

**-7RF Antenna-**  
**EPS-421003-LS-02**  
**PCB SMT Cellular Antenna**

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Revision: B  
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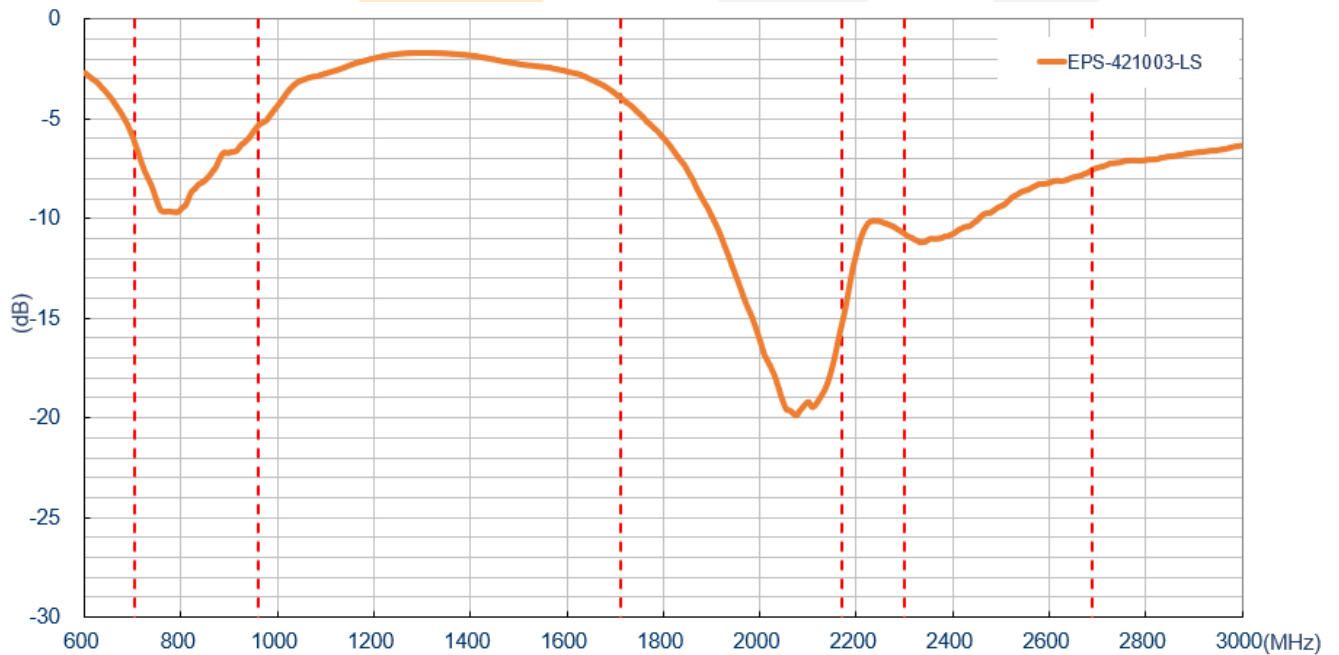
## I. Antenna Specification Table

EPS-421003-LS-02							
Electrical Characteristics							
	LTE 700	GSM850	GSM900	DCS	PCS	WCDMA I	LTE
Frequency (MHz)	698-798	824-896	880-960	1710-1880	1850-1990	1920-2170	2300-2690
Return Loss (dB)	<-5						
Efficiency (%)	59.42	68.31	52.25	42.93	67.16	65.00	59.73
Peak Gain (dBi)	2.24	3.21	1.86	2.90	5.28	5.05	4.83
Average Gain (dBi)	-2.41	-1.73	-2.85	-3.74	-1.82	-1.94	-2.27
Polarization	Linear						
Radiation Pattern	Omni-directional						
Mechanical Characteristics							
Dimension (mm)	42 * 10 * 3						
Mounting Type	Direct SMT						
Storage Temperature (°C)	-40~+85						
Operate Temperature (°C)	-40~+85						

\*The data were measured with 120\*45mm EVB, which has 100mm ground plane length.

