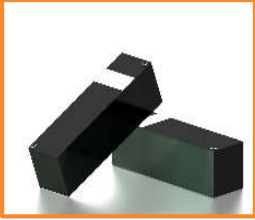
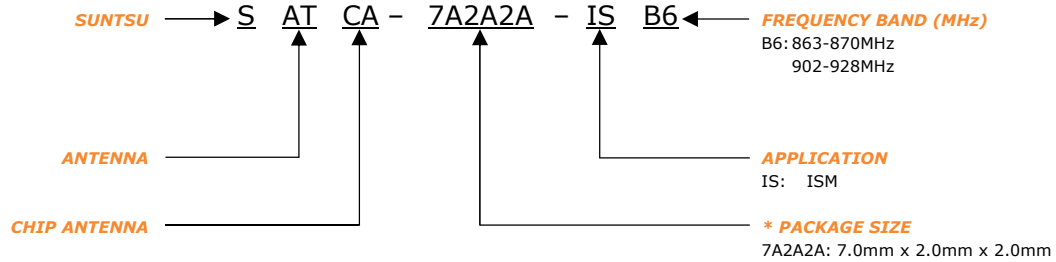


FEATURES	APPLICATIONS	
<ul style="list-style-type: none"> <li>- ISM</li> <li>- Chip Type</li> <li>- Stable And Reliable Performance</li> <li>- 863-870MHz &amp; 902-928MHz</li> <li>- SMT Process Compatible</li> </ul>	<ul style="list-style-type: none"> <li>- ISM Band System</li> <li>- Wireless Alarm And Security System</li> <li>- Smart Meters</li> <li>- IOT Applications</li> <li>- Machine To Machine Communication</li> </ul>	

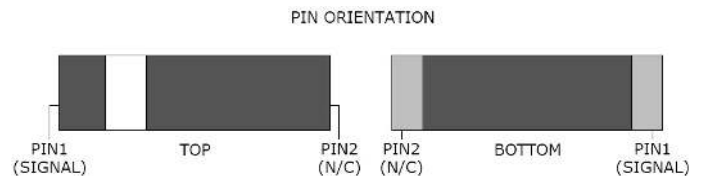
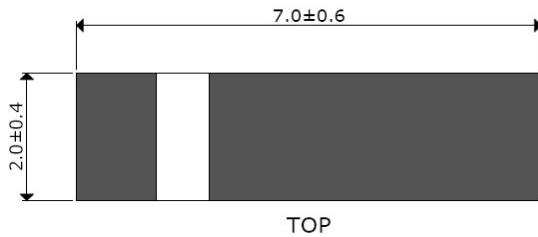
### PART NUMBERING GUIDE



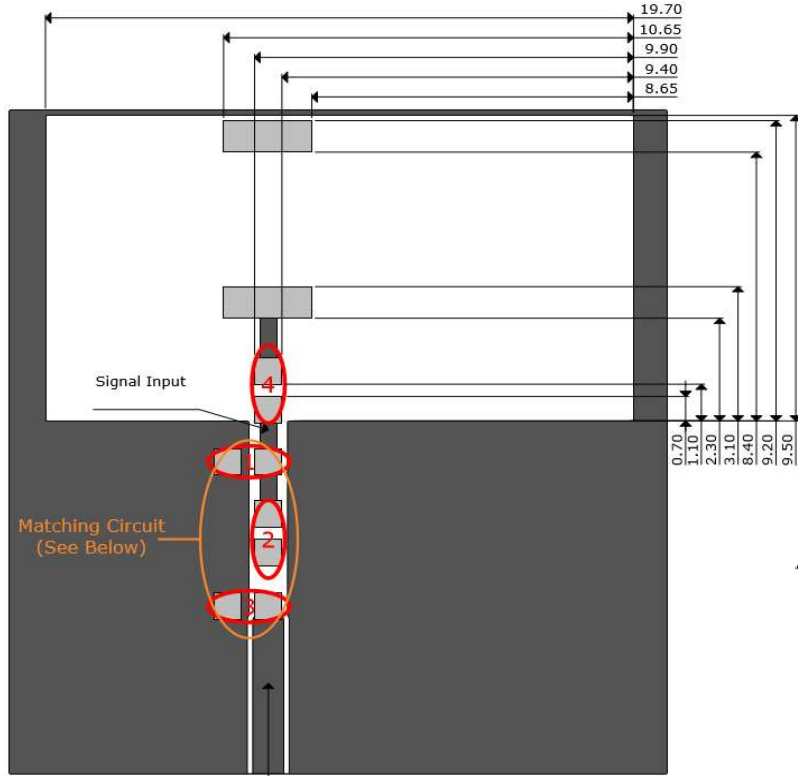
\* Where letters denote decimal location A=.0, B=.1, C=.2, etc. Ex: B5=0.15, 3A5=3.05, 9A=9.0  
 To customize your parameters, contact a Suntsu representative.

