

FEATURES	APPLICATIONS
<ul style="list-style-type: none"> <li>- <math>\pm 10\text{ppm}/\pm 10\text{ppm}</math> (Tolerance/Stability) Available</li> <li>- Miniature Package</li> <li>- AT-Cut Fundamental</li> <li>- RoHS Compliant</li> <li>- Tape and Reel</li> </ul>	<ul style="list-style-type: none"> <li>- Microprocessors</li> <li>- PCMCIA</li> <li>- Communication</li> <li>- Test Equipment</li> </ul>



**PART NUMBERING GUIDE**

SUNTSU CRYSTAL → **SXT 63 2 18 A A 48 T - 20.000M** ← FREQUENCY (MHz)

6.0mm x 3.5mm

2 PAD

LOAD CAPACITANCE  
S: SERIES  
7 - 30: 7pF - 30pF

FREQUENCY TOLERANCE  
A:  $\pm 50\text{ppm}$   
B:  $\pm 30\text{ppm}$   
C:  $\pm 25\text{ppm}$   
D:  $\pm 20\text{ppm}$   
E:  $\pm 15\text{ppm}$   
F:  $\pm 10\text{ppm}$

Cage Code: 4GUT4  
To customize your parameters contact a Suntsu representative.  
\* For frequency stability option F contact a Suntsu representative.  
\*\* For operating temperatures up to  $-55\sim 125^\circ\text{C}$  contact a Suntsu representative.

MODE OF OPERATION  
BLANK: FUNDAMENTAL  
T: THIRD OVERTONE

OPERATING TEMPERATURE RANGE\*\*  
07:  $0^\circ\text{C}$  to  $+70^\circ\text{C}$   
16:  $-10^\circ\text{C}$  to  $+60^\circ\text{C}$   
17:  $-10^\circ\text{C}$  to  $+70^\circ\text{C}$   
27:  $-20^\circ\text{C}$  to  $+70^\circ\text{C}$   
38:  $-30^\circ\text{C}$  to  $+85^\circ\text{C}$   
48:  $-40^\circ\text{C}$  to  $+85^\circ\text{C}$

FREQUENCY STABILITY  
A:  $\pm 50\text{ppm}$   
B:  $\pm 30\text{ppm}$   
C:  $\pm 25\text{ppm}$   
D:  $\pm 20\text{ppm}$   
E:  $\pm 15\text{ppm}$   
F:  $\pm 10\text{ppm}$ \*

ELECTRICAL PARAMETERS	UNITS	MIN.	TYP.	MAX.	REMARKS
Frequency Range	MHz	7		54	AT-Cut Fundamental.
		40		100	3 <sup>rd</sup> Overtone.
Frequency Tolerance at $+25^\circ\text{C}$	ppm	-10		+10	See part numbering guide for options.
Frequency Stability vs. Operating Temperature (Ref. $25^\circ\text{C}$ )	ppm	-10		+10	See part numbering guide for options.
vs. Aging		-3		+3	First year @ $+25^\circ\text{C}$ .
Operating Temperature	$^\circ\text{C}$	-40		+85	See part numbering guide for options.
Storage Temperature	$^\circ\text{C}$	-40		+125	
Load Capacitance	pF	7		30	See part numbering guide for options.
Shunt Capacitance	pF			7	
Drive Level	$\mu\text{W}$		100	500	
Insulation Resistance	M $\Omega$	500			@ $100\text{V}_{\text{DC}} \pm 15\text{V}$ .
Equivalent Series Resistance	7.000MHz ~ 11.999MHz			100	AT-Cut Fundamental.
	12.000MHz ~ 14.999MHz			60	AT-Cut Fundamental.
	15.000MHz ~ 29.999MHz			50	AT-Cut Fundamental.
	30.000MHz ~ 54.000MHz			40	AT-Cut Fundamental.
	40.000MHz ~ 100.000MHz			50	3 <sup>rd</sup> Overtone.

