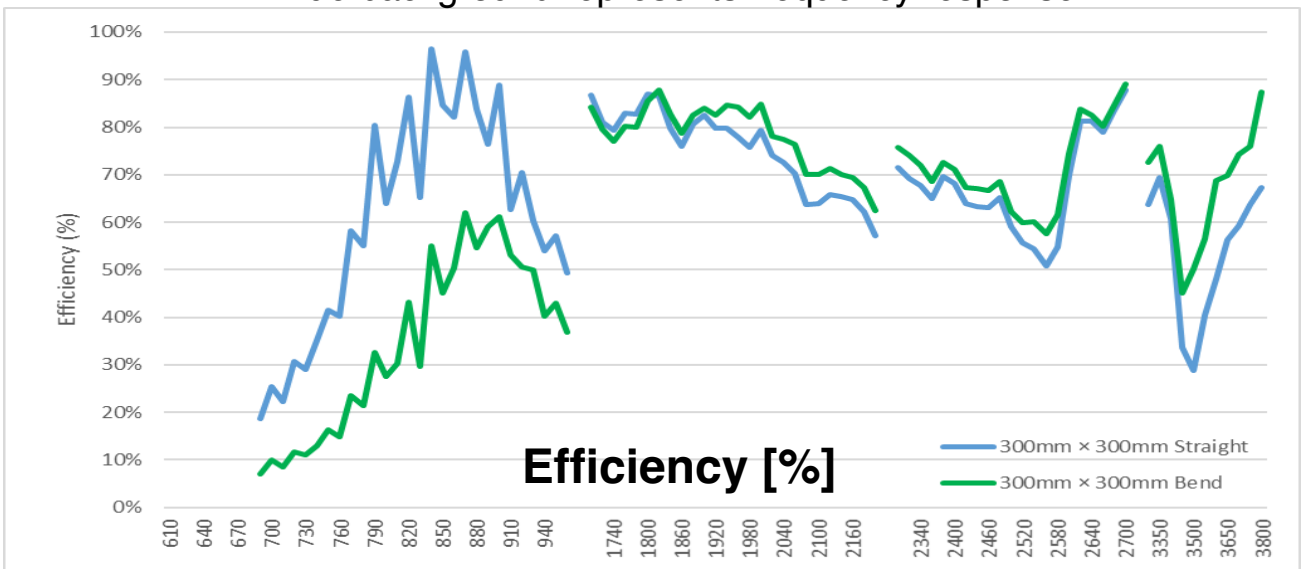
Charts in 300mm x 300mm Plane



Test setup, measurement performed in 3D Anechoic Chamber

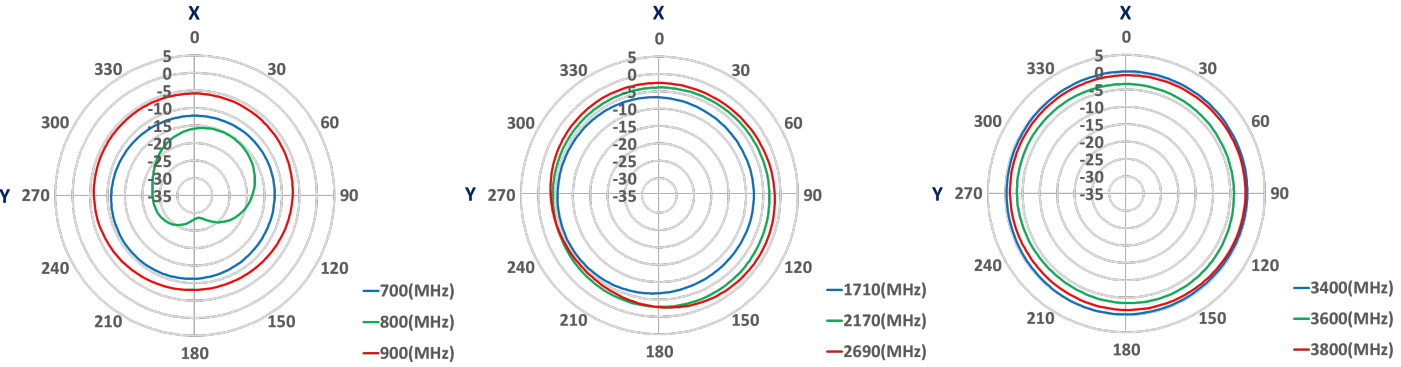


Blue background represents frequency response.