ELECTRICAL PARAMETERS (At 25°C)	UNITS	MIN.	TYP.	MAX	REMARKS
Frequency Band	MHz	863		870	
Impedance	Ω		50		
Polarization			Linear		
Peak Gain	dBi		-9.2		At 868MHz
Efficiency	%	0	11.4		At 868MHz
VSWR				2	At Center Frequency
Operating Temperature	°C	-40		85	
Frequency Band	MHz	902		928	
Impedance	Ω		50		
Polarization			Linear		
Peak Gain	dBi		-8.5		At 915MHz
Efficiency	%	0	13		At 915MHz
VSWR				2	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.)

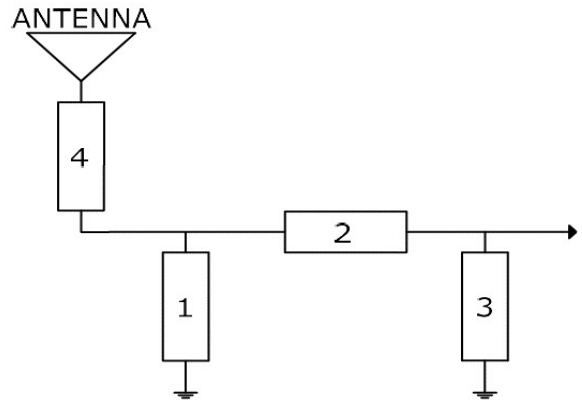


### RECOMMENDED LAND PATTERN & FREQUENCY TUNING SCENARIO CIRCUIT (NOTE: All dimensions are in mm, unless otherwise noted. Drawings are not to scale.)



Transmission Line With 50Ω Impedance Characteristics

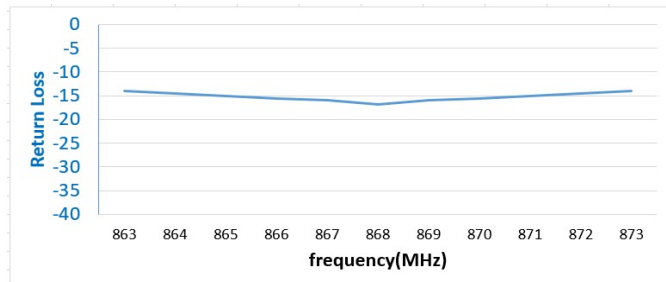
System Matching Circuit Component (868MHz Band)			
Location	Description	Vendor	Tolerance
1	N/A	-	-
2	2.2nH, (0402)	MURATA	±0.1nH
3	0.8pF, (0402)	MURATA	±0.05pF
4 (Fine Tuning)	68nH, (0402)	MURATA	±5%
System Matching Circuit Component (915MHz Band)			
Location	Description	Vendor	Tolerance
1	N/A	-	-
2	10nH, (0402)	MURATA	±5%
3	1pF, (0402)	MURATA	±0.05pF
4 (Fine Tuning)	56nH, (0402)	MURATA	±5%