## II. Antenna Parameters

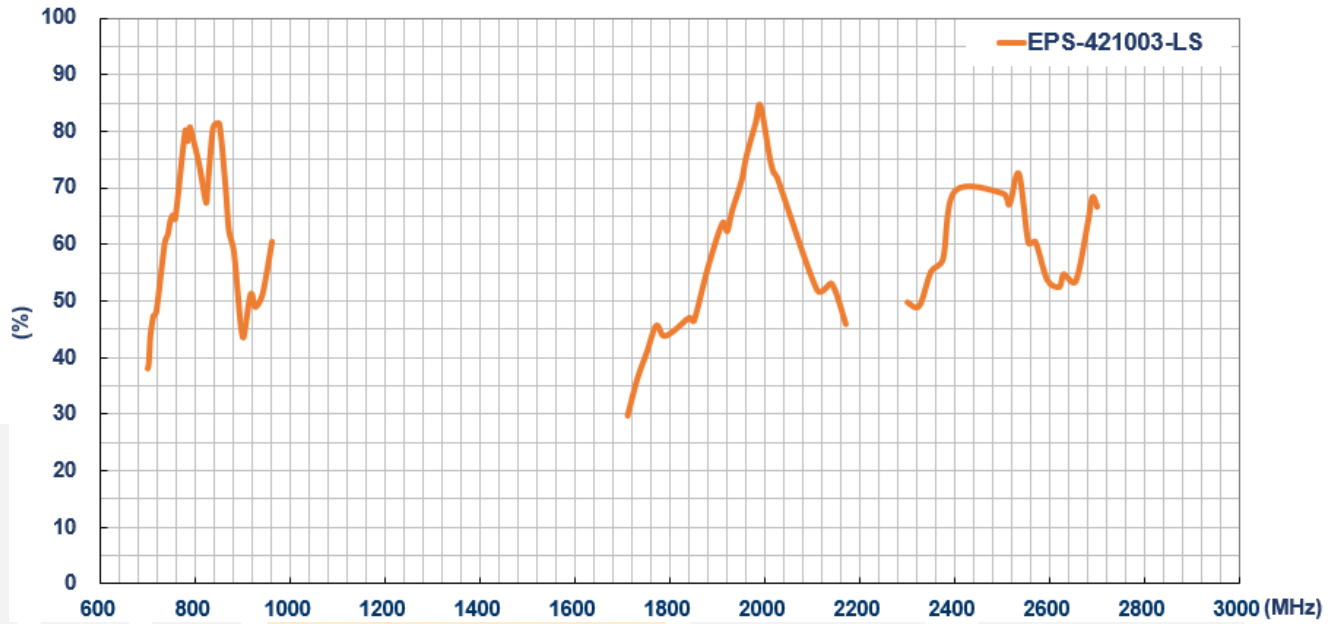
Return Loss:



