
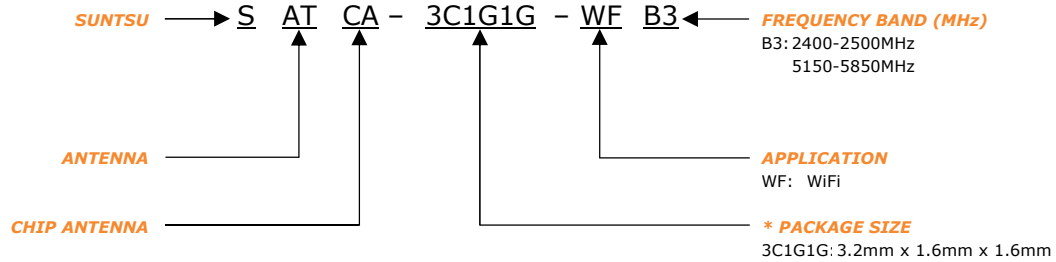


FEATURES	APPLICATIONS	
<ul style="list-style-type: none"> - Dual Band WiFi - Chip Type - Stable And Reliable Performance - 2400-2500MHz & 5150-5850MHz - SMT Process Compatible 	<ul style="list-style-type: none"> - Wireless Communication Devices - WiFi Certified AC Applications - IoT Applications - Machine To Machine Communication - Wireless PCMCIA Cards Or USB Dongles 	

