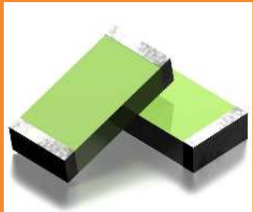


FEATURES	APPLICATIONS	
<ul style="list-style-type: none"> - DECT - Digital Enhanced Cordless Telecommunications - Chip Type - Stable And Reliable Performance - 1880-1930MHz - SMT Process Compatible 	<ul style="list-style-type: none"> - Cordless Home Telephones - DECT Internetworking - Cordless Terminal Mobility - Wireless Local Loop (WLL) 	

PART NUMBERING GUIDE

SUNTSU → **S** **AT** **CA** - **3C1GF** - **DE** **B1**

ANTENNA → **AT**

CHIP ANTENNA → **CA**

FREQUENCY BAND (MHz)

B1: 1880-1930MHz

APPLICATION

DE: DECT

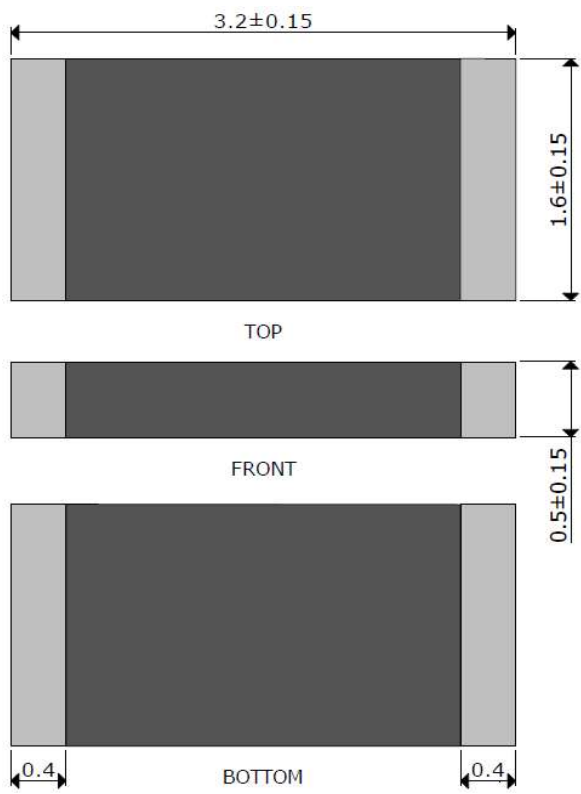
*** PACKAGE SIZE**

3C1GF: 3.2mm x 1.6mm x 0.5mm

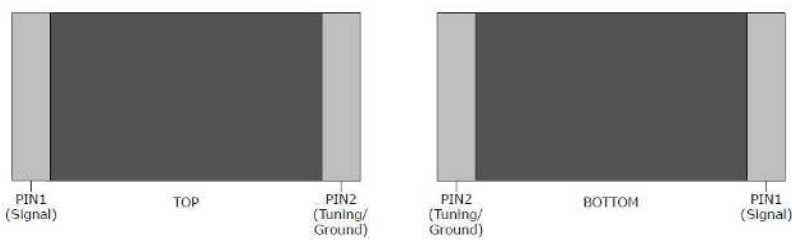
* Where letters denote decimal location A=.0, B=.1, C=.2, etc. Ex: B5=0.15, 3A5=3.05, 9A=9.0
To customize your parameters, contact a Suntsu representative.

ELECTRICAL PARAMETERS (At 25°C)	UNITS	MIN.	TYP.	MAX	REMARKS
Frequency Band	MHz	1880		1930	
Impedance	Ω		50		
Polarization			Linear		
Peak Gain	dBi		1.5		At 1905MHz
Efficiency	%		74		At 1905MHz
VSWR				2	At Center Frequency
Operating Temperature	°C	-40		85	