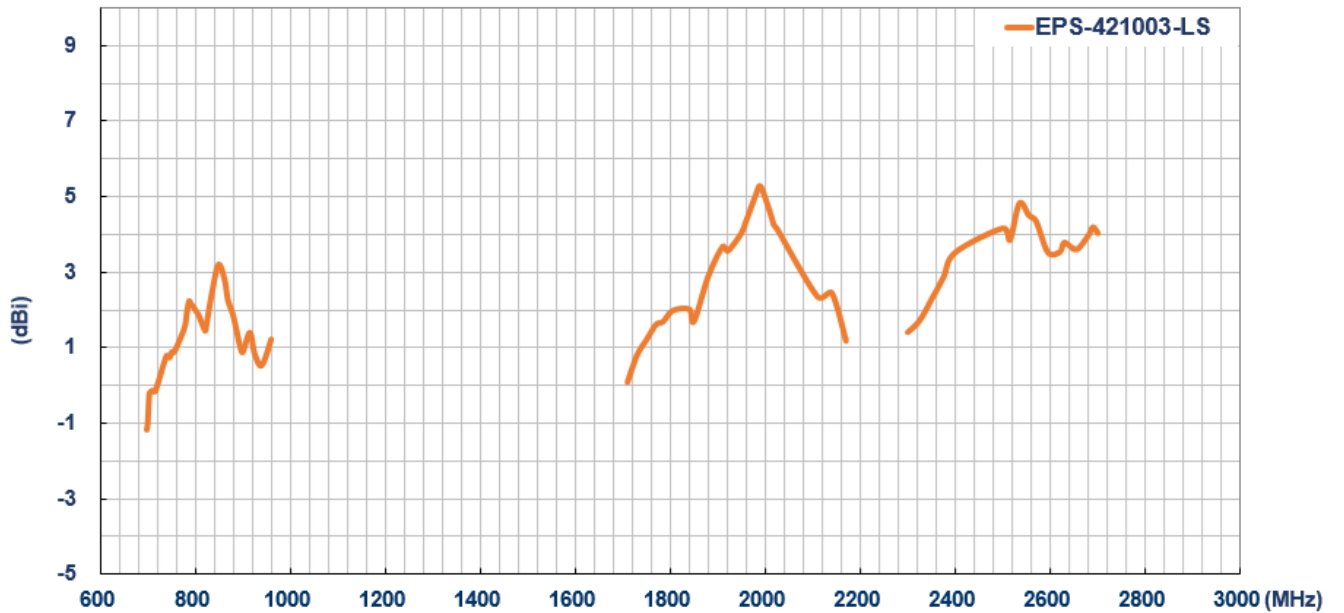
\*ISO-SPEC-19-11-B



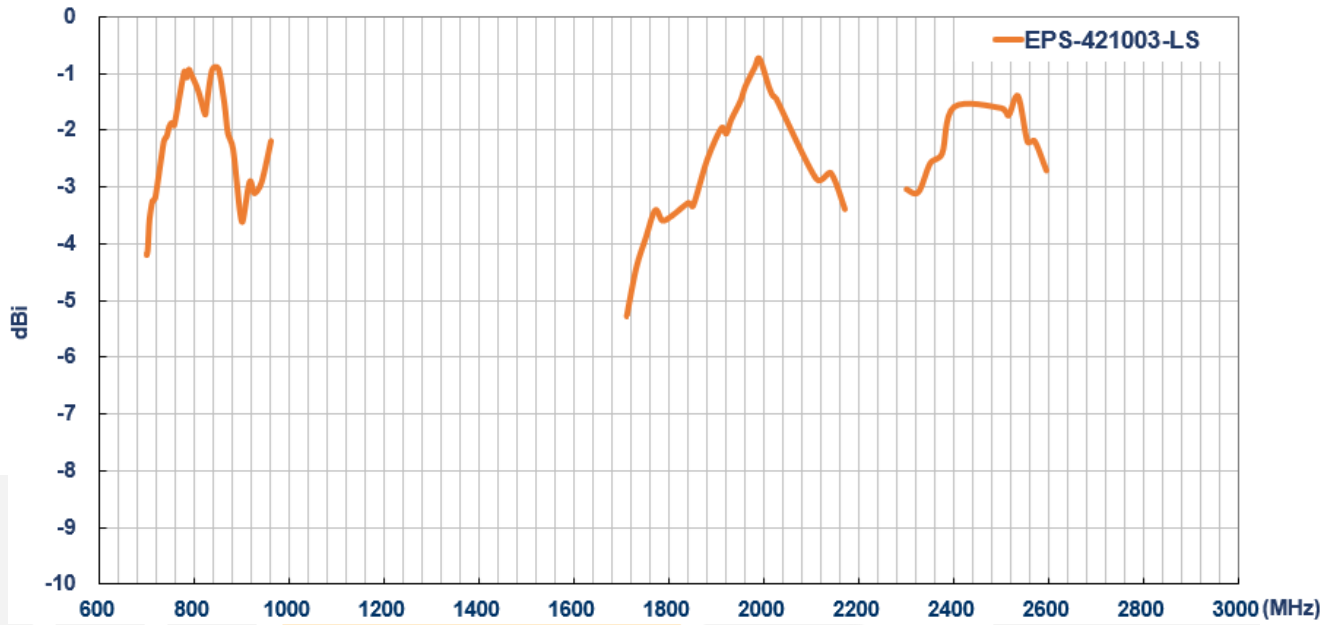
Efficiency:



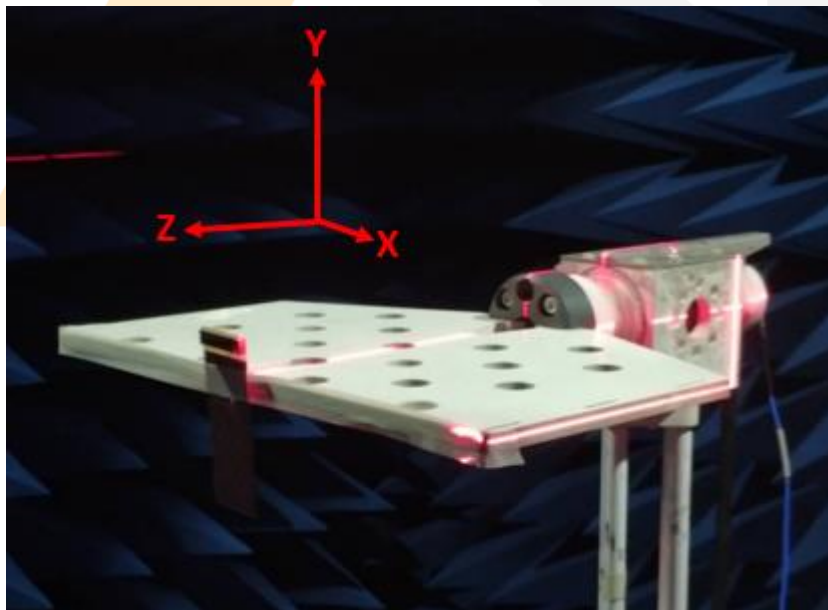
Peak Gain:



Average Gain:

