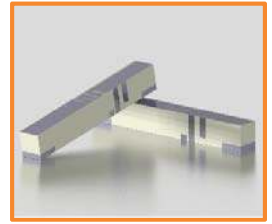


FEATURES	APPLICATIONS
<ul style="list-style-type: none"> - LTE Full Band / 3G / 2G - Chip Type - Stable And Reliable Performance - 698-798MHz, 824-960MHz, 1710-2170MHz, 2300-2400MHz & 2490-2690MHz 	<ul style="list-style-type: none"> - LTE Full Band / 3G / 2G - LTE / GSM / CDMA / DCS / PCS / WCDMA / UMTS - HSDPA / GPRS / EDGE / IMT. - Machine To Machine Communication - Hand Held Devices



PART NUMBERING GUIDE

SUNTSU → S AT CA 40A5A6A CE B3 ← FREQUENCY BAND (MHz)

ANTENNA → S AT CA

CHIP ANTENNA → S AT CA

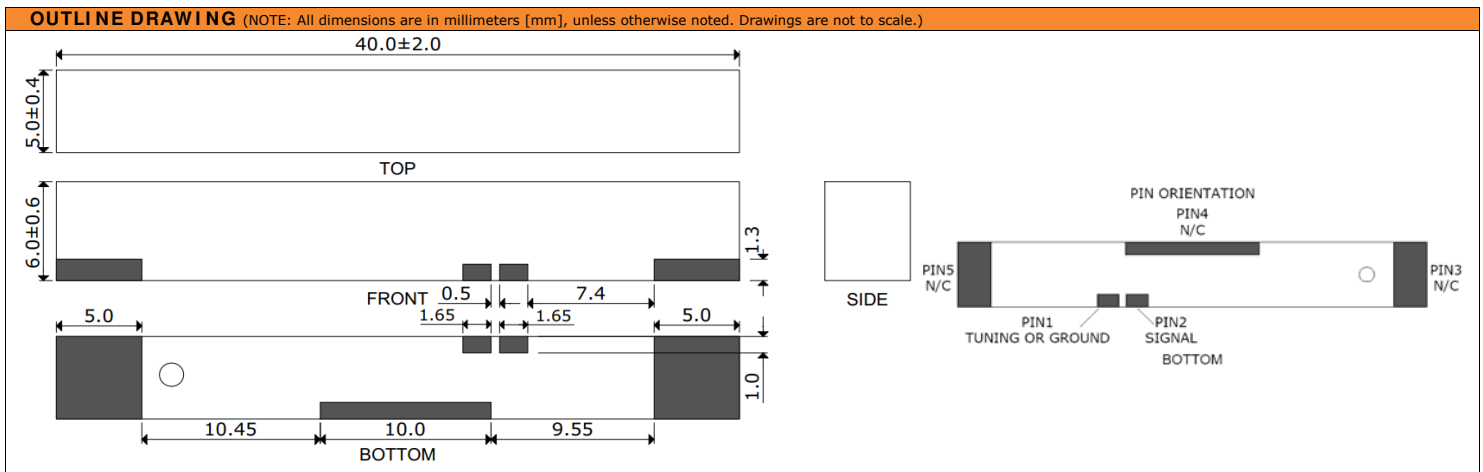
FREQUENCY BAND (MHz):
 B3: 698-798MHz
 824-960MHz
 1710-2170MHz
 2300-2400MHz
 2490-2690MHz

APPLICATION:
 CE: Cellular
 * PACKAGE SIZE
 40A5A6A: 40.0mm x 5.0mm x 6.0mm

* Where letters denote decimal location A=.0, B=.1, C=.2, etc. Ex: B5=0.15, 3A5=3.05, 9A=9.0
 To customize your parameters, contact a Suntsu representative.