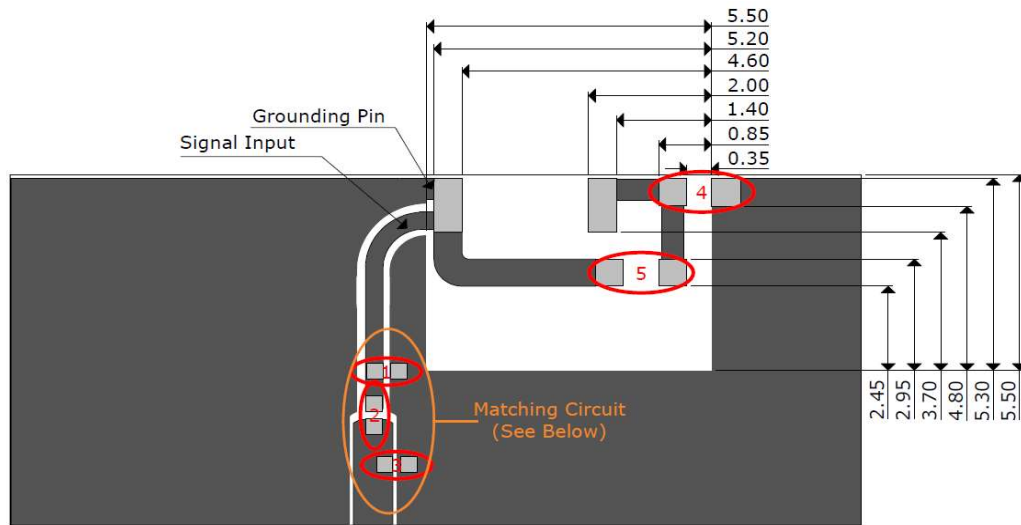
OUTLINE DRAWING (NOTE: All dimensions are in millimeters [mm], unless otherwise noted. Drawings are not to scale.)



PIN ORIENTATION

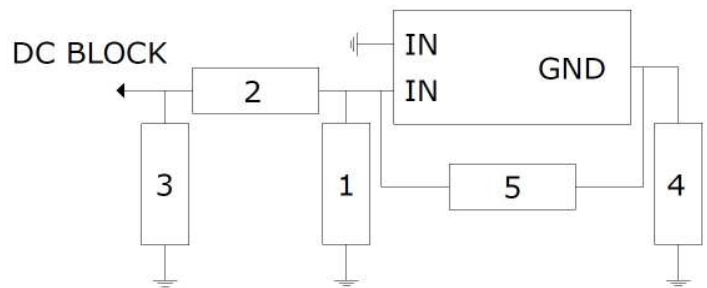


RECOMMENDED LAND PATTERN & FREQUENCY TUNING SCENARIO CIRCUIT (NOTE: All dimensions are in mm, unless otherwise noted. Drawings are not to scale.)



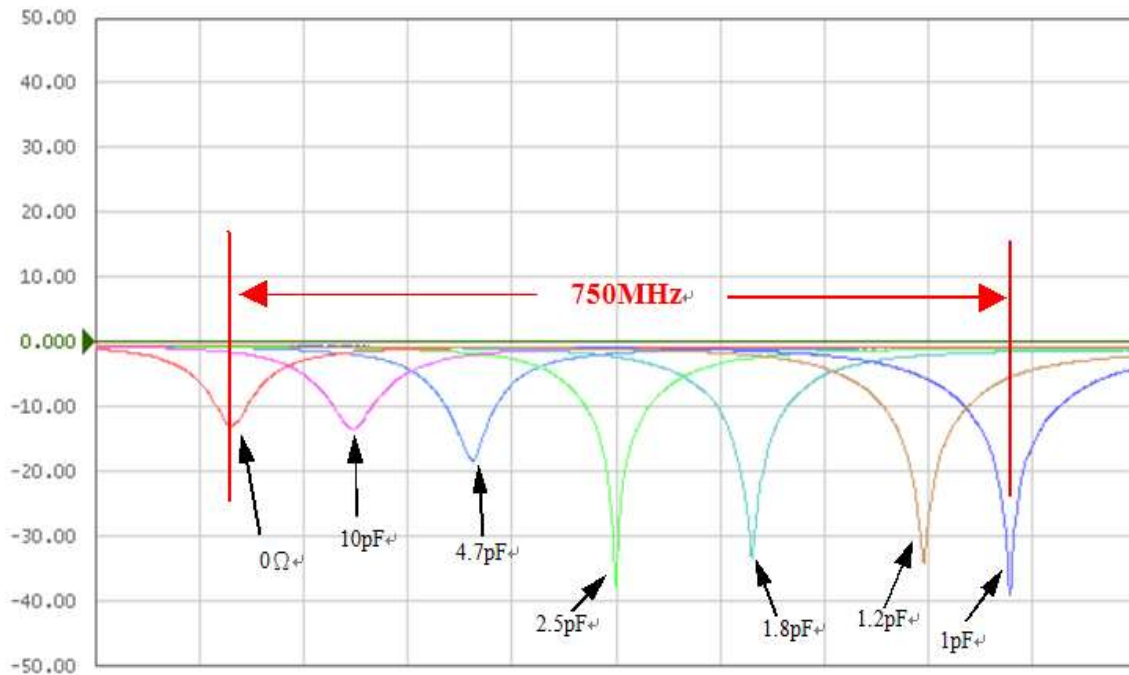
Transmission Line With 50Ω Impedance Characteristics