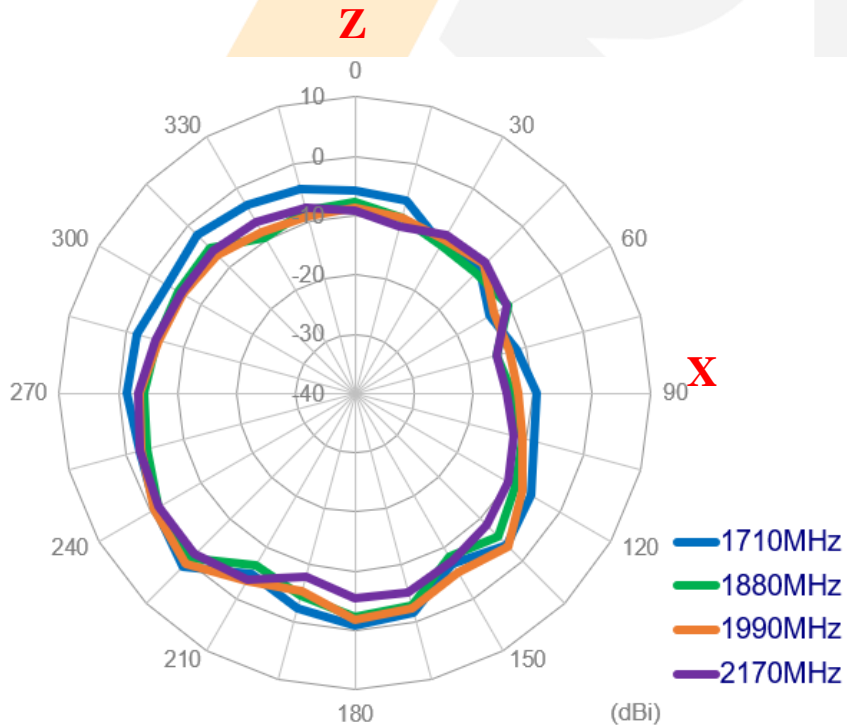
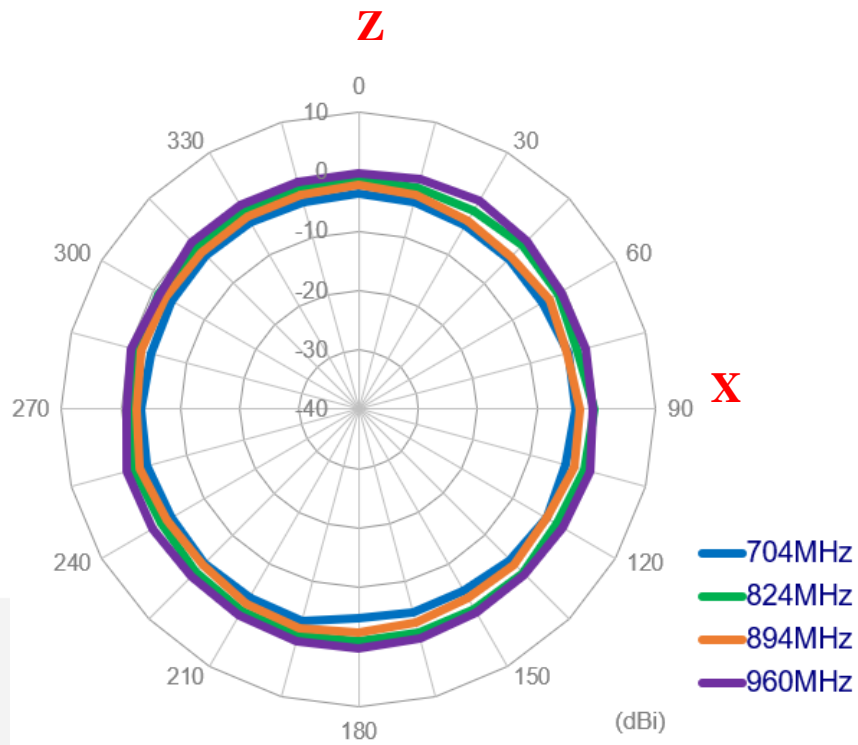