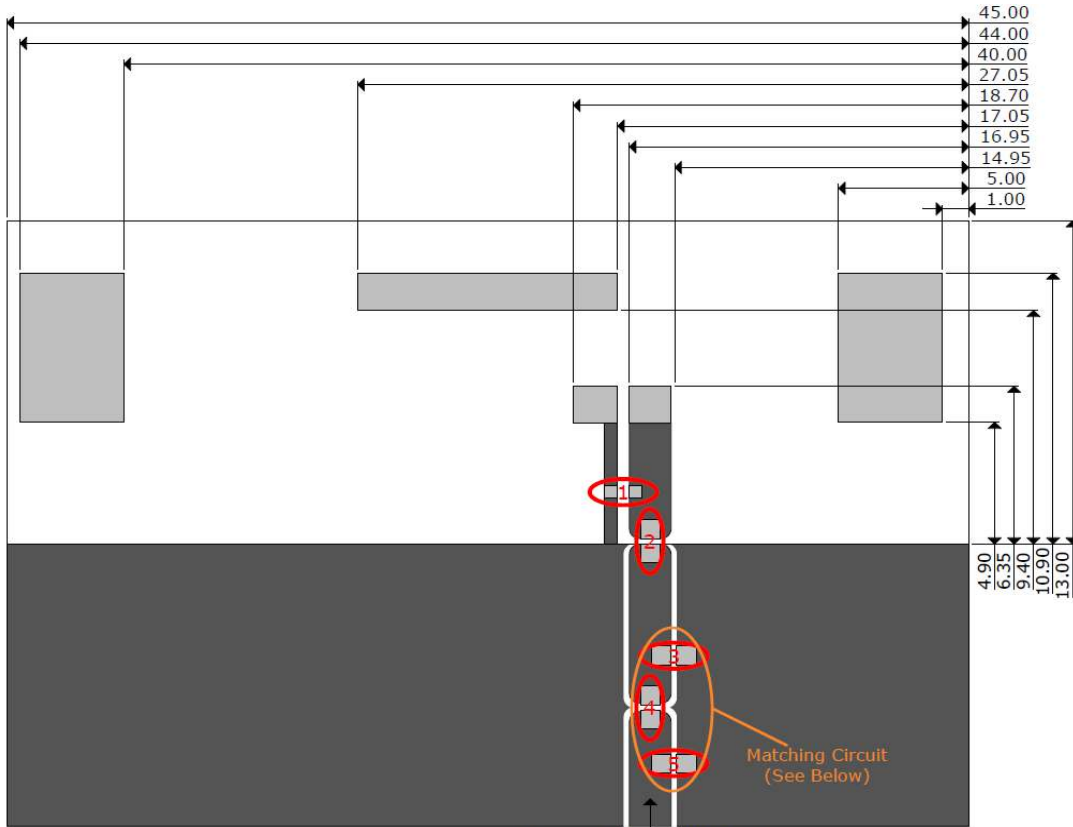
ELECTRICAL PARAMETERS (At 25°C)	UNITS	MIN.	TYP.	MAX	REMARKS
Frequency Band	MHz	698		798	
Impedance	Ω		50		
Polarization			Linear		
Peak Gain	dBi		1.4		At 748MHz
Efficiency	%		65		At 748MHz
VSWR			3		At Center Frequency
Frequency Band	MHz	824		960	
Impedance	Ω		50		
Polarization			Linear		
Peak Gain	dBi		1.1		At 900MHz
Efficiency	%		61		At 900MHz
VSWR			3		At Center Frequency
Frequency Band	MHz	1710		2170	
Impedance	Ω		50		
Polarization			Linear		
Peak Gain	dBi		3.2		At 1950MHz
Efficiency	%		71		At 1950MHz
VSWR			3		At Center Frequency
Frequency Band	MHz	2300		2400	
Impedance	Ω		50		
Polarization			Linear		
Peak Gain	dBi		3.8		At 2350MHz
Efficiency	%		67		At 2350MHz
VSWR			3		At Center Frequency
Frequency Band	MHz	2490		2690	
Impedance	Ω		50		
Polarization			Linear		
Peak Gain	dBi		4.2		At 2590MHz
Efficiency	%		62		At 2590MHz
VSWR			3		At Center Frequency
Operating Temperature	°C	-40		85	

OUTLINE DRAWING (NOTE: All dimensions are in millimeters [mm], unless otherwise noted. Drawings are not to scale.)



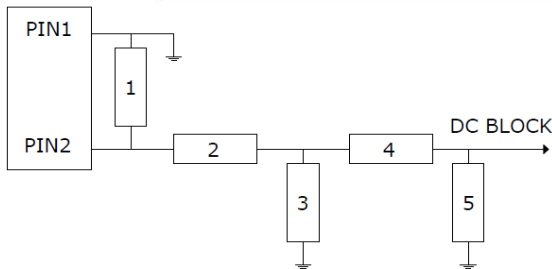
PIN ORIENTATION:
 PIN4 N/C
 PIN3 N/C
 PIN1 TUNING OR GROUND
 PIN2 SIGNAL
 BOTTOM

RECOMMENDED LAND PATTERN & FREQUENCY TUNING SCENARIO CIRCUIT (NOTE: All dimensions are in mm, unless otherwise noted. Drawings are not to scale.)



Transmission Line With 50Ω Impedance Characteristics

Matching Circuit (See Below)

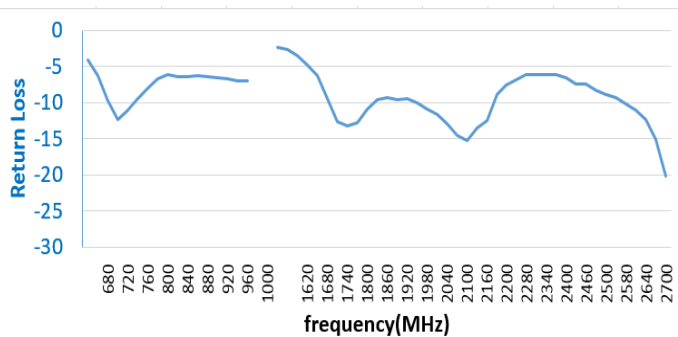


System Matching Circuit Components			
Location	Description	Vendor	Tolerance
1 (Fine Tuning)	5.6nH (0402)	MURATA	± 0.1nH
2 (Fine Tuning)	3.6pF (0402)	MURATA	± 0.05pF
3	N/A	-	-
4	0Ω, (0402)	-	-
5	N/A	-	-

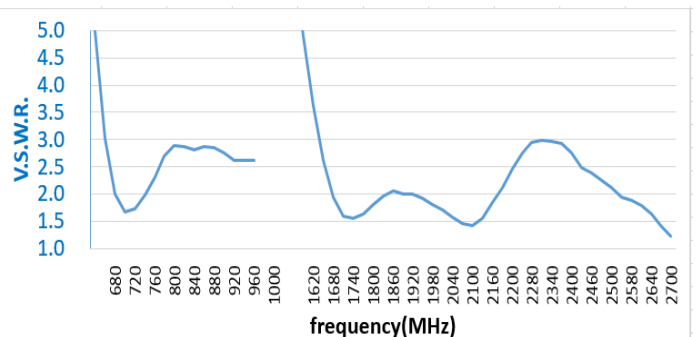
For these suggested values for the matching and tuning of components, the average frequency will be 698-690MHz & 1710-2690MHz on a standard 120 x 45mm² Evaluation board. Please note, these are average reference values which may need to be changed when different circuit boards or manufactures are used.