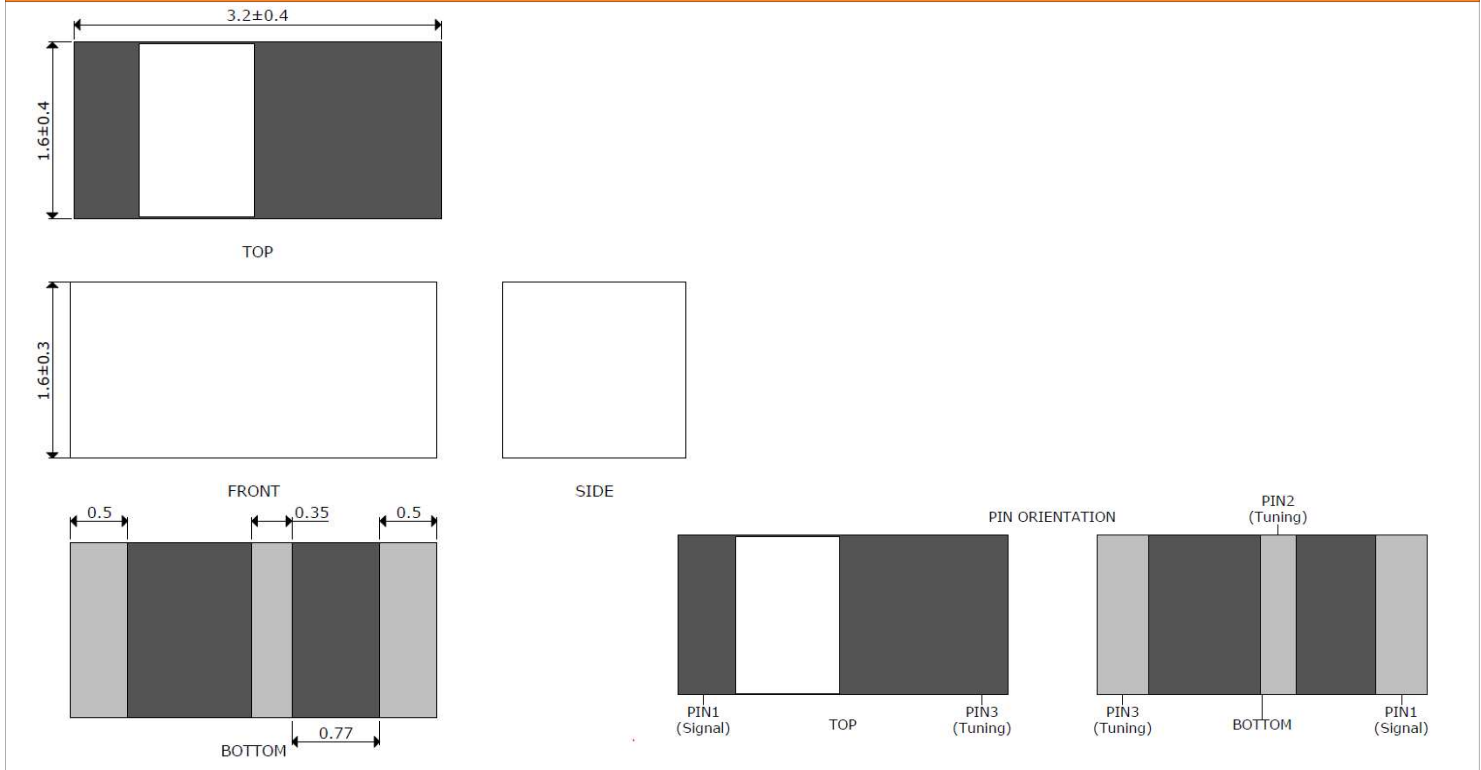
PART NUMBERING GUIDE



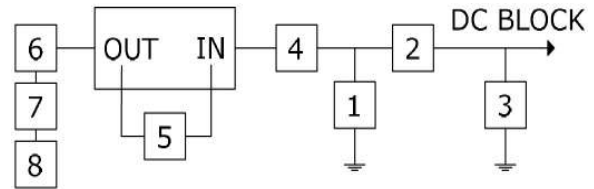
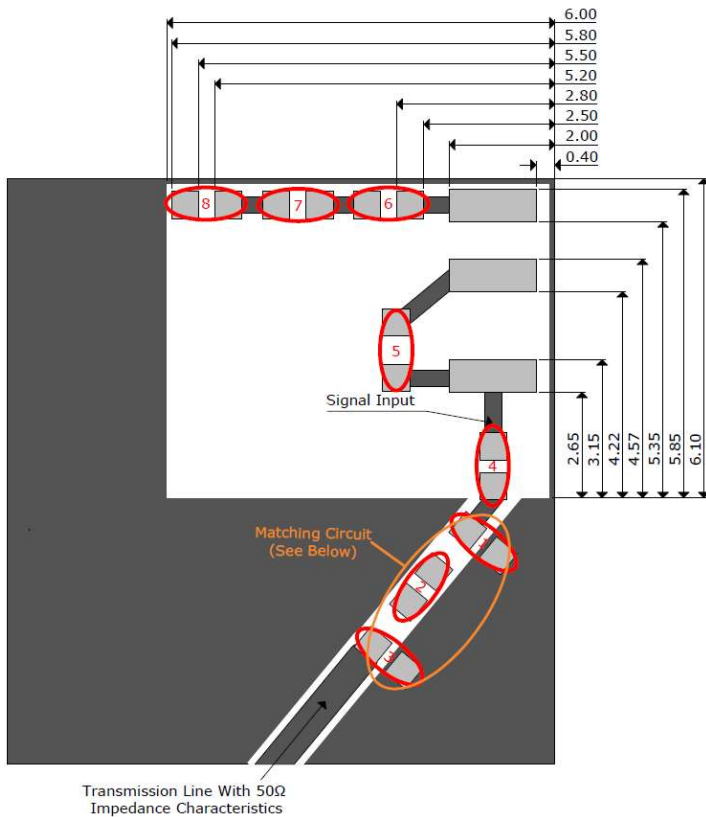
* Where letters denote decimal location A=.0, B=.1, C=.2, etc. Ex: B5=0.15, 3A5=3.05, 9A=9.0
 To customize your parameters, contact a Suntsu representative.

ELECTRICAL PARAMETERS (At 25°C)	UNITS	MIN.	TYP.	MAX	REMARKS
Frequency Band	MHz	2400		2500	
Impedance	Ω		50		
Polarization			Linear		
Peak Gain	dBi		2.4		At 2442MHz
Efficiency	%		61		At 2442MHz
VSWR				2	At Center Frequency
Operating Temperature	°C	-40		85	
Frequency Band	MHz	5150		5850	
Impedance	Ω		50		
Polarization			Linear		
Peak Gain	dBi		1.8		At 5550MHz
Efficiency	%		56		At 5550MHz
VSWR				2.5	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.)



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



System Matching Circuit Components			
Location	Description	Vendor	Tolerance
1	0.3pF (0402)	MUTATA	±0.05pF
2	15pF (0402)	MUTATA	±5%
3	2.2nH (0402)	MUTATA	±0.1nH
4	1.5nH (0402)	MUTATA	±0.1nH
5 (Fine Tuning)	7.5nH (0402)	MUTATA	±2%
6 (Fine Tuning)	0Ω (0201)	-	-
7 (Fine Tuning)	N/C	-	-
8 (Fine Tuning)	N/C	-	-