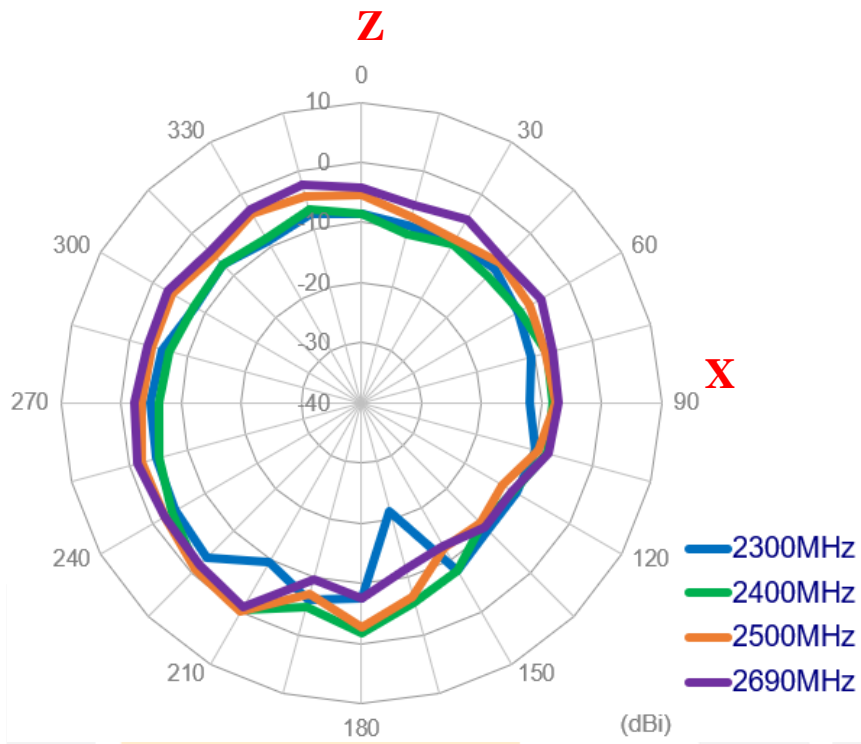
### III. Radiation Pattern



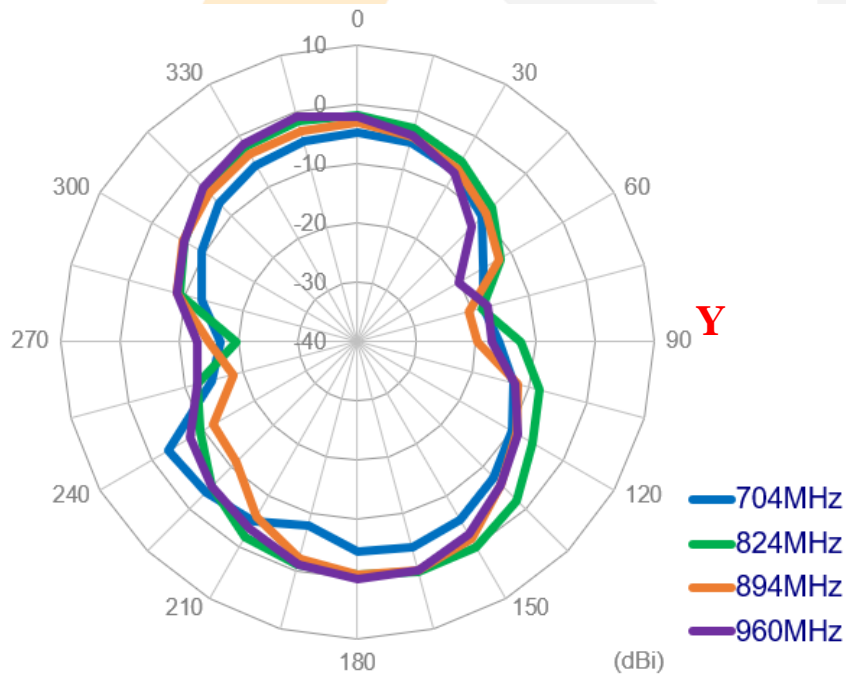