ELECTRICAL TEST

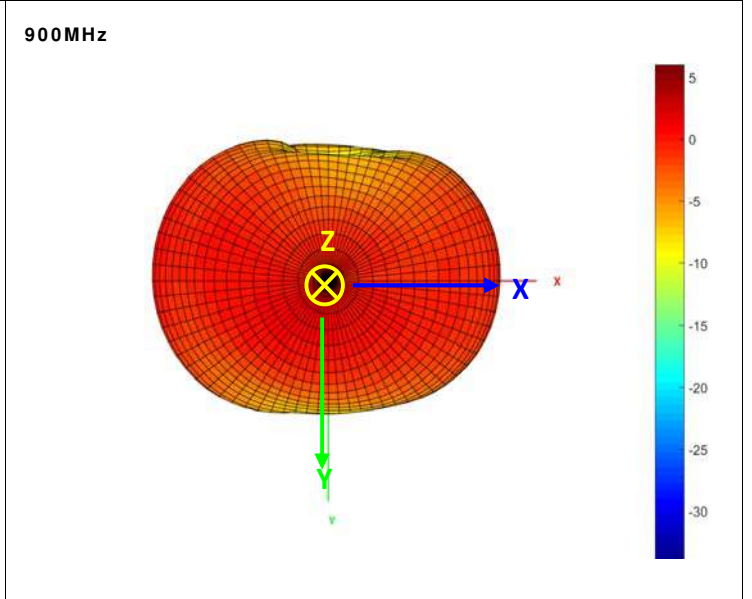
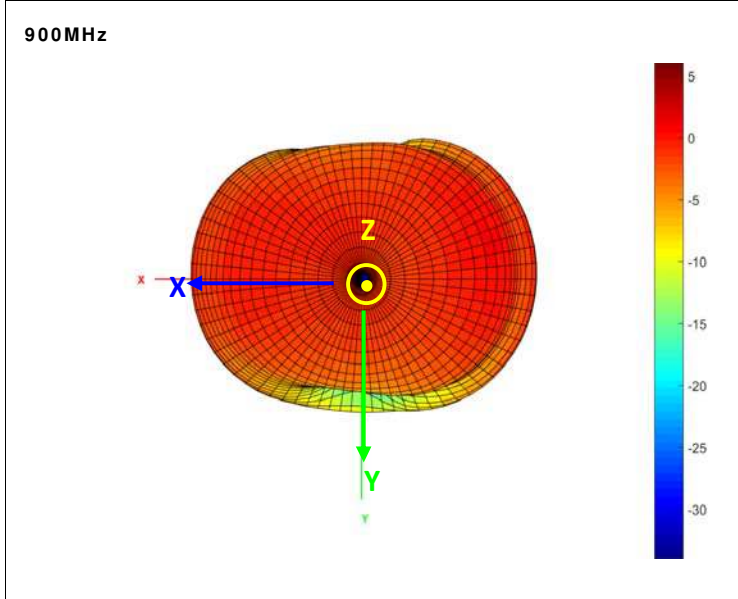
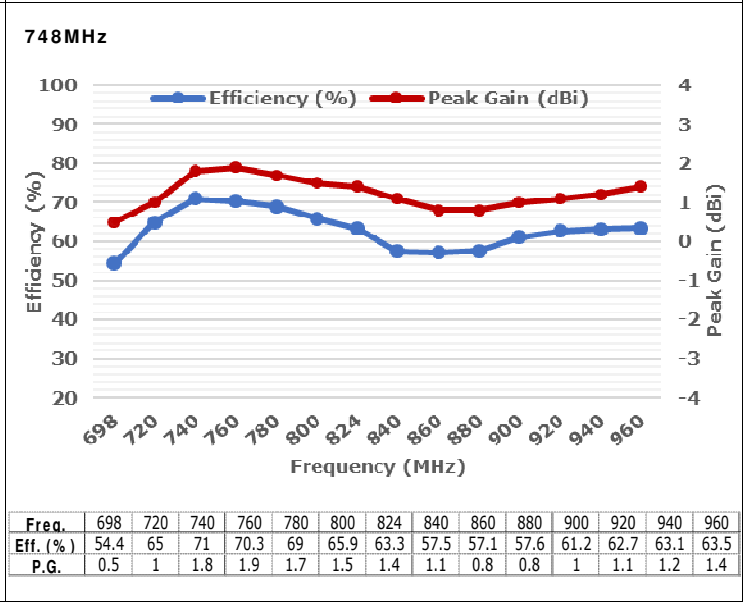
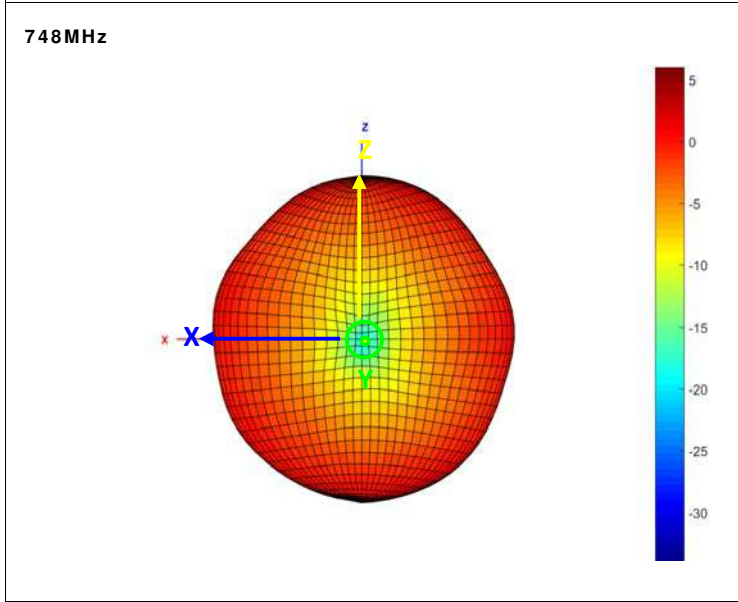
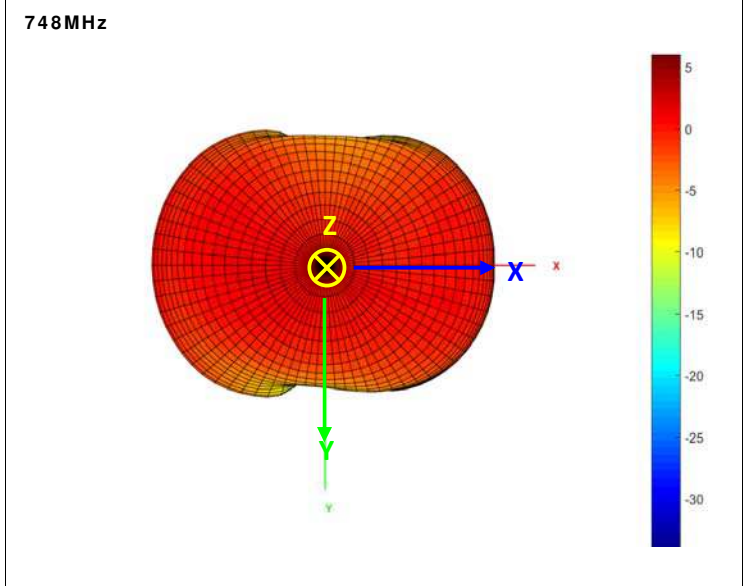
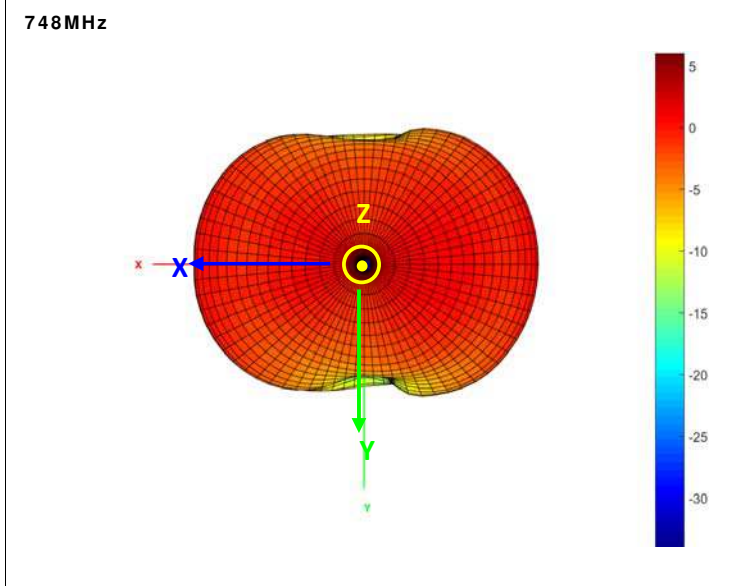
RETURN LOSS