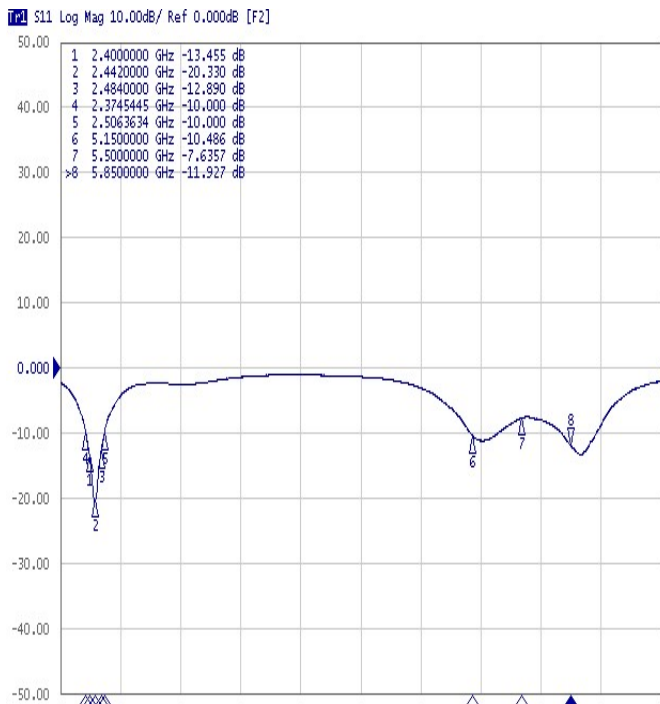
For these suggested values for the matching and tuning of components, the average frequency will be around 2442Mhz for the lower Band and around 5550MHz for the higher on a standard 40 x 40mm² Evaluation board.

Please note, these are average reference values which may need to be changed when different circuit boards or manufactures are used.

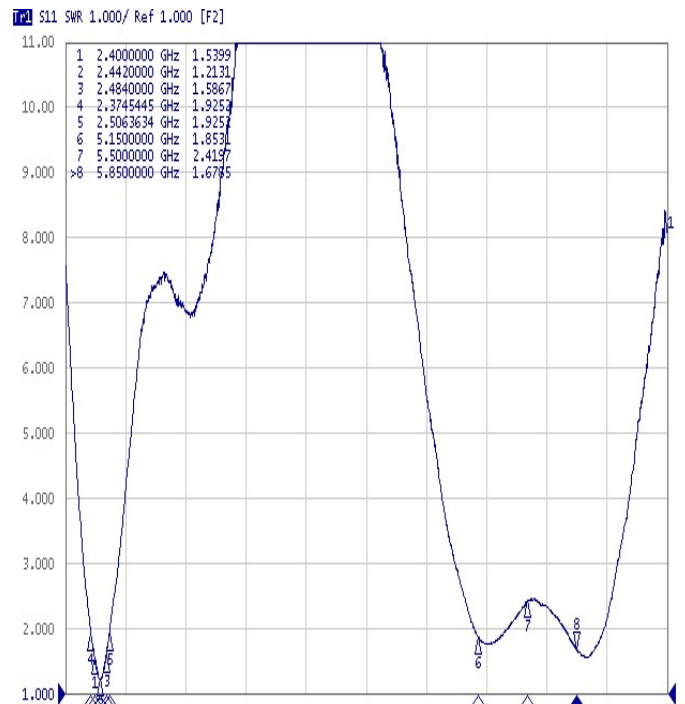
***For fine tuning element 5, we highly recommend using Murata LQG15WZ_G02# series inductor which has 2% tolerance in inductance and high Q factor. In general, the inductance of this inductor that can be used for fine tuning element 5 is 5nH ~ 10nH in most circumstances.**