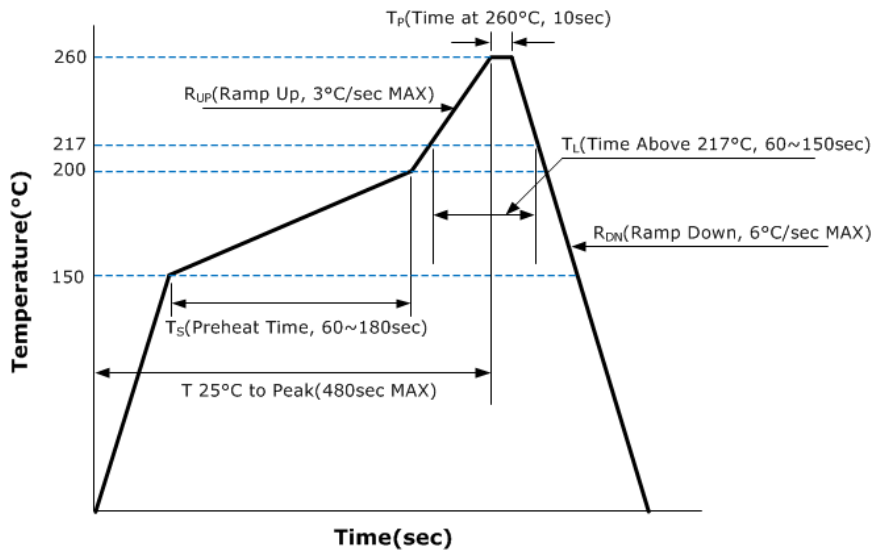
**OUTLINE DRAWING**

NOTE: Dimensions in millimeters (mm).

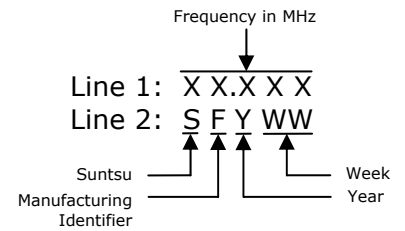
### ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

Temperature Cycling	MIL-STD-883, Method 1010, Condition B
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-883, Method 2002, Condition B
Vibration	MIL-STD-883, Method 2007, Condition A
Moisture Resistance	MIL-STD-883, Method 1004
Moisture Sensitivity	J-STD-020, MSL 1
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition K
Resistance to Solvents	MIL-STD-202, Method 215
Solderability	MIL-STD-883, Method 2003

### REFLOW PROFILE

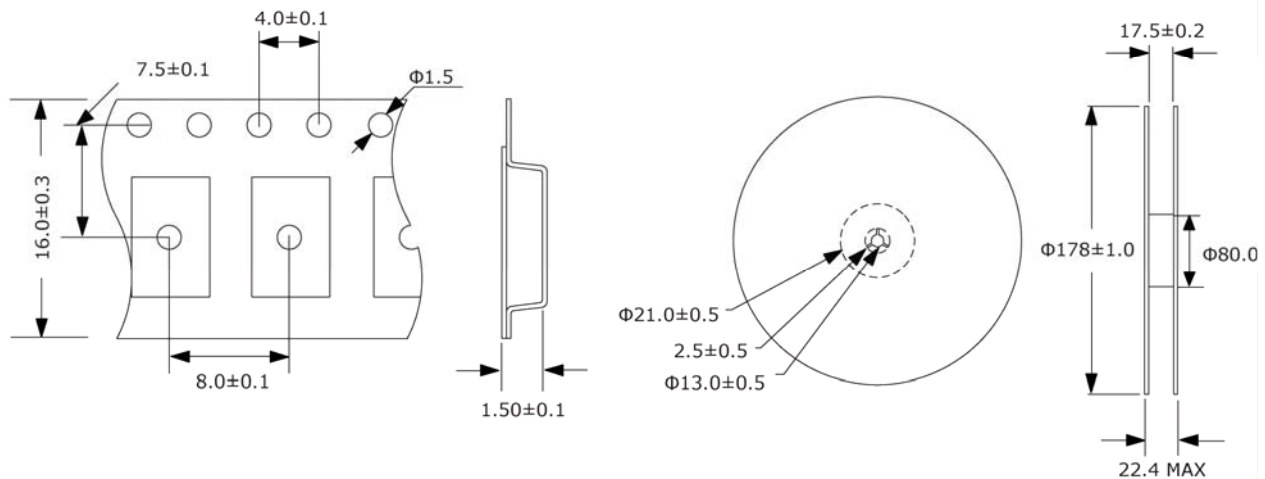


### MARKING



### TAPE AND REEL DIMENSIONS

1,000pcs/reel



NOTE: Dimensions in millimeters (mm); drawing is not to scale.