VSWR

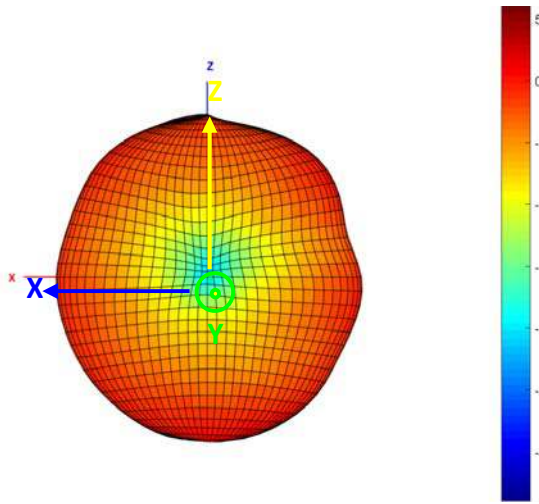


3D RADIATION PATTERN (UNIT: dBi) AND EFFICIENCY vs FREQUENCY

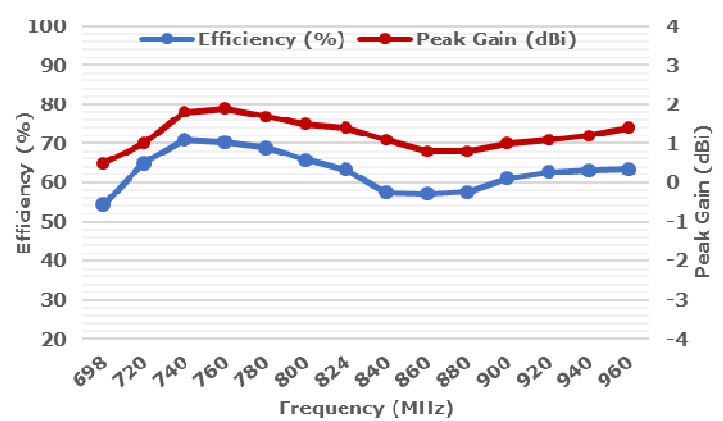


3D RADIATION PATTERN (UNIT: dBi) AND EFFICIENCY vs FREQUENCY (CONT)

