
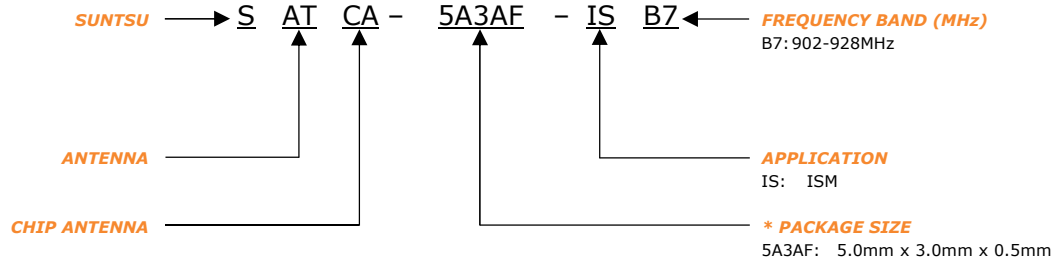


FEATURES	APPLICATIONS	
<ul style="list-style-type: none"> - ISM - Chip Type - Stable And Reliable Performance - 902-928MHz - SMT Process Compatible 	<ul style="list-style-type: none"> - ISM 915MHz Band System - Wireless Alarm And Security System - LoRa / Sigfox - IOT Applications - Machine To Machine Communication 	