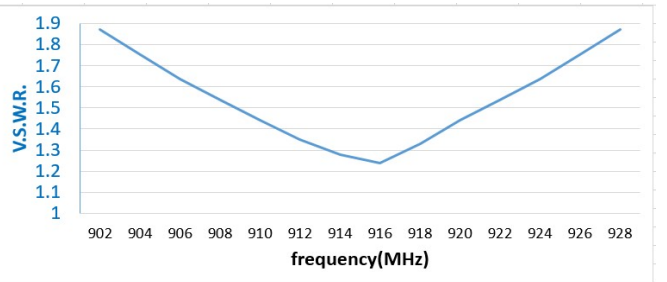
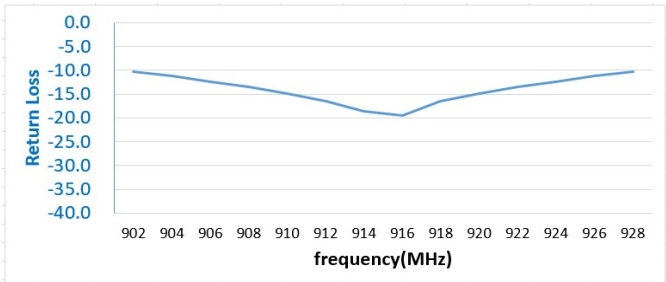
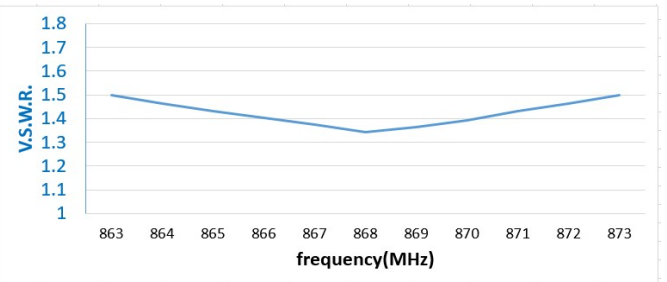
For these suggested values for the matching and tuning of components, the average frequency will be 868 & 915MHz on a standard 49.5 x 20mm<sup>2</sup> Evaluation board. Please note, these are average reference values which may need to be changed when different circuit boards or manufactures are used.