ELECTRICAL TEST

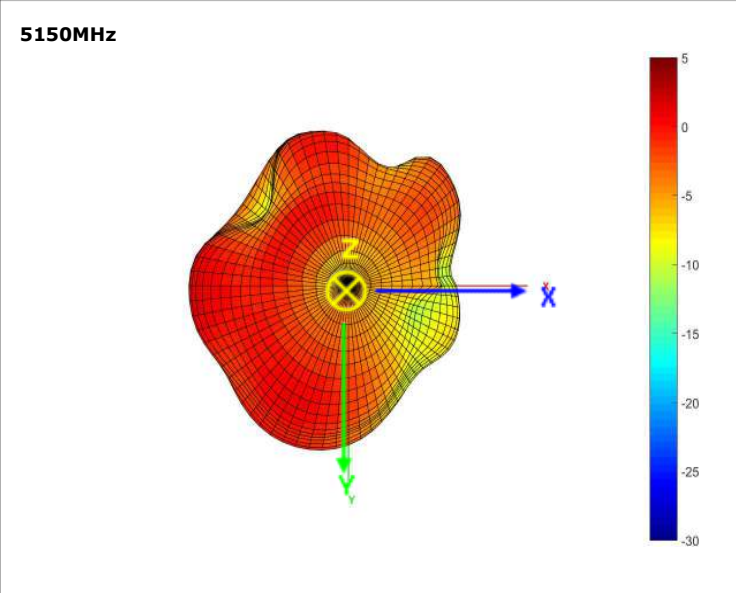
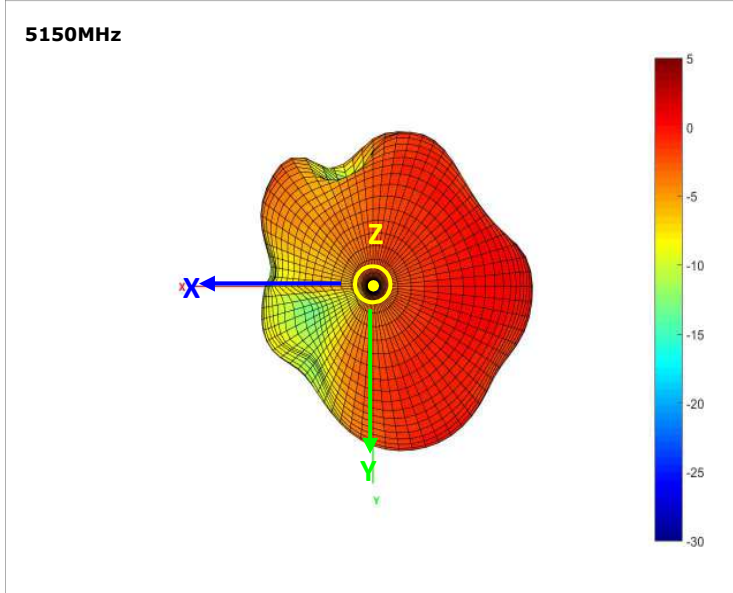
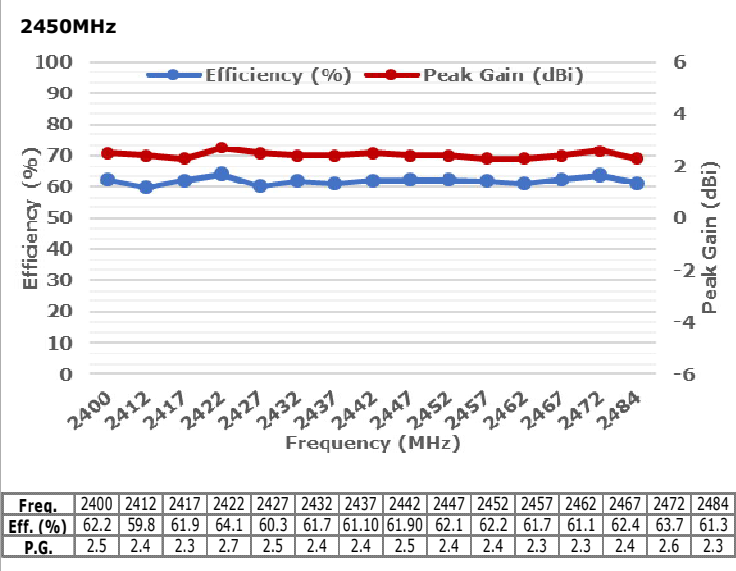