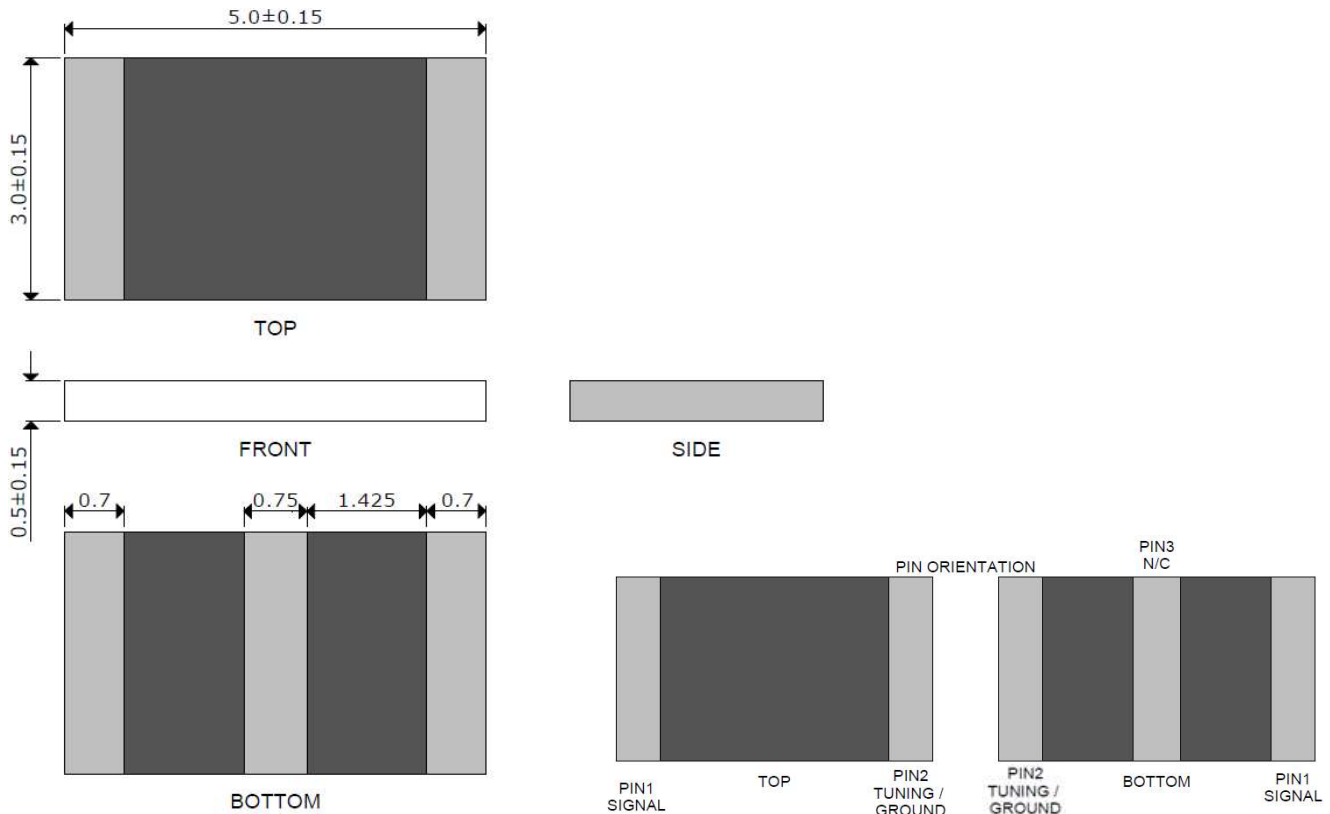
PART NUMBERING GUIDE



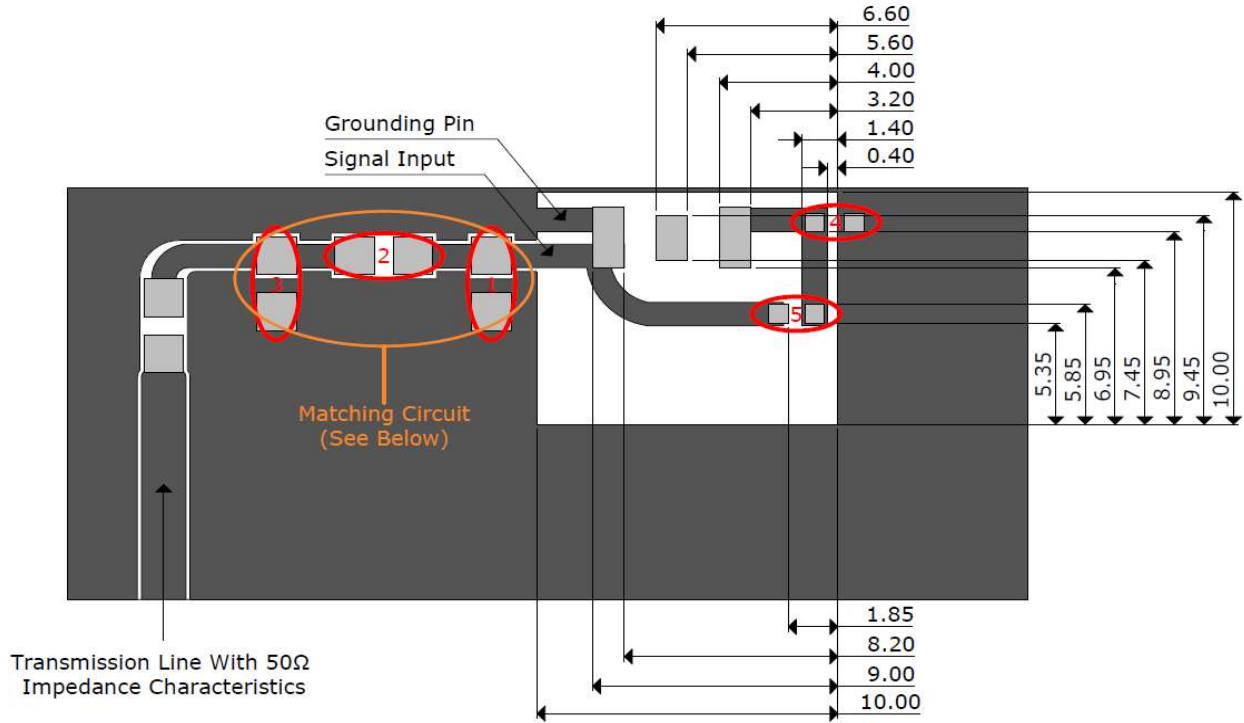
* Where letters denote decimal location A=.0, B=.1, C=.2, etc. Ex: B5=0.15, 3A5=3.05, 9A=9.0
To customize your parameters, contact a Suntsu representative.