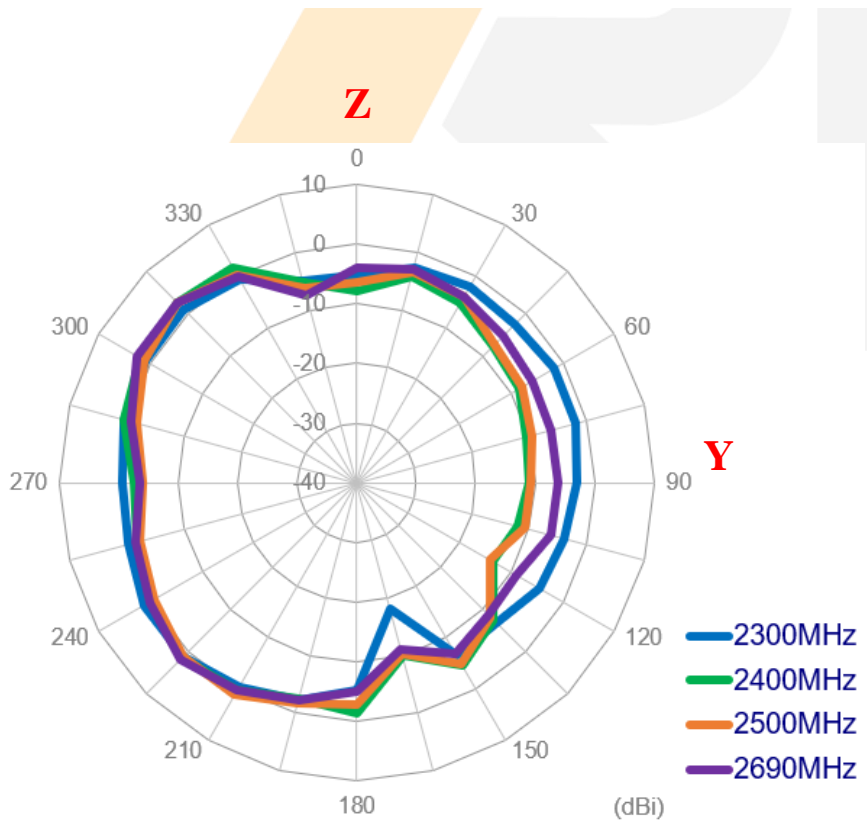
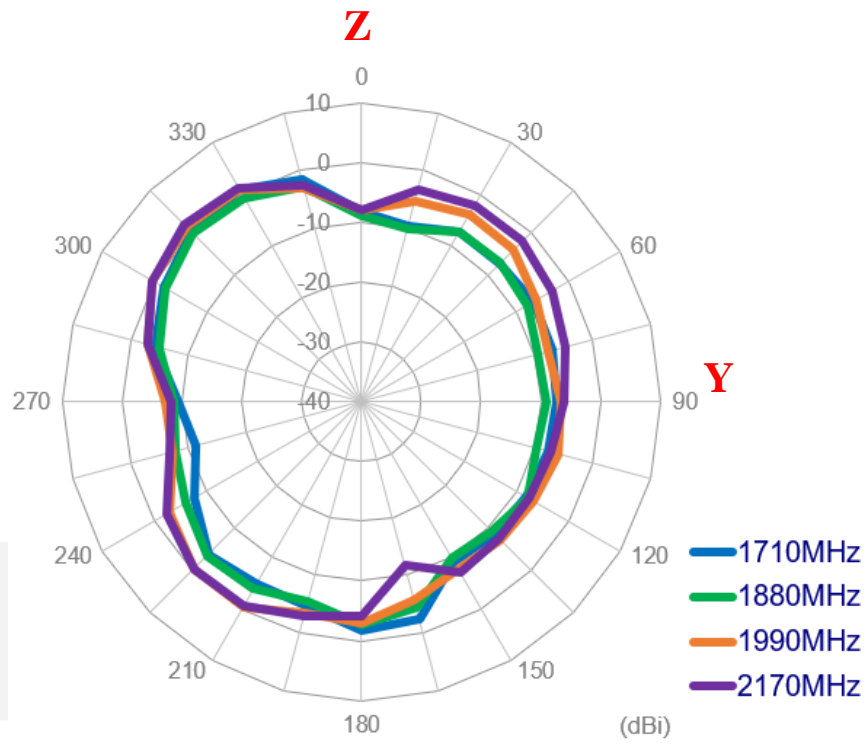