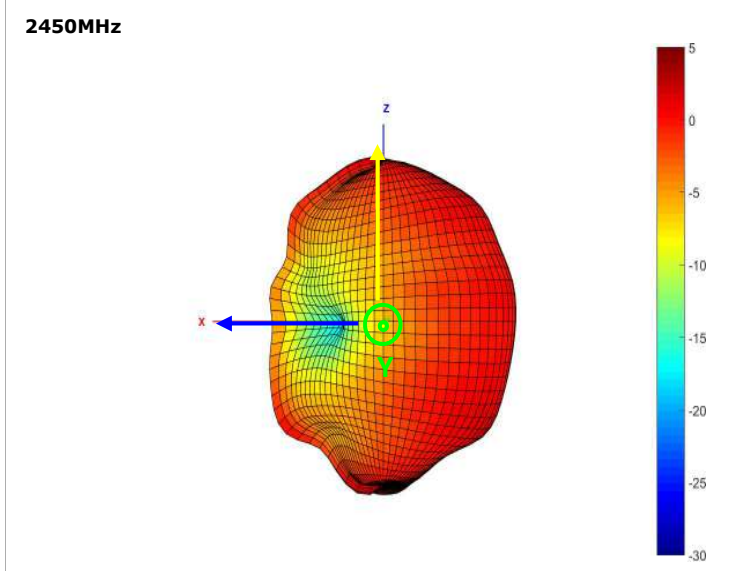
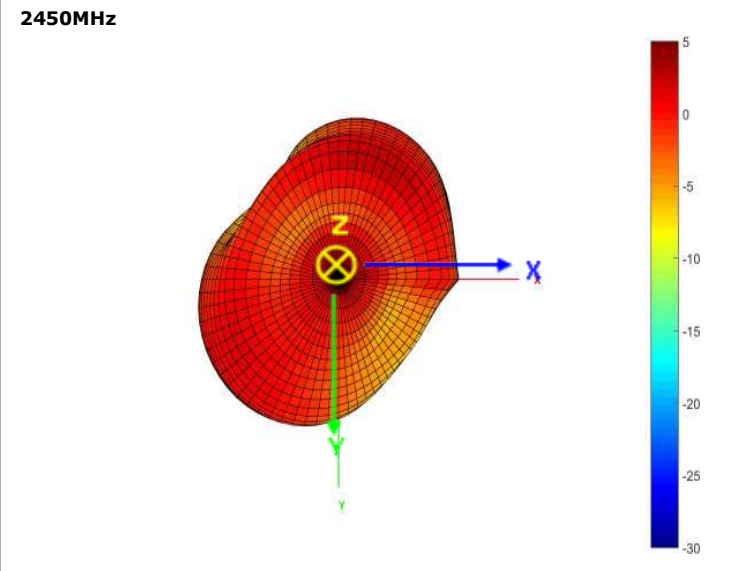
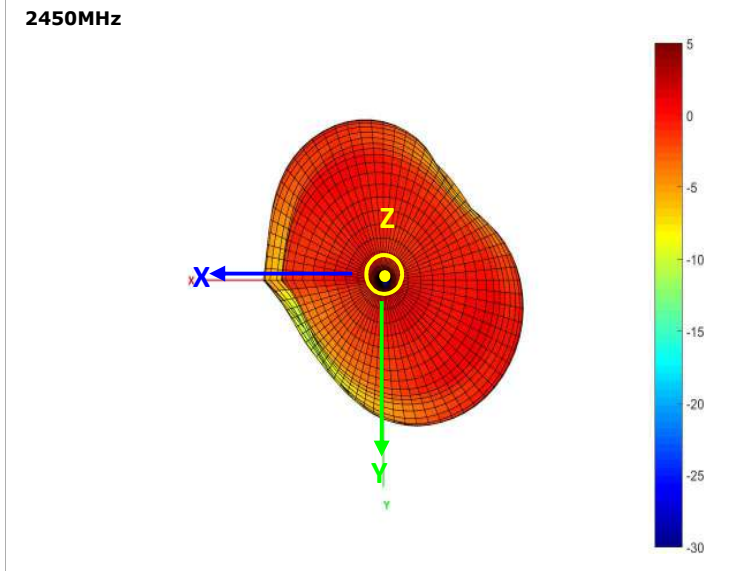
Return Loss