System Matching Circuit Components			
Location	Description	Vendor	Tolerance
1	1.2pF (0402)	DARFON	±0.1pF
2	0Ω, (0402)	-	-
3	N/A	-	-
4	2.5pF (0402)	DARFON	±0.1pF
5 (Fine Tuning)	0.5pF (0402)	DARFON	±0.05pF



For these suggested values for the matching and tuning of components, the average frequency will be around 1905MHz on a standard 80 x 40mm² Evaluation board.

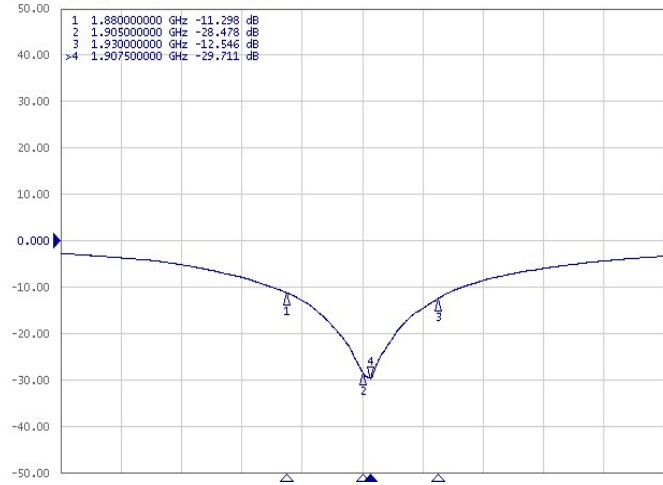
Please note, these are average reference values which may need to be changed when different circuit boards or manufacturers are used.



ELECTRICAL TEST

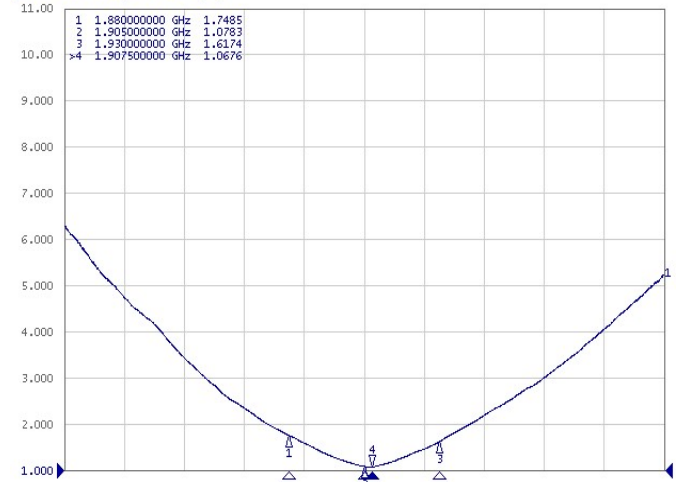
RETURN LOSS

S11 Log Mag 10.00dB/ Ref 0.000dB [F1]