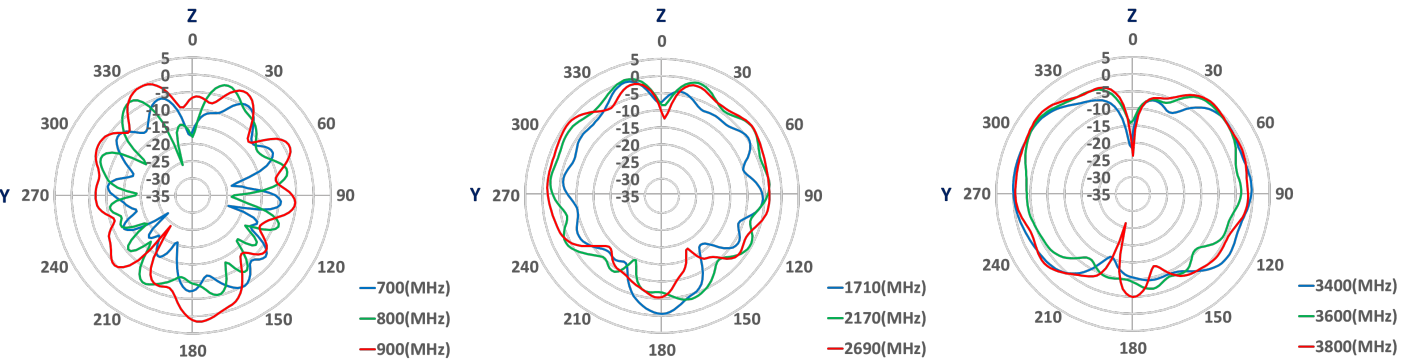


Radiation Pattern - Free Space Straight

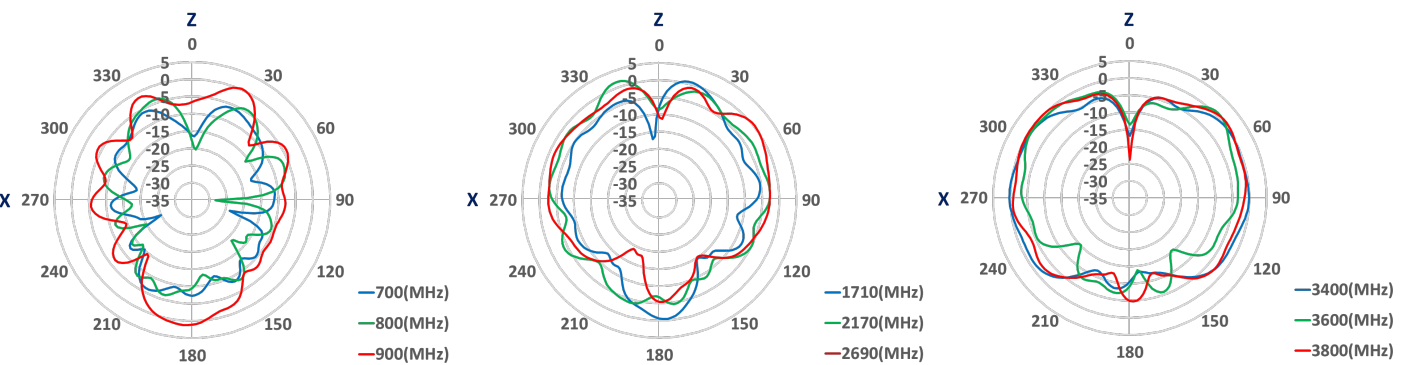
XY - Plane



YZ - Plane

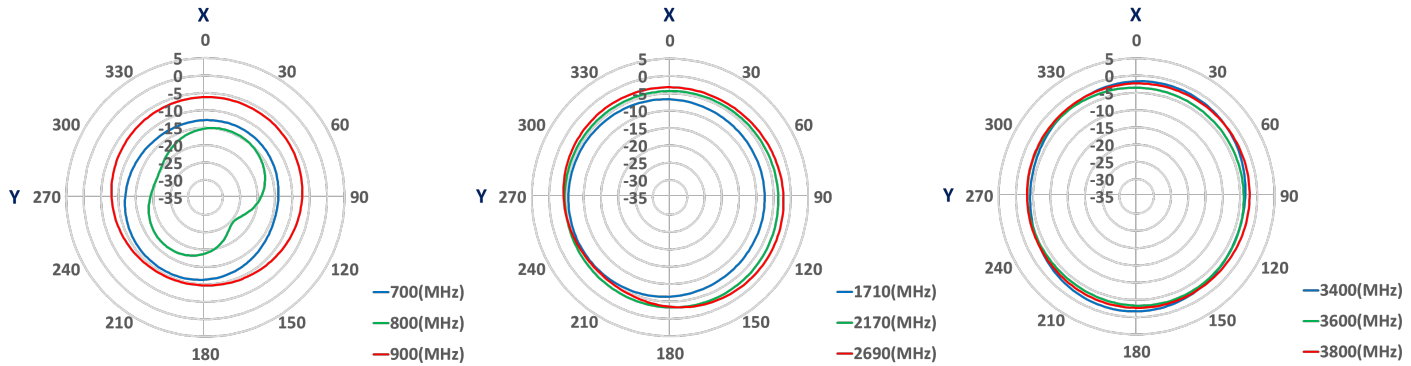