ELECTRICAL PARAMETERS (At 25°C)	UNITS	MIN.	TYP.	MAX	REMARKS
Frequency Band	MHz	902		928	
Impedance	Ω		50		
Polarization			Linear		
Peak Gain	dBi		0.3		At 915MHz
Efficiency	%		52		At 915MHz
VSWR				2	At Center Frequency
Operating Temperature	°C	-40		85	

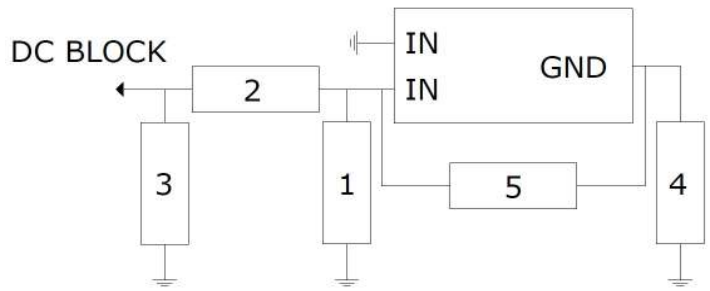
OUTLINE DRAWING (NOTE: All dimensions are in millimeters [mm], unless otherwise noted. Drawings are not to scale.)



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



System Matching Circuit Components			
Location	Description	Vendor	Tolerance
1	N/A	-	-
2	1.2nH, (0402)	DARFON	±0.1nH
3	0.2pF, (0402)	DARFON	±0.1pF
4 (Fine Tuning)	18pF, (0402)	DARFON	±2%
5 (Fine Tuning)	0.5pF, (0402)	DARFON	±0.1pF

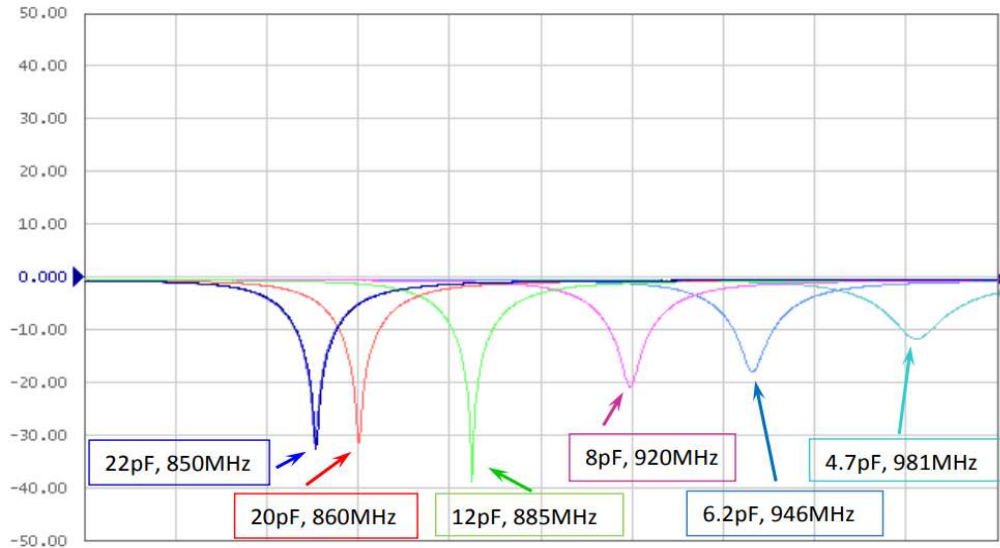


For these suggested values for the matching and tuning of components, the average frequency will be 915MHz on a standard 80 x 40mm² Evaluation board.