900MHz

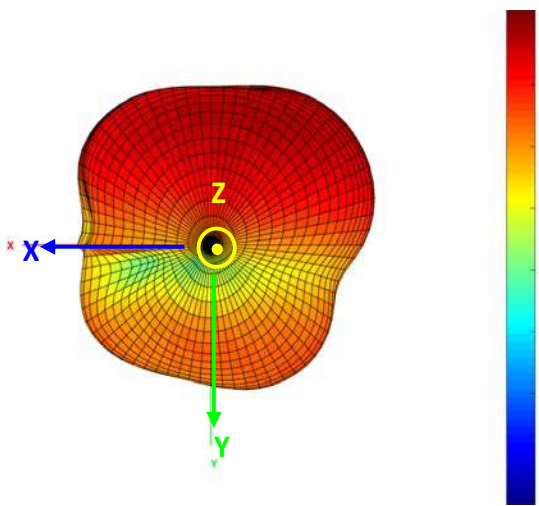


900MHz

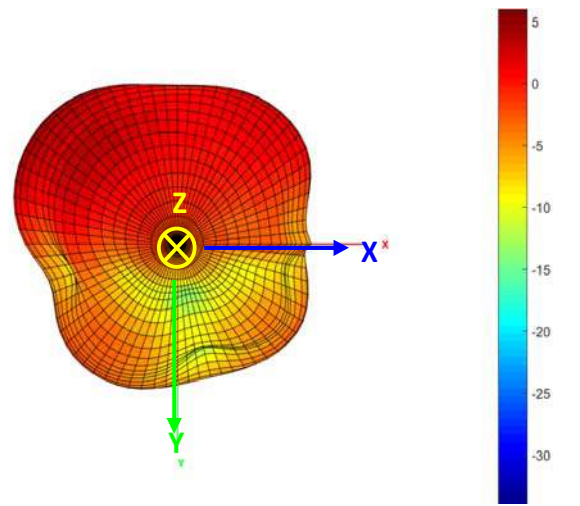


Freq.	698	720	740	760	780	800	824	840	860	880	900	920	940	960
Eff. (%)	54.4	65	71	70.3	69	65.9	63.3	57.5	57.1	57.6	61.2	62.7	63.1	63.5
P.G.	0.5	1	1.8	1.9	1.7	1.5	1.4	1.1	0.8	0.8	1	1.1	1.2	1.4