XZ - Plane

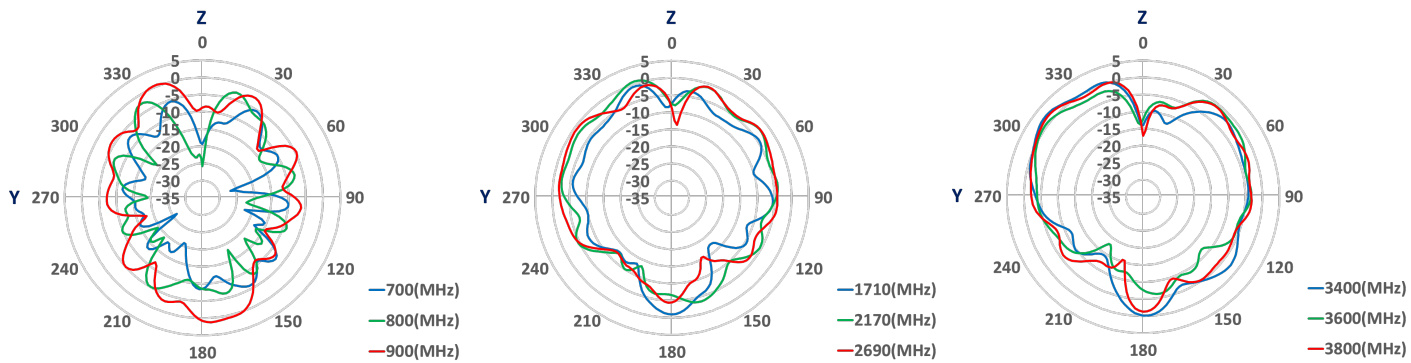


Radiation Pattern - Free Space Bend

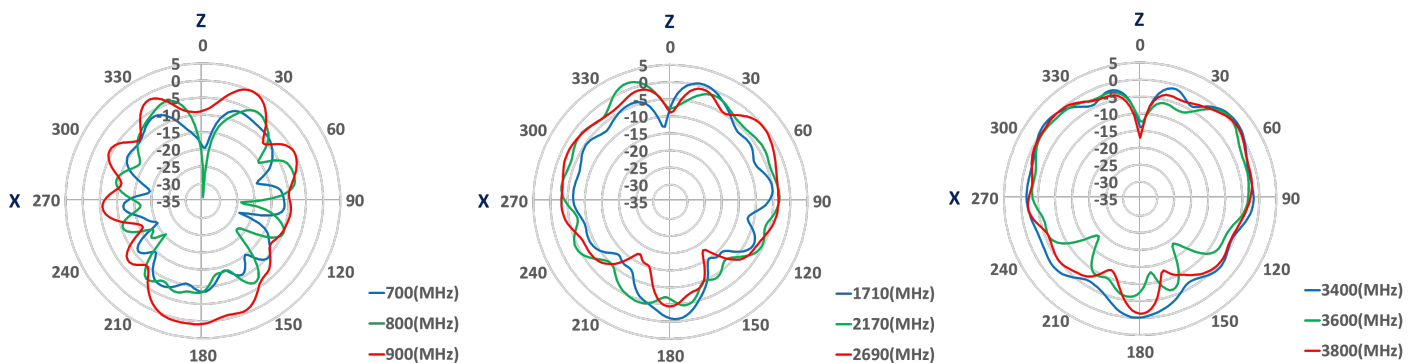
XY - Pane



YZ - Plane