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

```
Tr1 S11 Log Mag 10.00dB/ Ref 0.000dB [F1 D&M]
Tr2 S11 Log Mag 10.00dB/ Ref 0.000dB [F1 D&M]
Tr3 S11 Log Mag 10.00dB/ Ref 0.000dB [F1 D&M]
Tr4 S11 Log Mag 10.00dB/ Ref 0.000dB [F1 D&M]
Tr5 S11 Log Mag 10.00dB/ Ref 0.000dB [F1 D&M]
Tr6 S11 Log Mag 10.00dB/ Ref 0.000dB [F1 D&M]
```

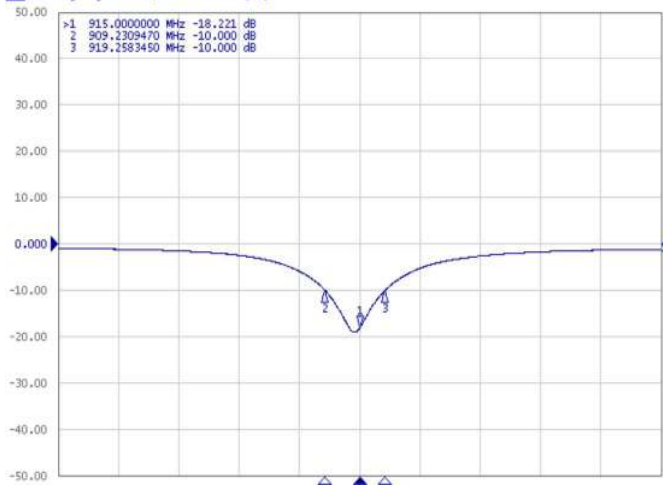
The below chart is for reference of Frequency Tuning then the element in location 5 is kept at 1pF.



ELECTRICAL TEST

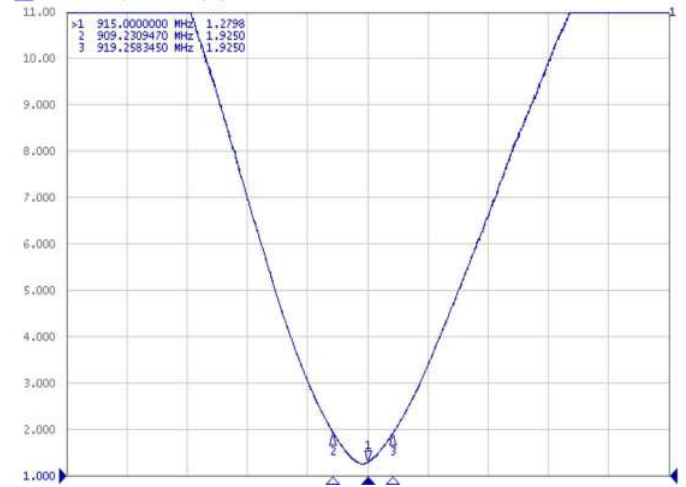
RETURN LOSS

[F1] S22 Log Mag 10.00dB/ Ref 0.000dB [F1]



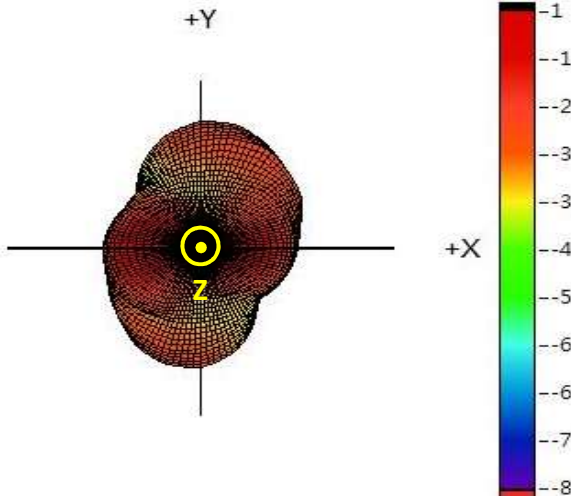
VSWR

[F1] S22 SWR 1.000/ Ref 1.000 [F1]