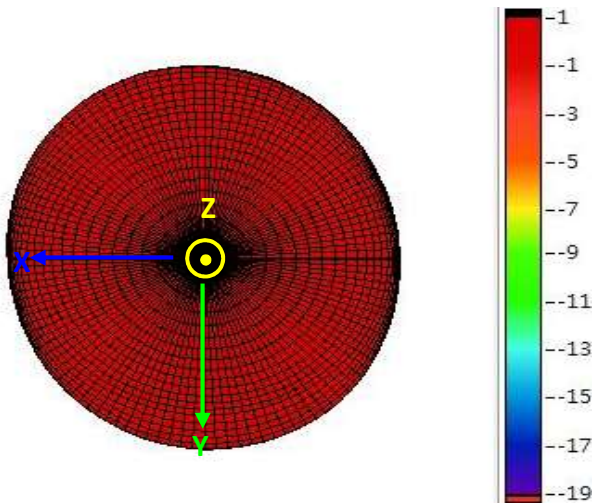
VSWR

S11 SWR 1.000/ Ref 1.000 [F1]

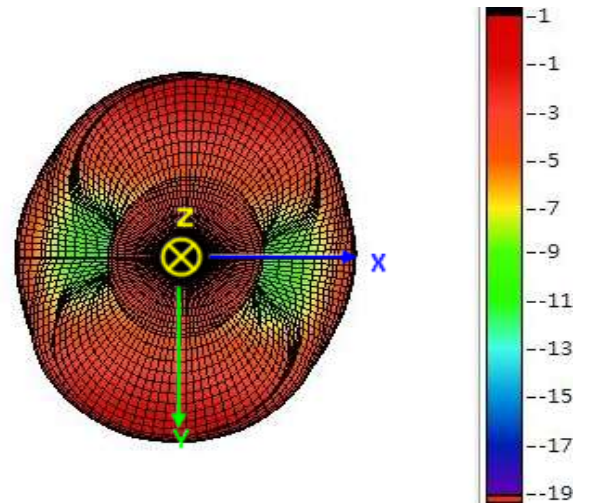


3D RADIATION PATTERN (UNIT: dBi) AND EFFICIENCY vs FREQUENCY

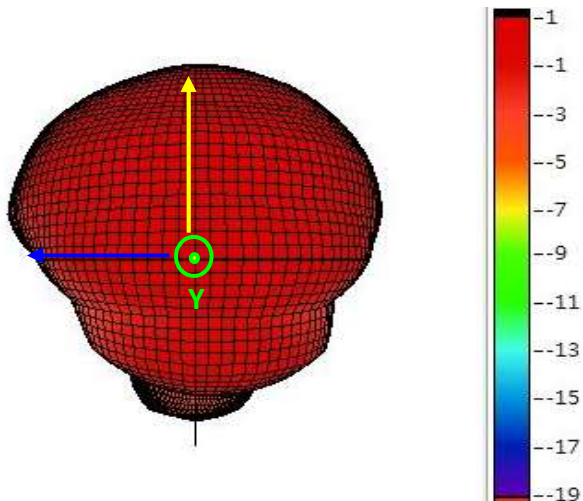
1880MHz



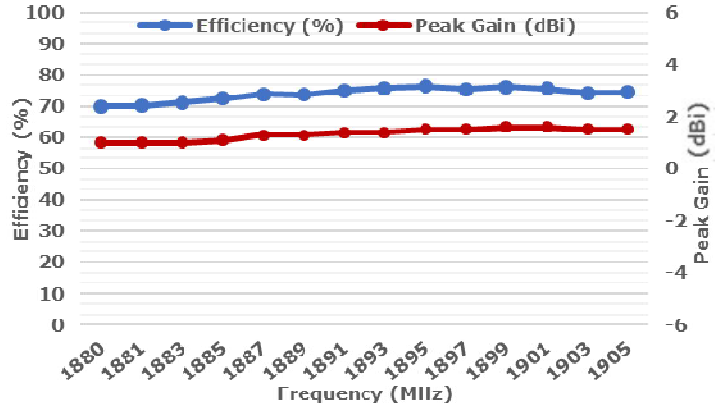
1880MHz



1880MHz



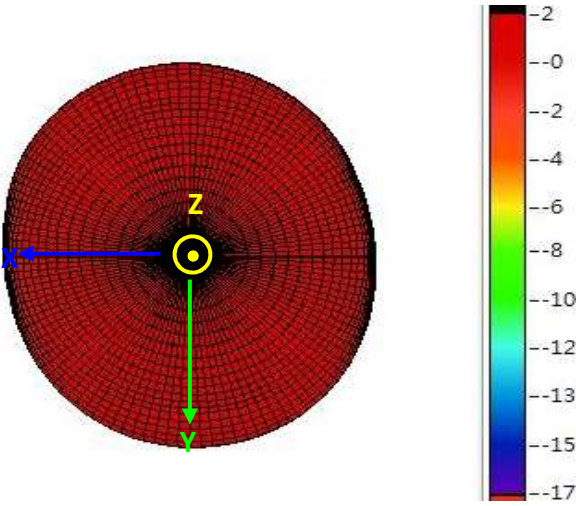
1880MHz



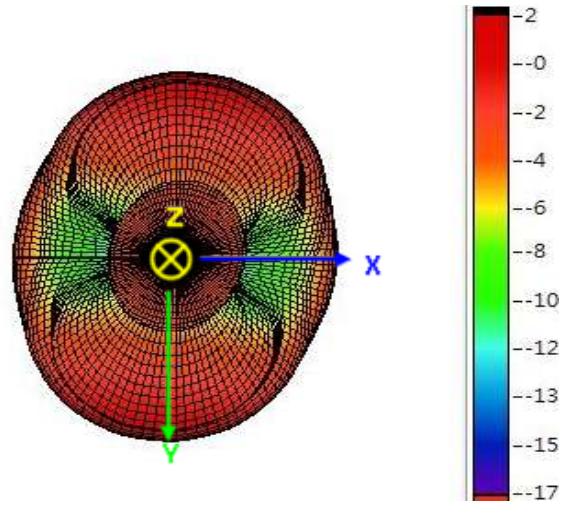
Freq.	1880	1881	1883	1885	1887	1889	1891	1893	1895	1897	1899	1901	1903	1905
Eff. (%)	70	70.2	71.1	72.6	73.9	73.7	75.00	75.80	76.3	75.5	76.1	75.6	74.3	74.5
P.G.	1	1	1	1.1	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.5	1.5