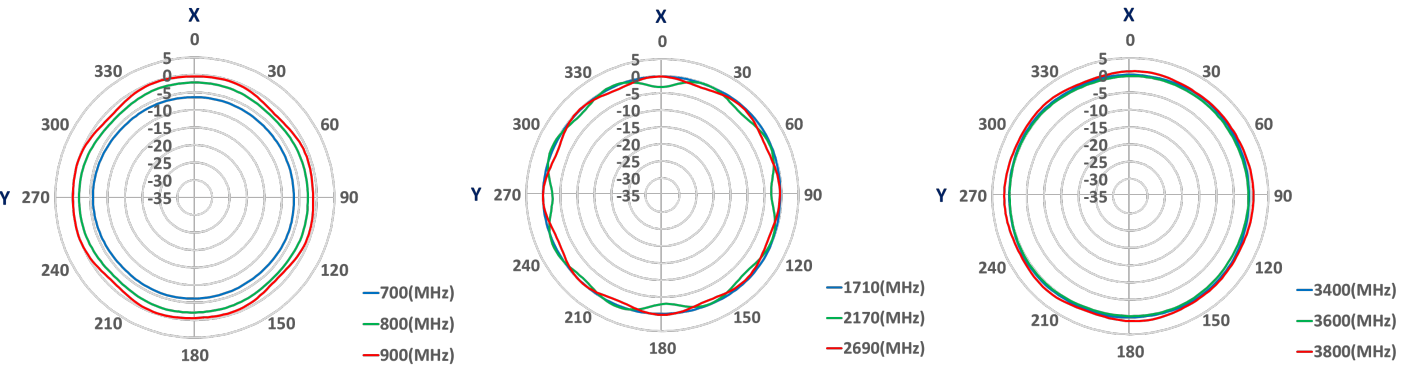


XZ - Plane

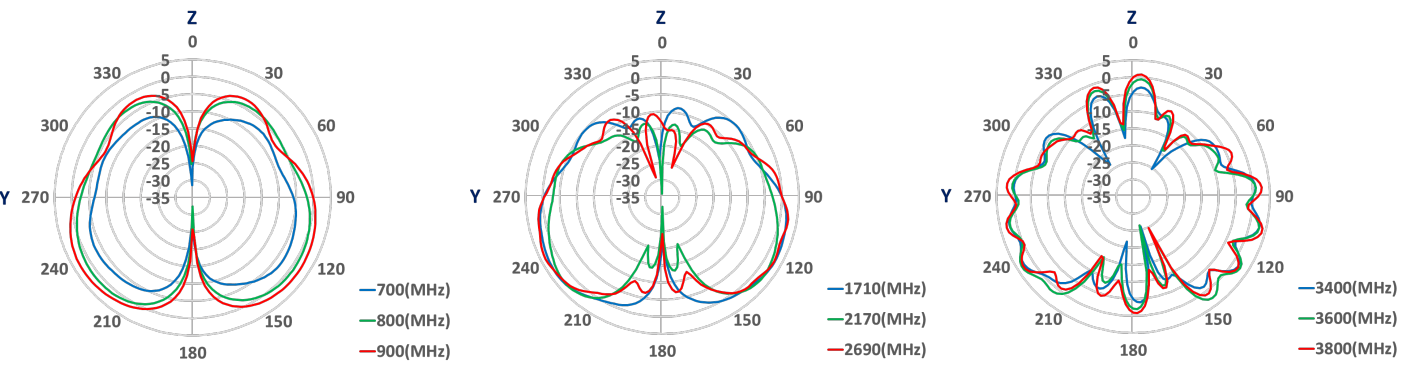


Radiation Pattern - 300mm x 300mm Straight

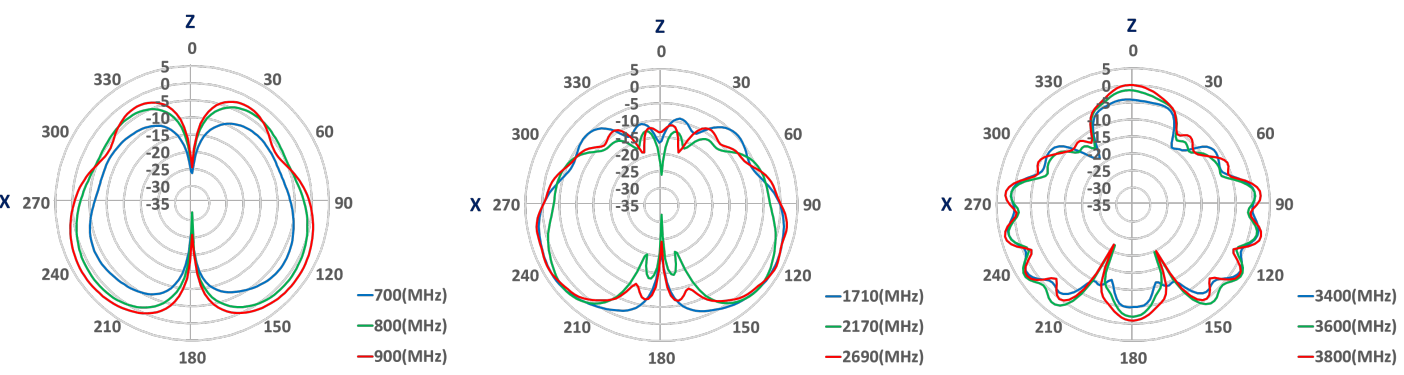
XY - Pane