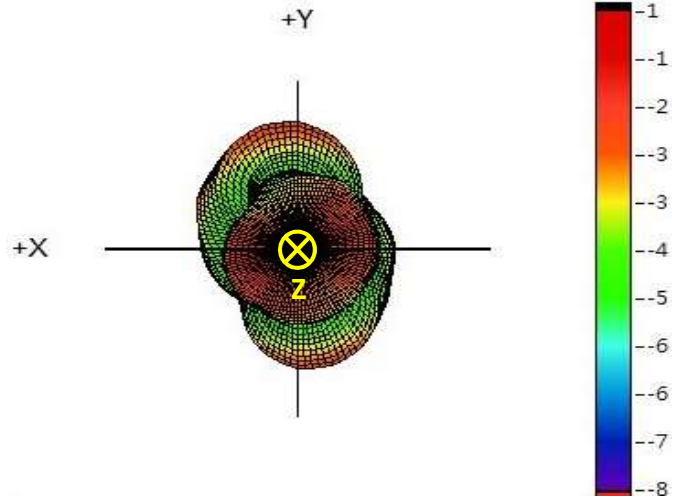


3D RADIATION PATTERN (UNIT: dBi) AND EFFICIENCY vs FREQUENCY

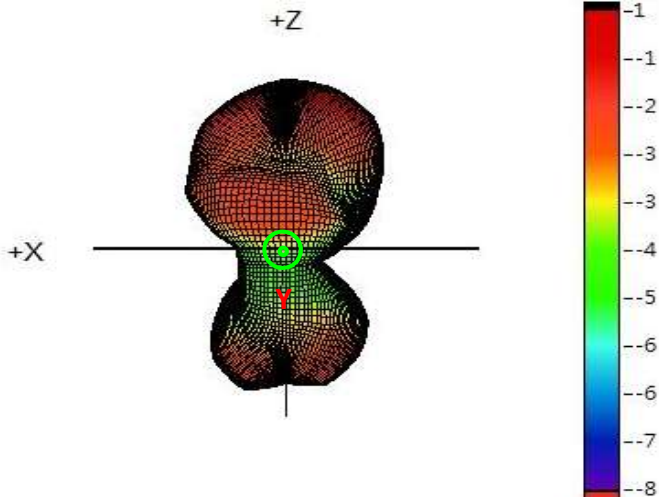
915MHz



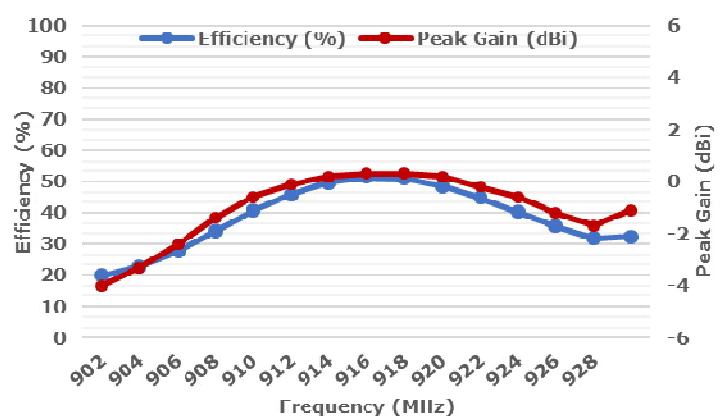
915MHz



915MHz



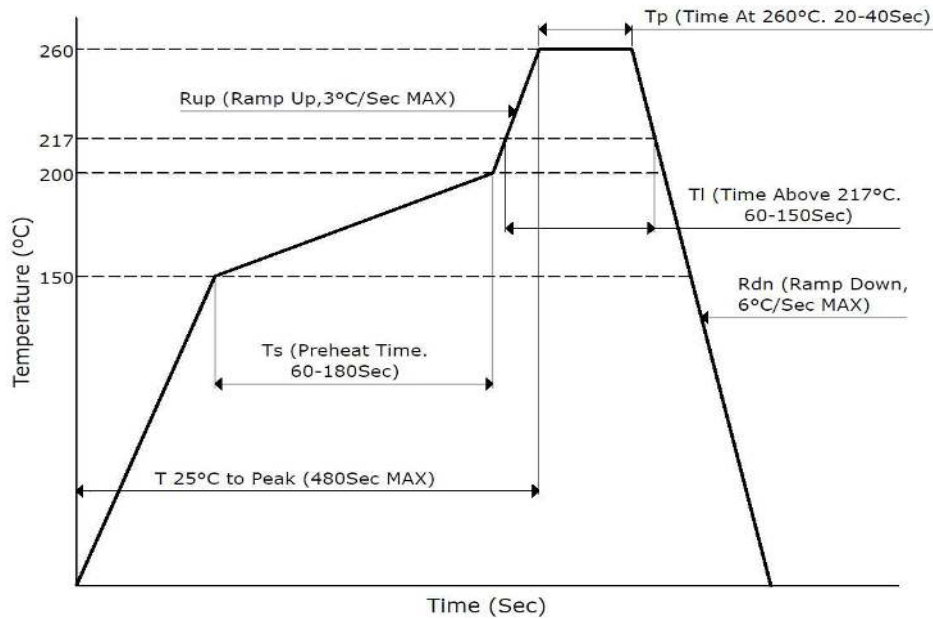
915MHz



Freq.	902	904	906	908	910	912	914	916	918	920	922	924	926	928