### ELECTRICAL TEST

#### RETURN LOSS

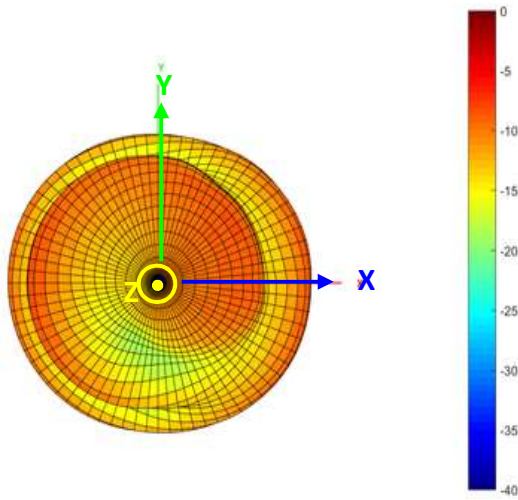


#### VSMR

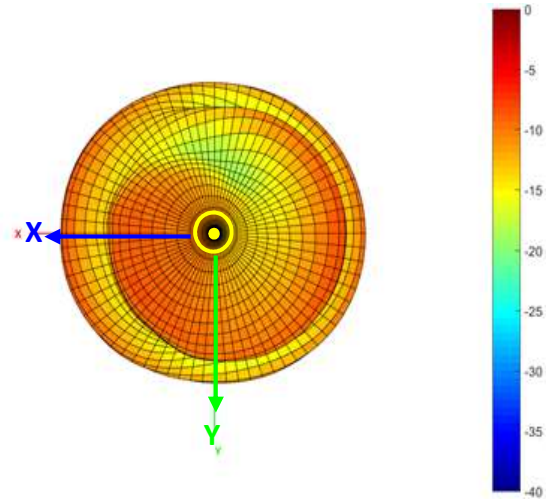


**3D RADIATION PATTERN (UNIT: dBi) AND EFFICIENCY vs FREQUENCY**

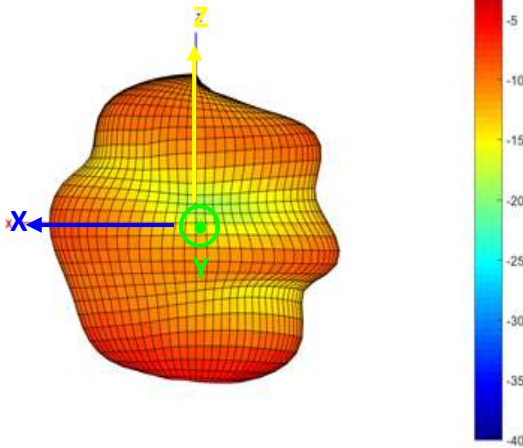
868MHz



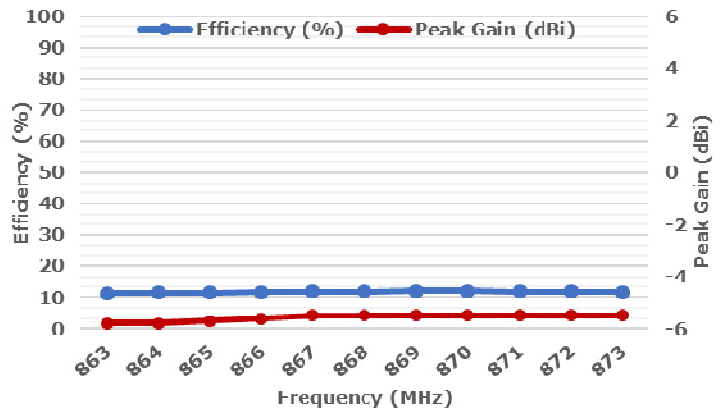
868MHz



868MHz

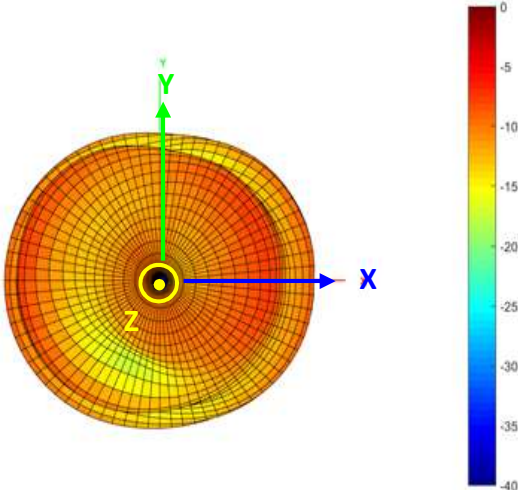


868MHz

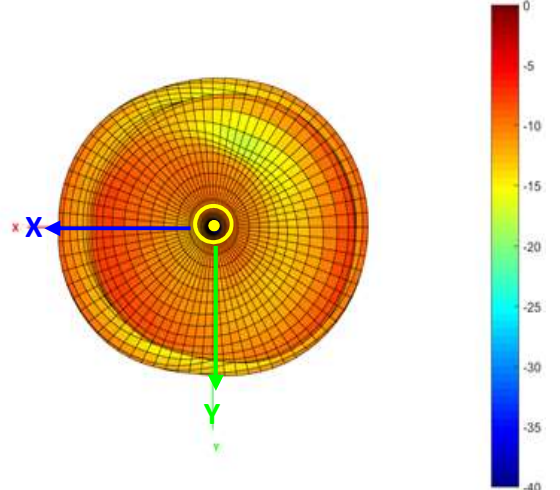


Freq.	863	864	865	866	867	868	869	870	871	872	873
Eff. (%)	11.4	11.5	11.6	11.7	11.9	11.9	12.00	12.00	11.9	11.8	11.7
P.G.	-5.8	-5.8	-5.7	-5.6	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5	-5.5