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

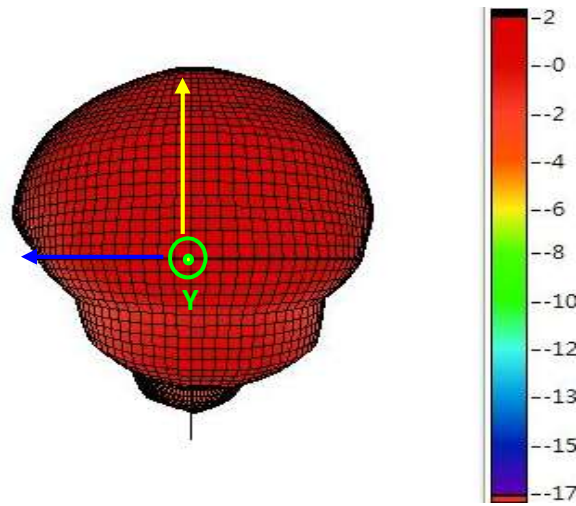
1905MHz



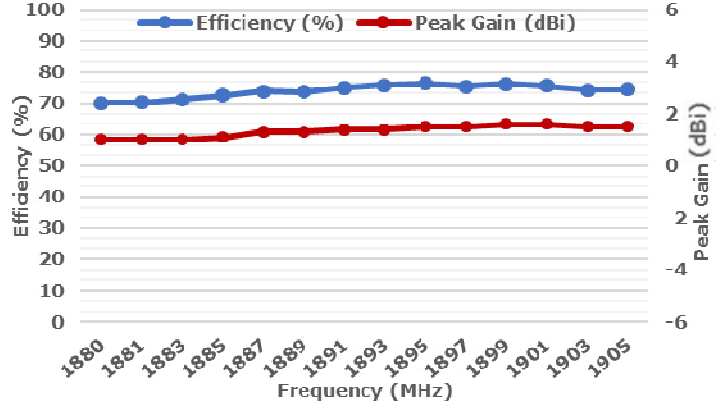
1905MHz



1905MHz

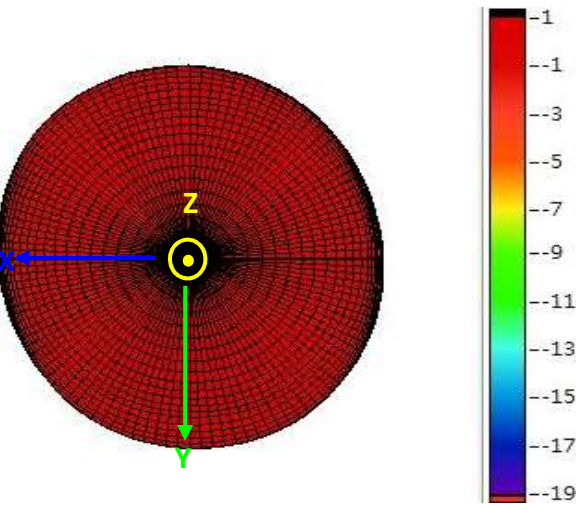


1905MHz

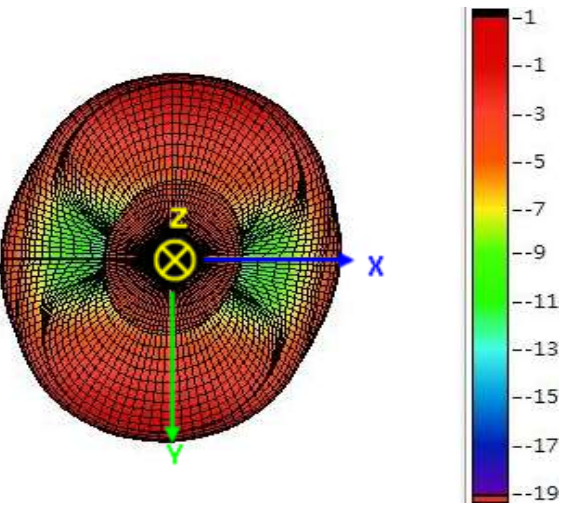


Freq.	1880	1881	1883	1885	1887	1889	1891	1893	1895	1897	1899	1901	1903	1905