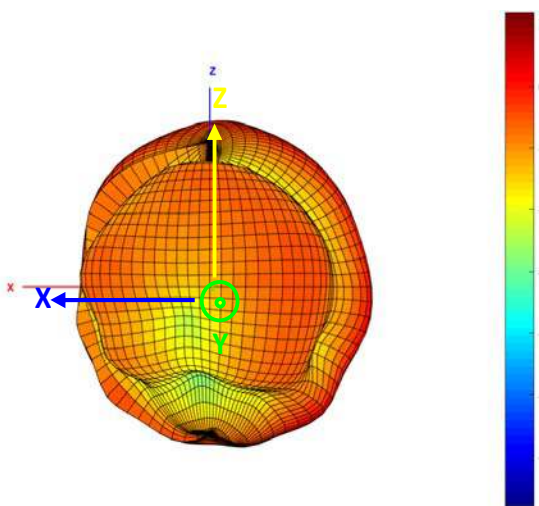
1950MHz



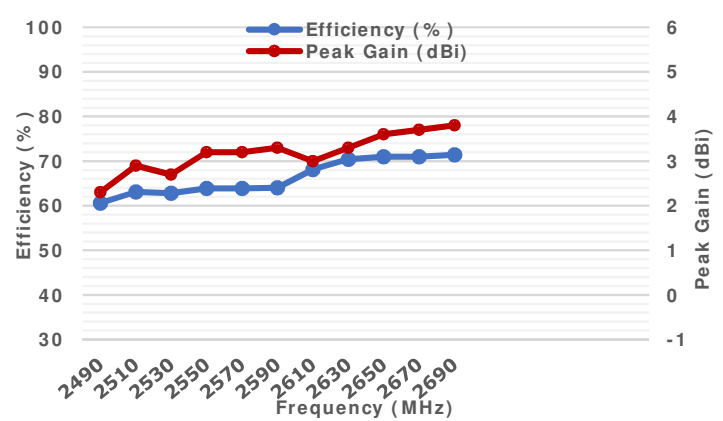
1950MHz



1950MHz

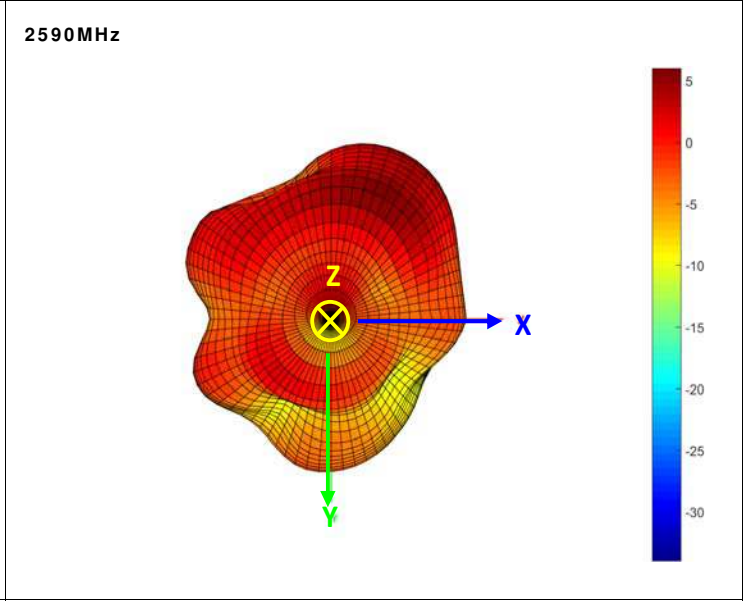
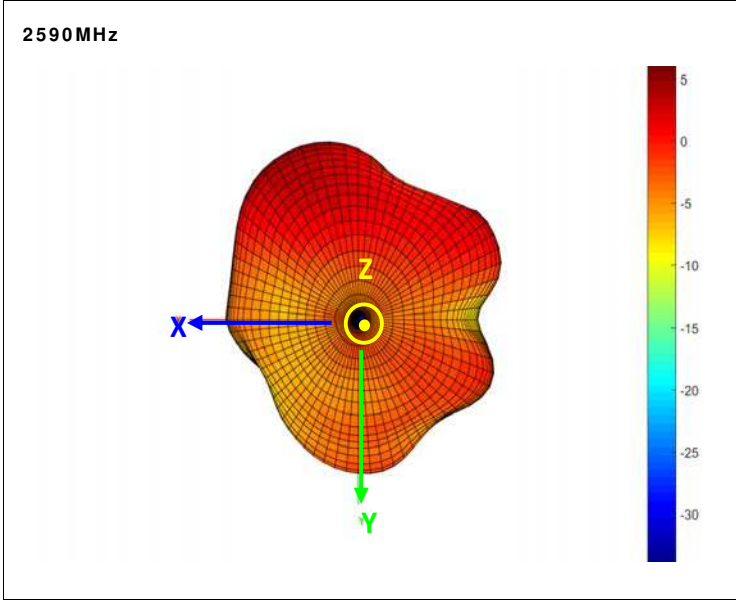