915MHz

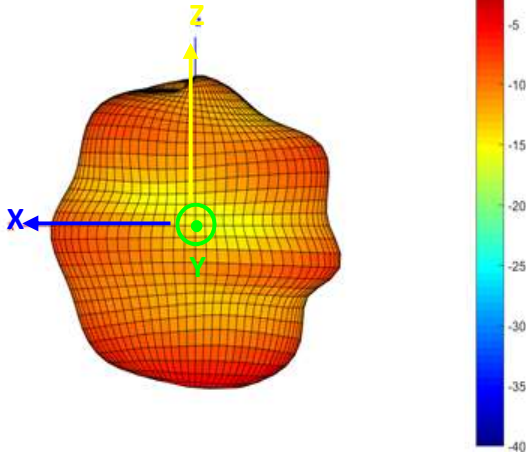


915MHz

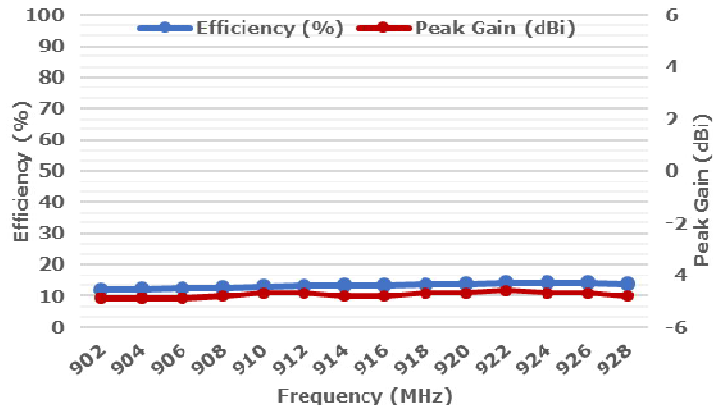


### 3D RADIATION PATTERN (UNIT: dBi) AND EFFICIENCY vs FREQUENCY (CONT.)

915MHz



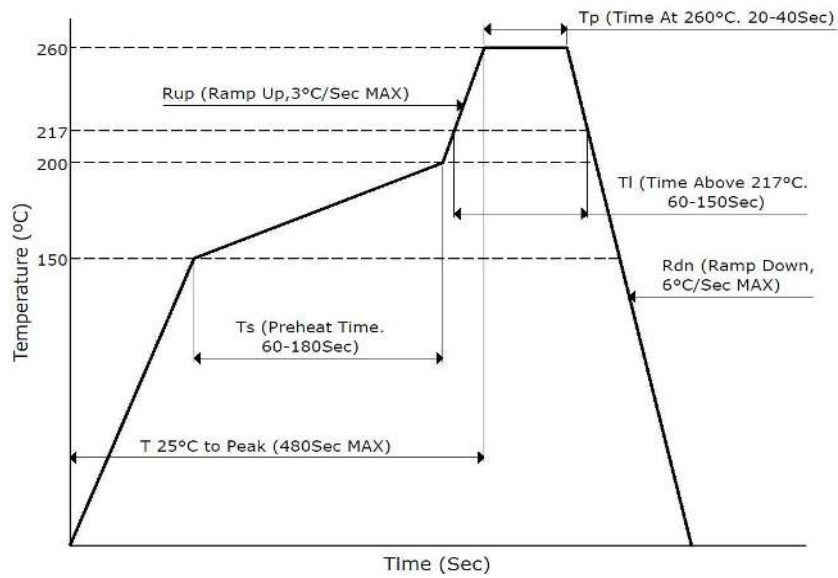
915MHz



Freq.	902	904	906	908	910	912	914	916	918	920	922	924	926	928
Eff. (%)	12.1	12.2	12.4	12.7	13.1	13.3	13.40	13.50	13.7	13.9	14.1	14.2	14.1	13.9
P.G.	-4.9	-4.9	-4.9	-4.8	-4.7	-4.7	-4.8	-4.8	-4.7	-4.7	-4.6	-4.7	-4.7	-4.8

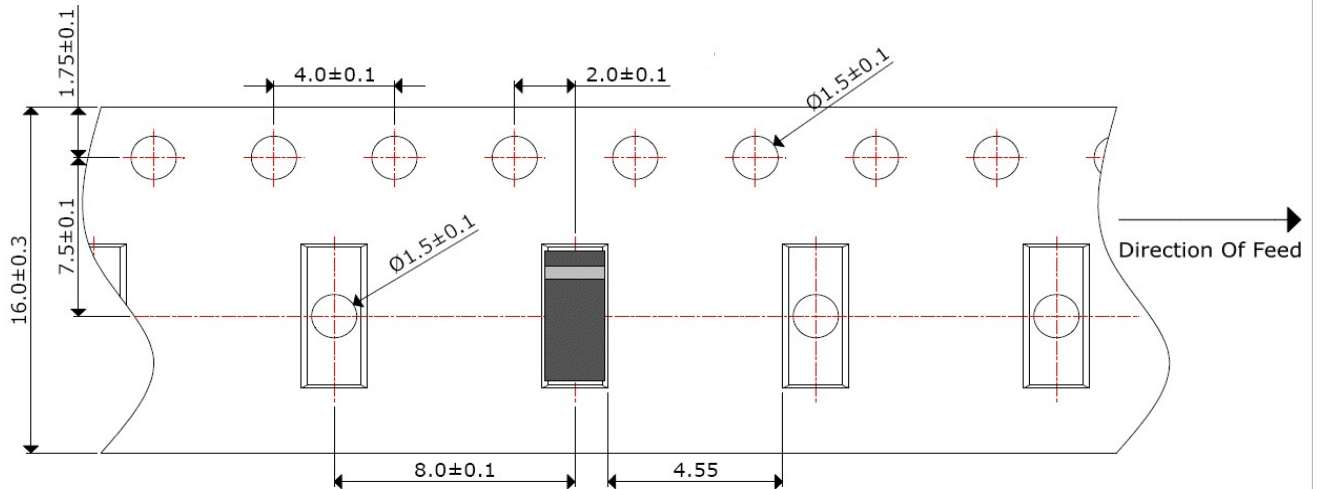
### SOLDERING CONDITIONS

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.)

900pcs / 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.