# XZ-Plane





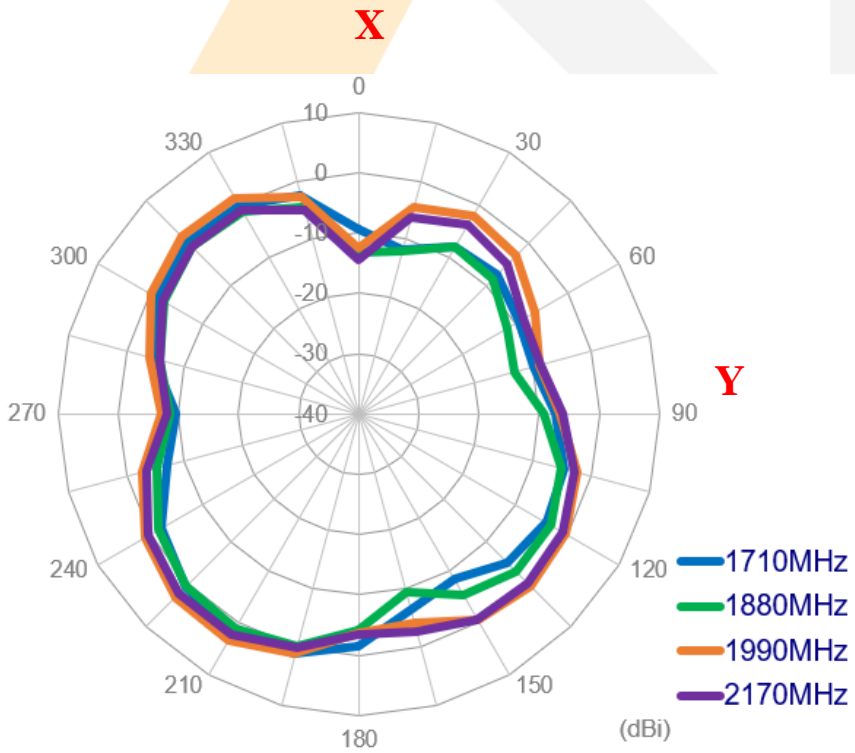
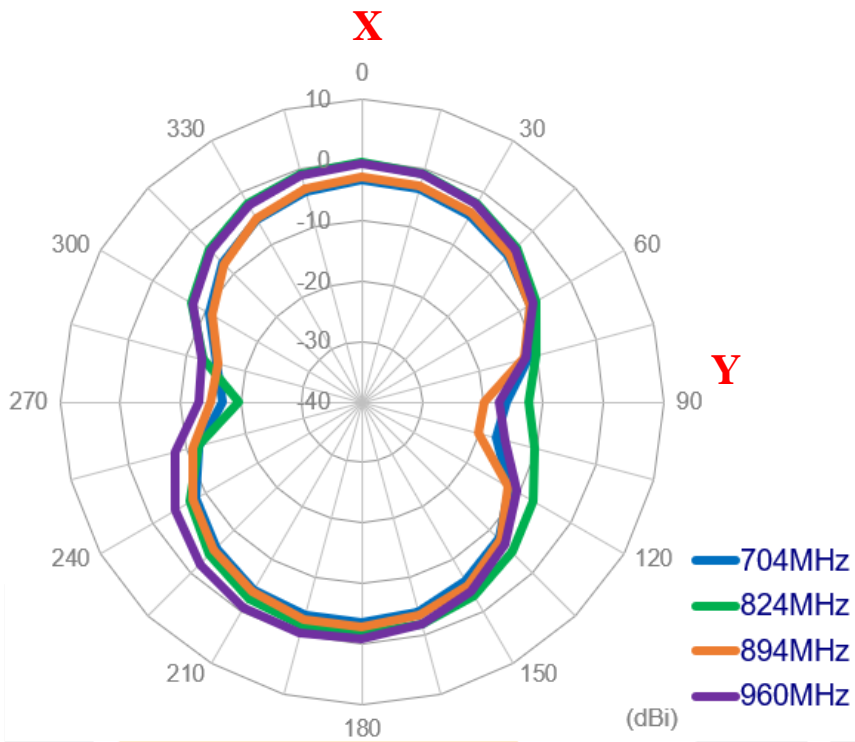
YZ-Plane