YZ - Plane

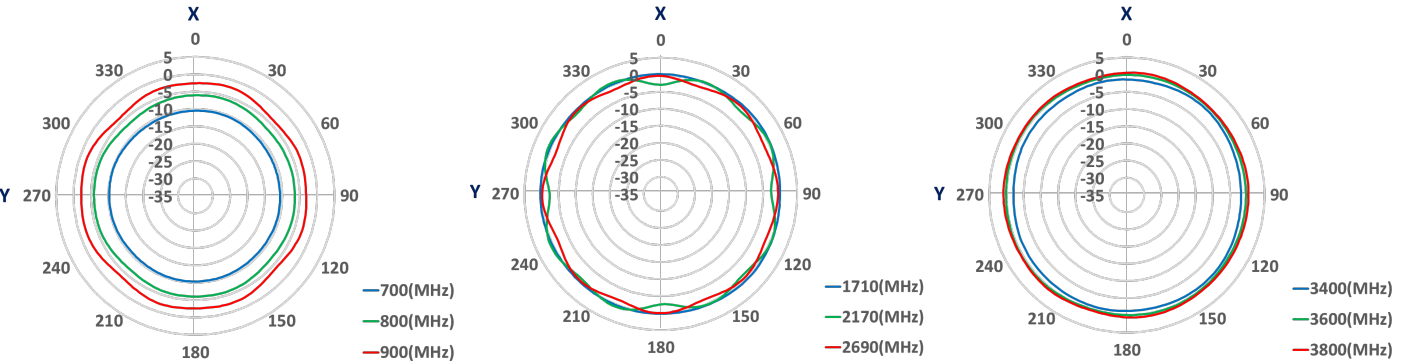


XZ - Plane

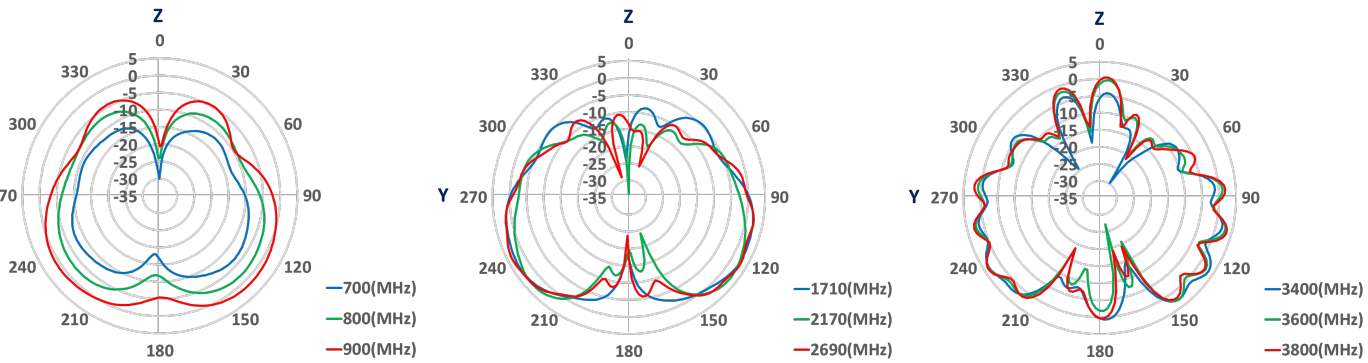


Radiation Pattern - 300mm x 300mm Bend

XY - Pane



YZ - Plane



XZ - Plane