Eff. (%)	70	70.2	71.1	72.6	73.9	73.7	75.00	75.80	76.3	75.5	76.1	75.6	74.3	74.5
P.G.	1	1	1	1.1	1.3	1.3	1.4	1.4	1.5	1.5	1.6	1.6	1.5	1.5

1930MHz

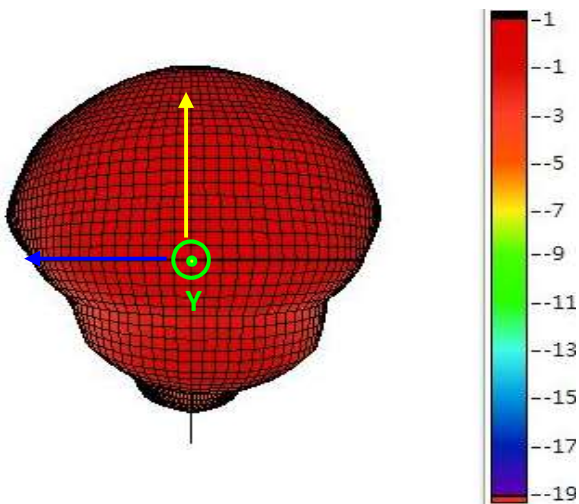


1930MHz

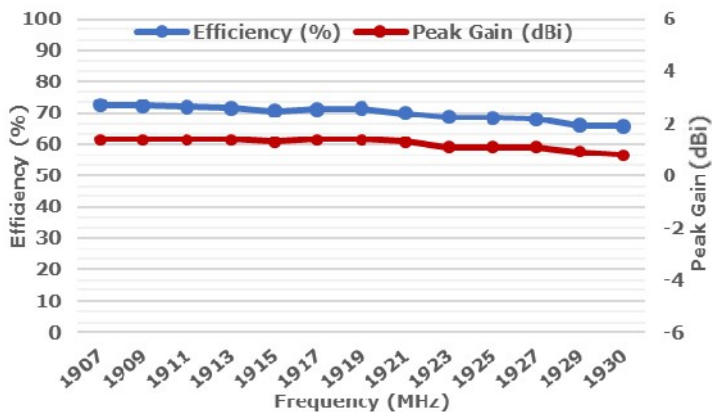


3D RADIATION PATTERN (UNIT: dBi) AND EFFICIENCY vs FREQUENCY (CONT.)