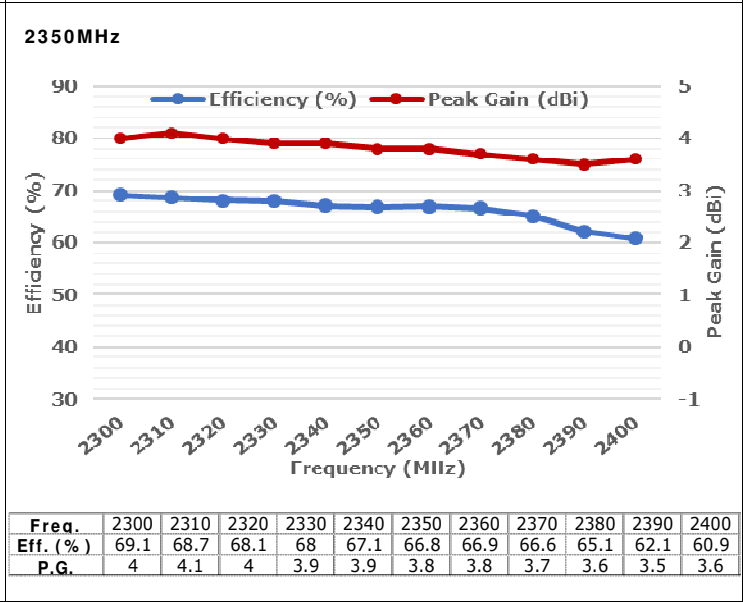
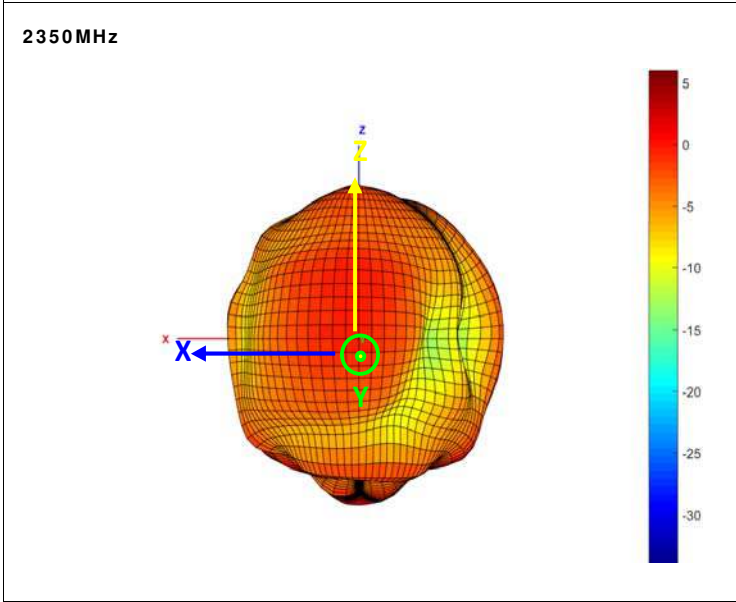
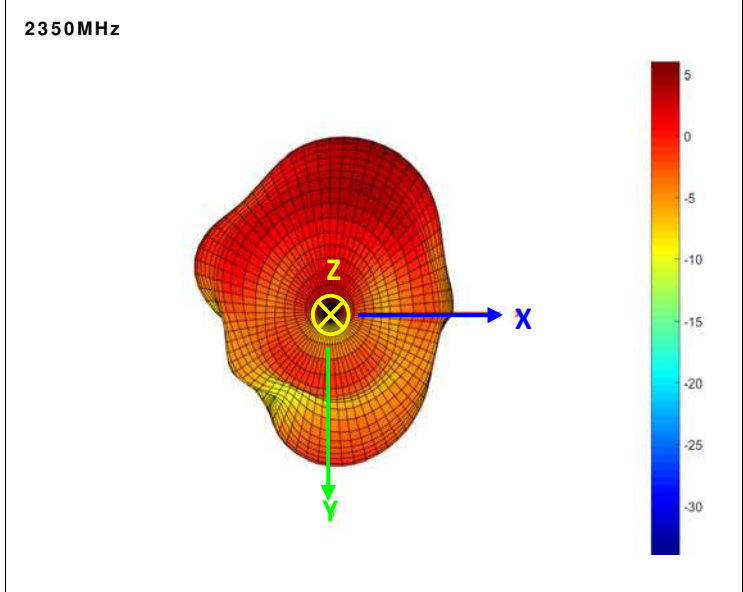
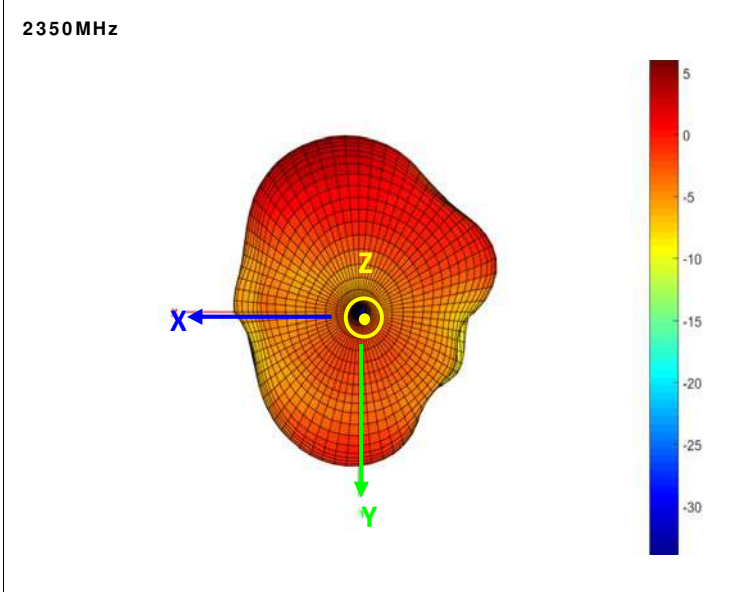