VSWR

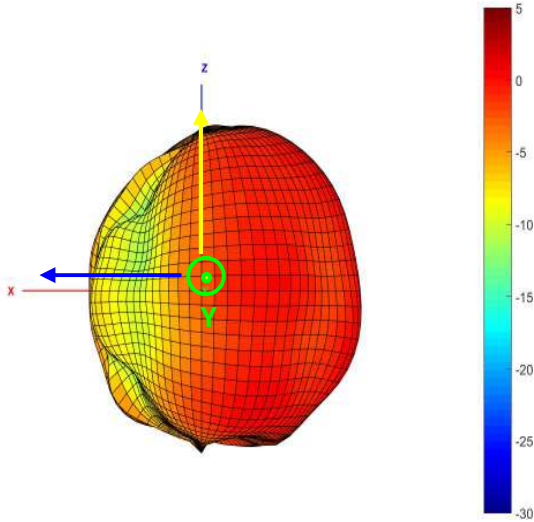


3D RADIATION PATTERN (UNIT: dBi) AND EFFICIENCY vs FREQUENCY

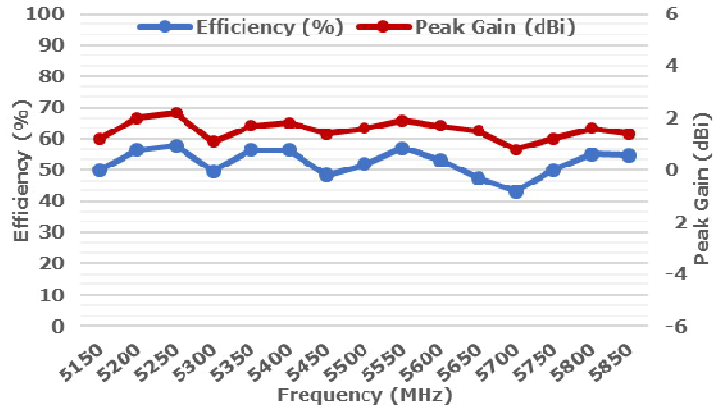


3D RADIATION PATTERN (UNIT: dBi) AND EFFICIENCY vs FREQUENCY (CONT.)

5150MHz

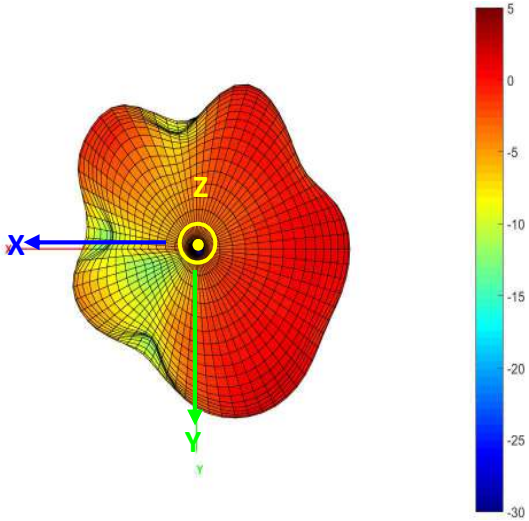


5150MHz

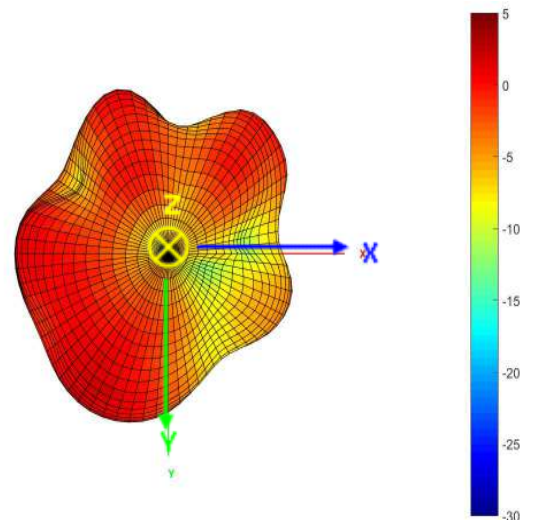


Freq.	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850
Eff. (%)	50.1	56.5	57.8	49.7	56.4	56.4	48.30	51.90	56.9	53.2	47.3	43.2	50	55	54.6
P.G.	1.2	2	2.2	1.1	1.7	1.8	1.4	1.6	1.9	1.7	1.5	0.8	1.2	1.6	1.4