1930MHz



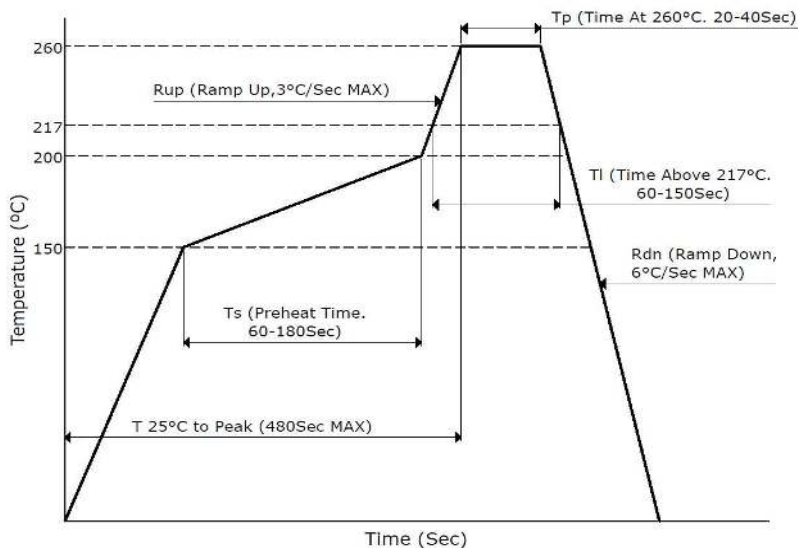
1930MHz



Freq.	1907	1909	1911	1913	1915	1917	1919	1921	1923	1925	1927	1929	1930
Eff. (%)	72.6	72.3	72	71.5	70.6	71.2	71.40	69.90	68.7	68.5	68.1	66.1	65.8
P.G.	1.4	1.4	1.4	1.4	1.3	1.4	1.4	1.3	1.1	1.1	1.1	0.9	0.8

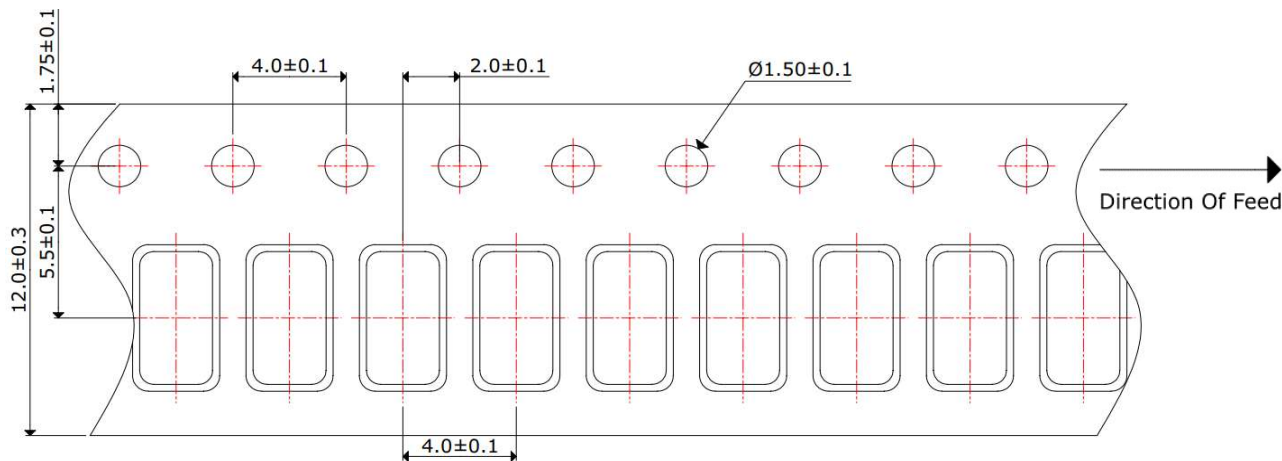
SOLDERING CONDITIONS

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.)

5,000pcs / 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.