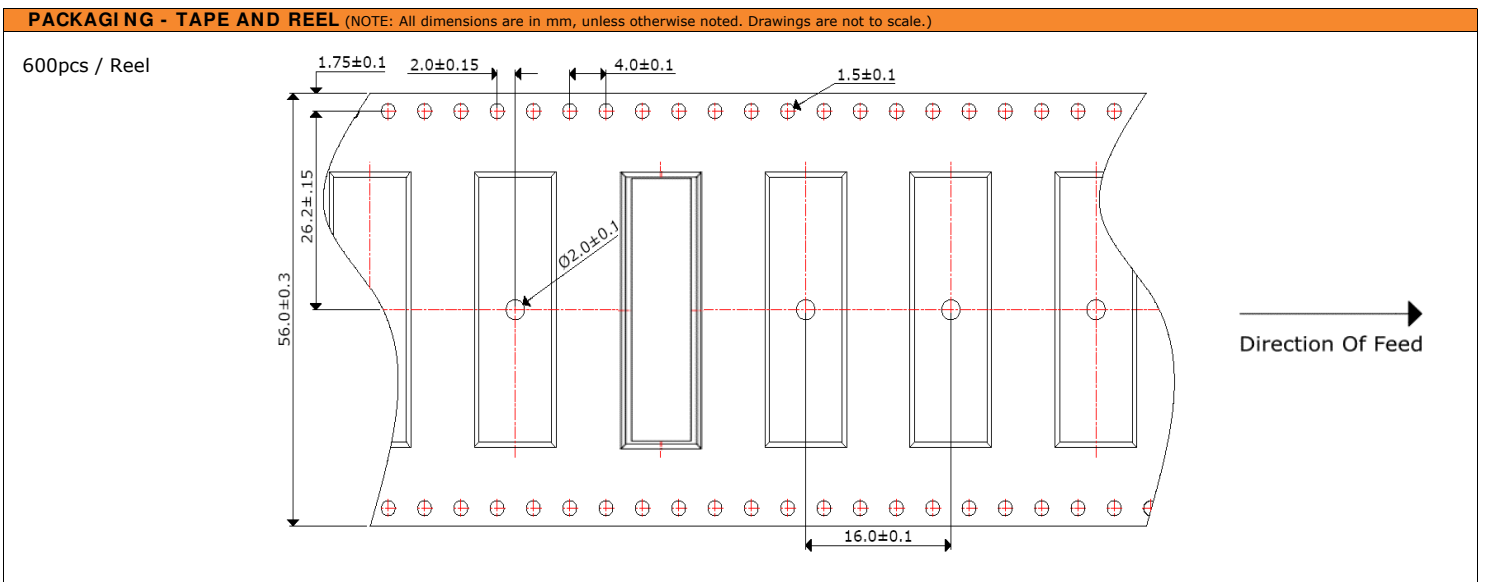
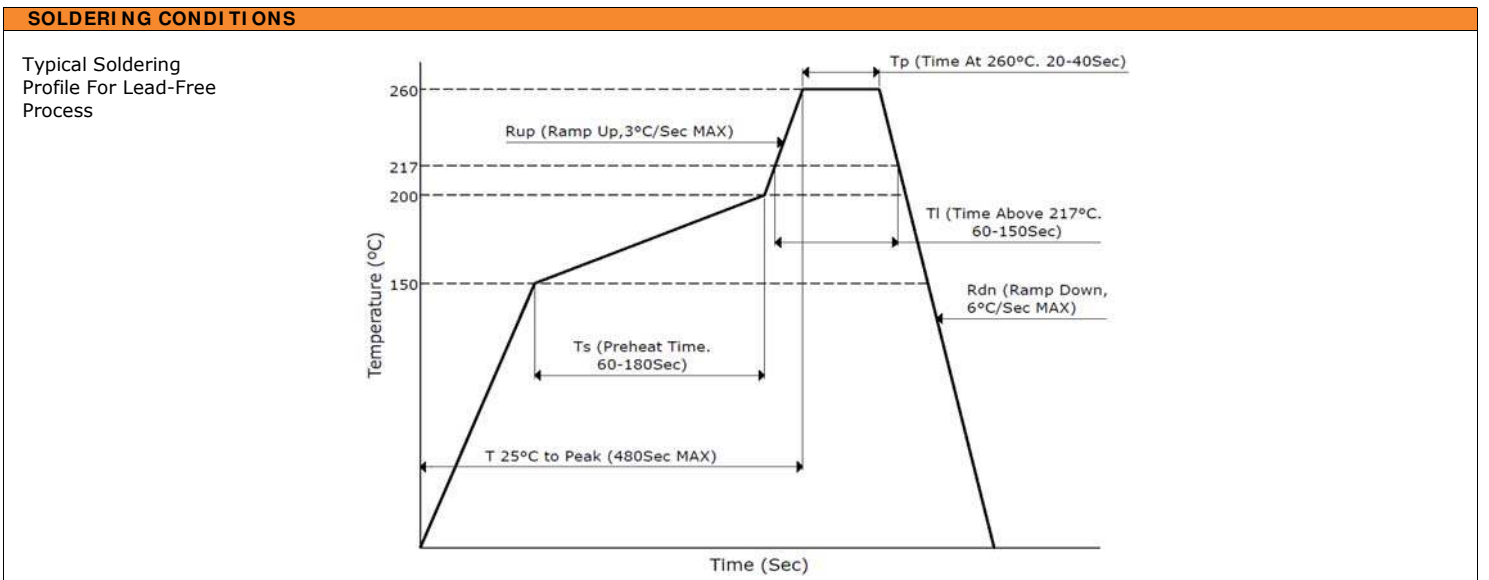
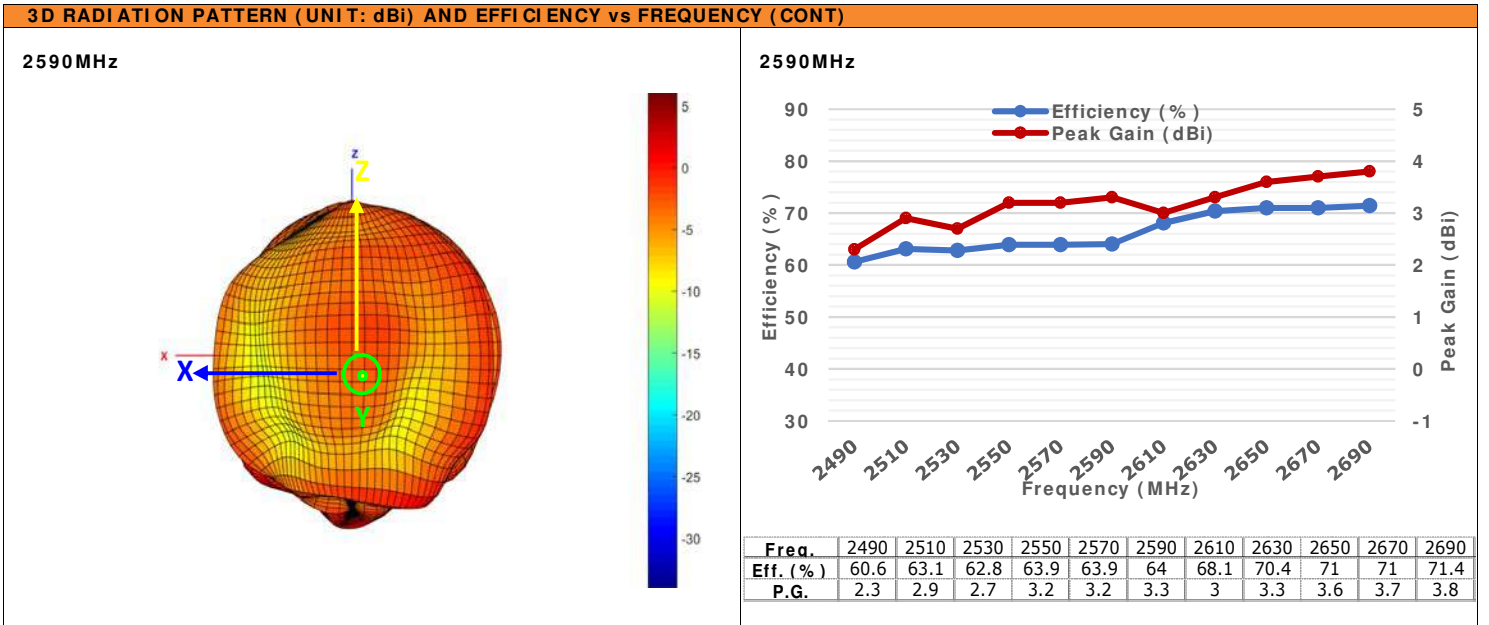
1950MHz



Freq.	1710	1740	1770	1800	1830	1860	1890	1920	1950	1980	2010	2040	2070	2100	2130	2170
Eff. (%)	63.4	72.2	74.4	78.2	76.2	71.9	70.3	66.2	68	67.2	66.2	66.1	64.2	63.1	62.9	60.3
P.G.	3.6	4	4	4	3.9	3.8	3.9	3.6	3.8	3.6	3.2	3.2	2.7	2.7	2.9	3.6

3D RADIATION PATTERN (UNIT: dBi) AND EFFICIENCY vs FREQUENCY (CONT)





ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

High Temperature Test	85°C for 500 hours, and then to normal temperature/humidity for 24hours.
Low Temperature Test	-30°C for 500 hours, and then to normal temperature/humidity for 24hours.
Humidity Test	85°C / 90-95% for 96 hours, and then to normal temperature/humidity for 24hours.
Thermal Shock Test	-30°C for 30 min and +85°C for 30 min. 5 cycles, then expose to normal temperature/humidity for 24 hours or more.
Vibration Test	5 to 200 to 5Hz, swept in 10min, 4.5G at max(2mm amplitude), in X and Y directions for 2 hours each and in Z direction for 4 hours.