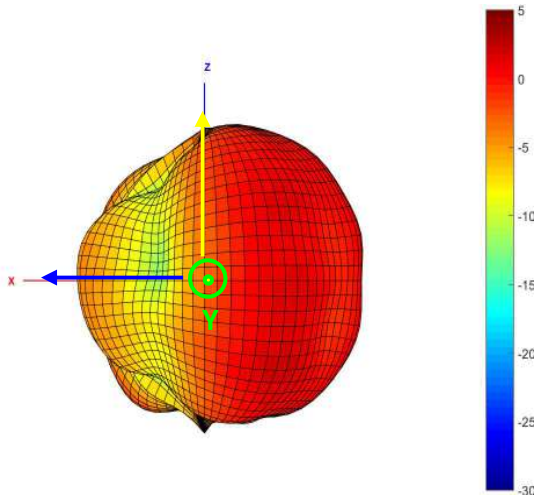
5550MHz



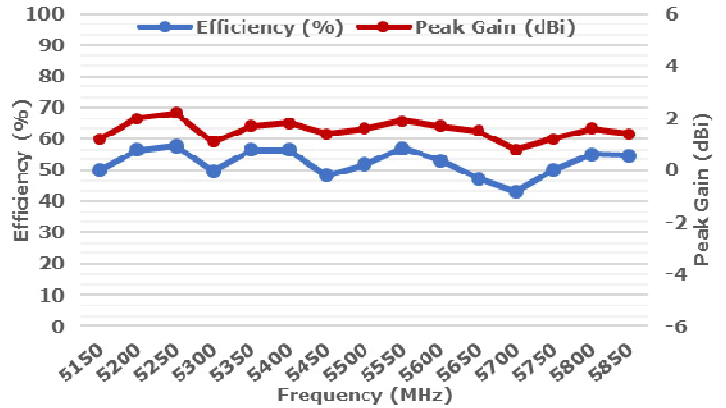
5550MHz



5550MHz



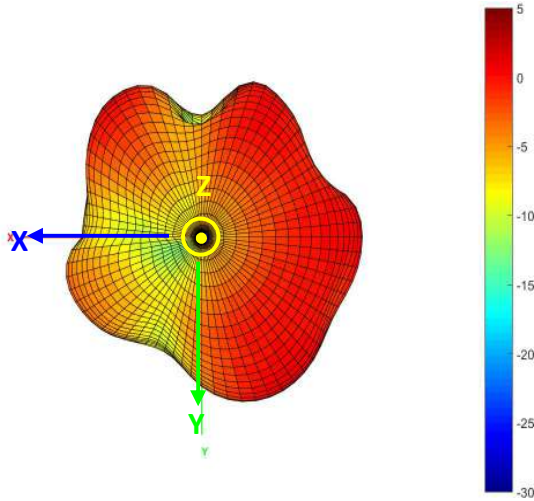
5550MHz



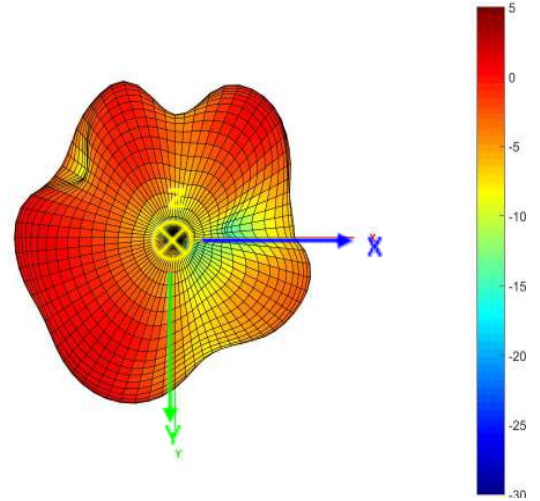
Freq.	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850
Eff. (%)	50.1	56.5	57.8	49.7	56.4	56.4	48.30	51.90	56.9	53.2	47.3	43.2	50	55	54.6
P.G.	1.2	2	2.2	1.1	1.7	1.8	1.4	1.6	1.9	1.7	1.5	0.8	1.2	1.6	1.4