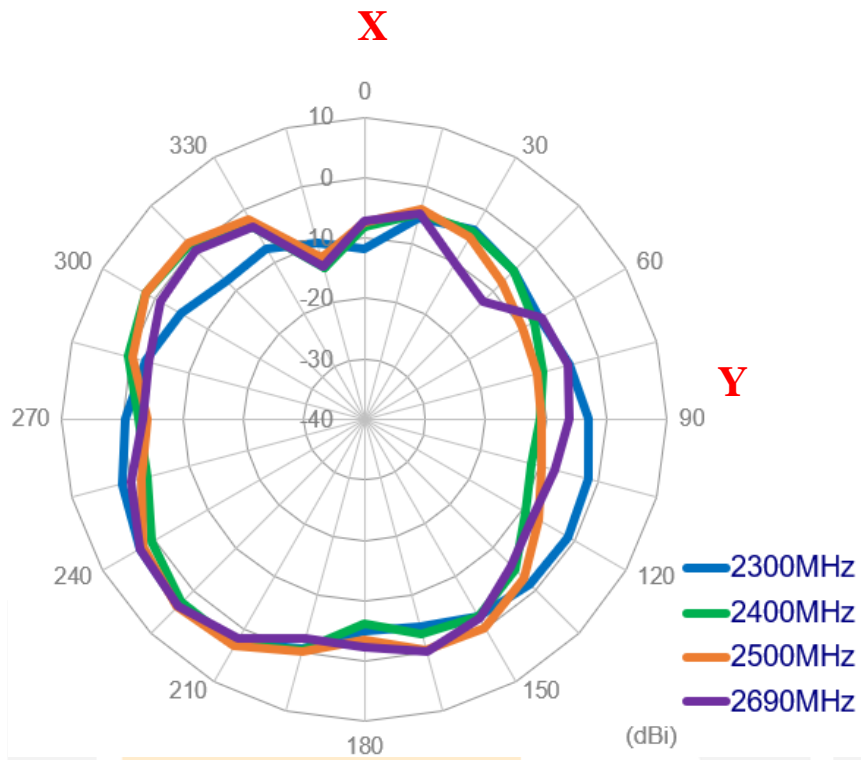




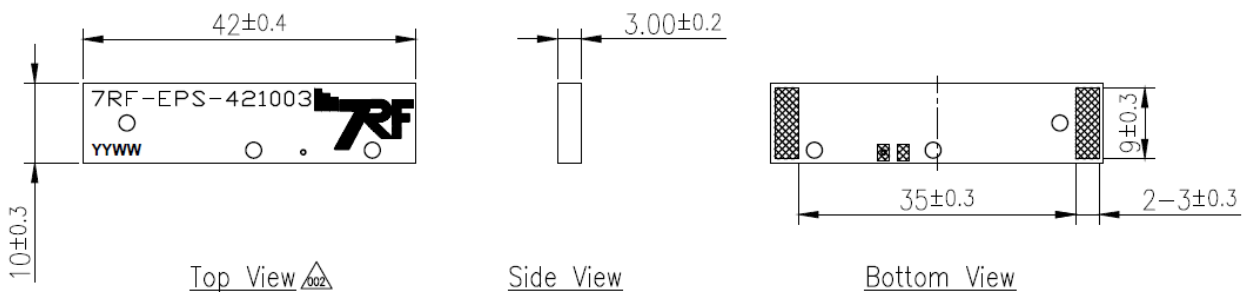
# XY-Plane







#### IV. Antenna Drawing

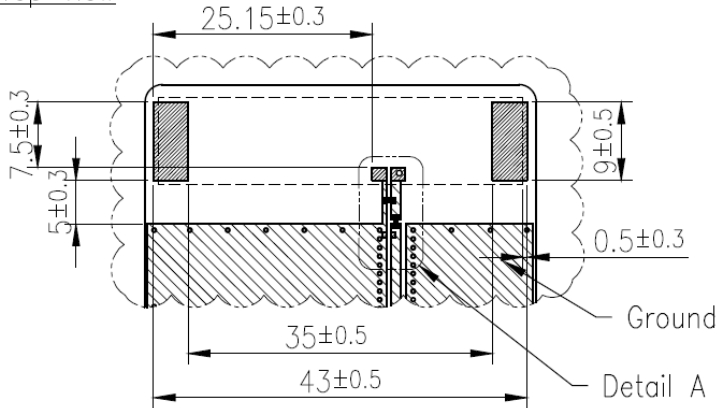


Note:

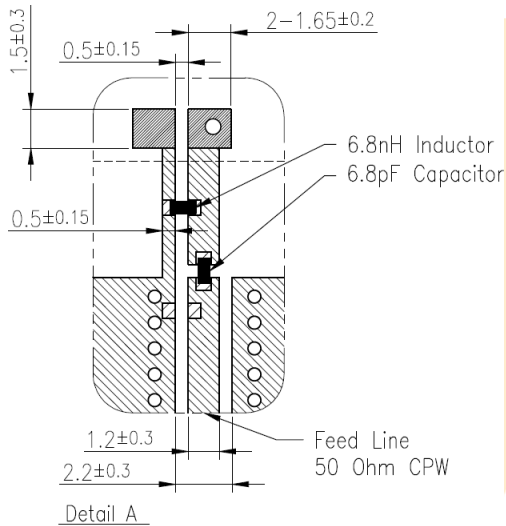
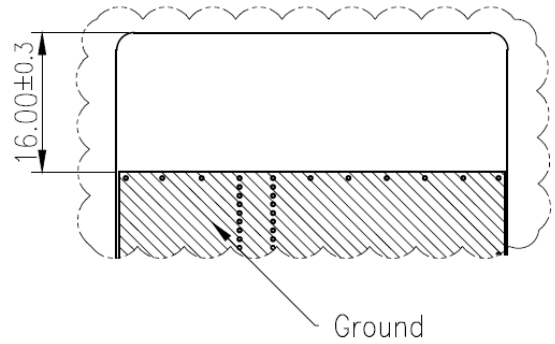
1. Material: High Temperature Composite
2. Finish: Sn Plated
3. Logo & Text Ink Printing : White
4. Soldermask: Black

## V. PCB Footprint Recommendation

Top View



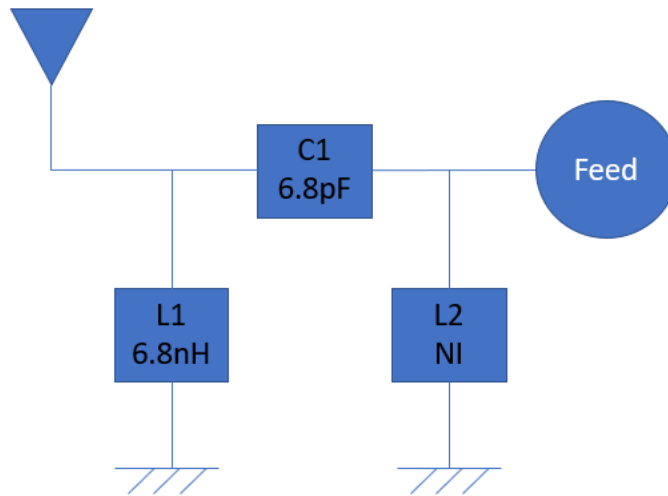
Bottom View



NOTES:

1. Copper Area
2. Solder Area
3. Ground Keepout area
4. Ground keepout should extend through any inner PCB layers and any sides around the antenna till the board edge to minimize coupling from RF feed to ground, except the side facing system ground.
5. Any vias in pads should be either filled or tented to prevent solder from wicking away from the pad during reflow.
6. The dimension tolerances should follow standard PCB manufacturing guidelines

## VI. Reference Matching Circuits



## VII. Packaging Method

1k pieces/ reel  
1 reel/ 1 vacuum bag