Eff. (%)	20	22.9	27.6	34.1	40.7	45.9	49.7	51.5	51.1	48.5	44.9	40.2	35.6	31.9
P.G.	-4	-3.3	-2.4	-1.4	-0.6	-0.1	0.2	0.3	0.3	0.2	-0.2	-0.6	-1.2	-1.7

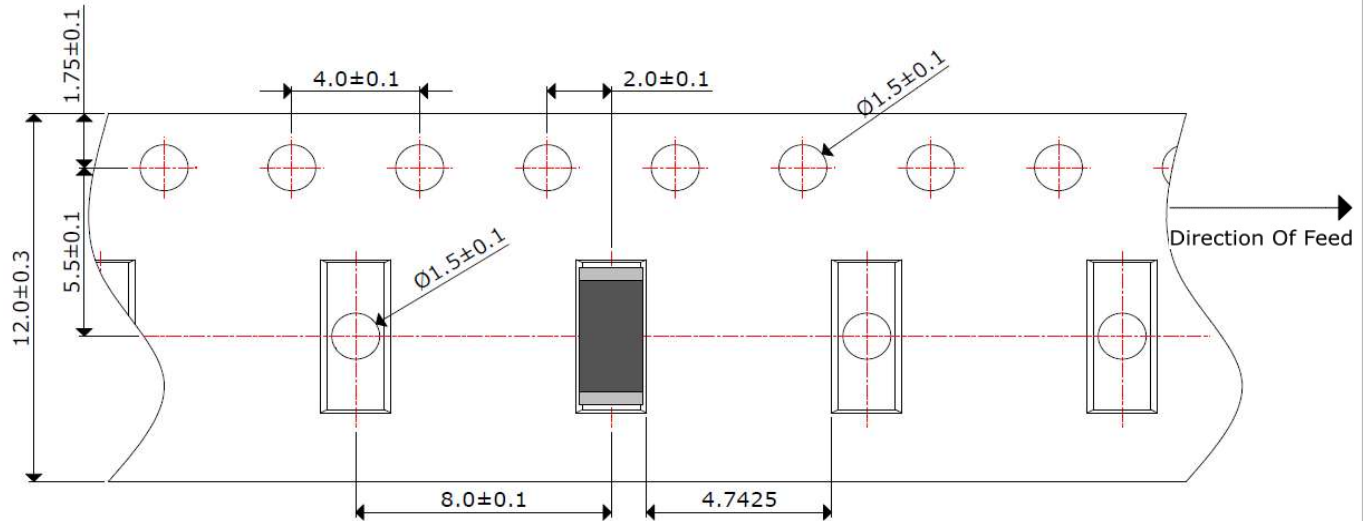
SOLDERING CONDITIONS

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.)

6,000Pcs / 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.