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

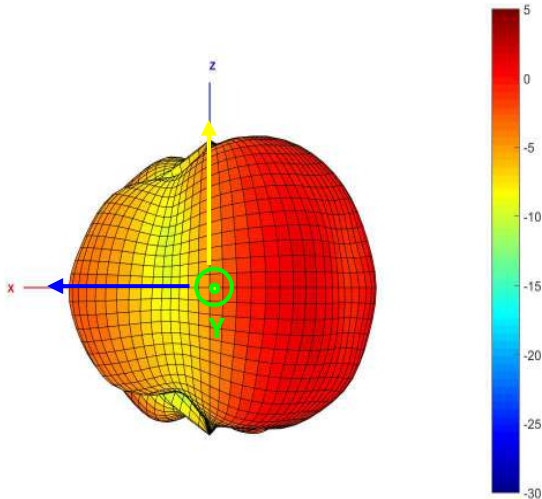
5850MHz



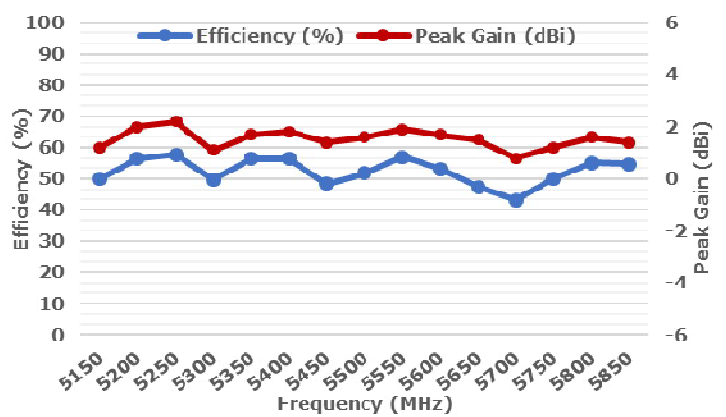
5850MHz



5850MHz



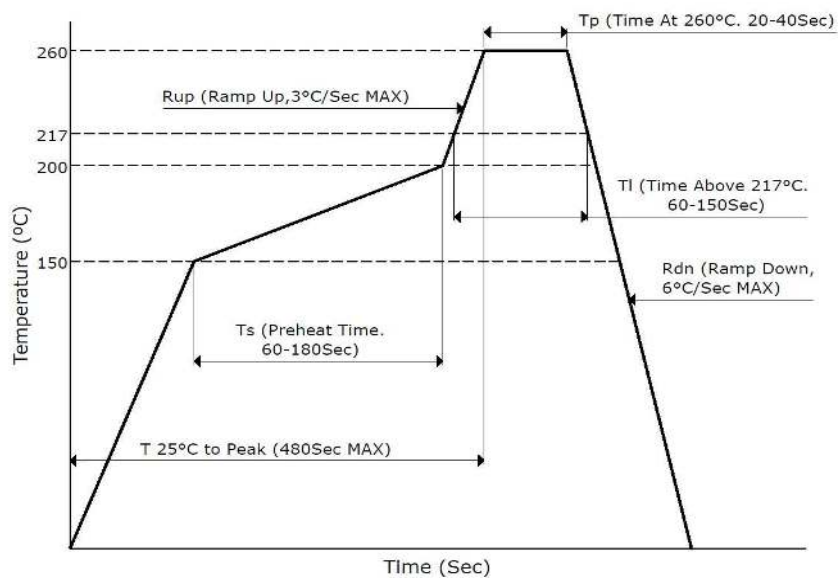
5850MHz



Freq.	5150	5200	5250	5300	5350	5400	5450	5500	5550	5600	5650	5700	5750	5800	5850
Eff. (%)	50.1	56.5	57.8	49.7	56.4	56.4	48.30	51.90	56.9	53.2	47.3	43.2	50	55	54.6
P.G.	1.2	2	2.2	1.1	1.7	1.8	1.4	1.6	1.9	1.7	1.5	0.8	1.2	1.6	1.4

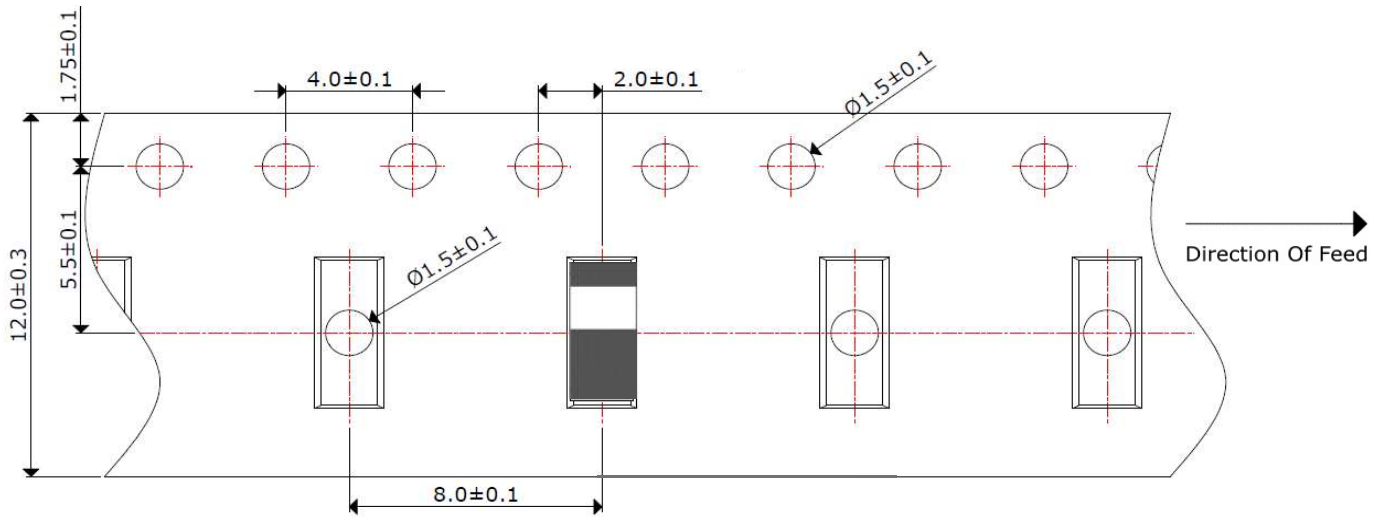
SOLDERING CONDITIONS

Typical Soldering Profile For Lead-Free Process



PACKAGING - TAPE AND REEL (NOTE: All dimensions are in mm, unless otherwise noted. Drawings are not to scale.)

2,000pcs / Reel



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.