

FEATURES	APPLICATIONS
<ul style="list-style-type: none"> <li>- <math>\pm 10\text{ppm}/\pm 10\text{ppm}</math> (Tolerance/Stability) Available</li> <li>- Ultra-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>- Bluetooth</li> <li>- Wireless LAN</li> <li>- High Density Applications</li> </ul>



**PART NUMBERING GUIDE**

**SUNTSU CRYSTAL** → **SXT 11 4 12 A A 48 - 20.000M** ← **FREQUENCY (MHz)**

**1.6mm x 1.2mm**  
**4 PAD**  
**LOAD CAPACITANCE**  
 S: SERIES  
 8 - 12: 8pF - 12pF  
**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:  $\pm 10\text{ppm}$

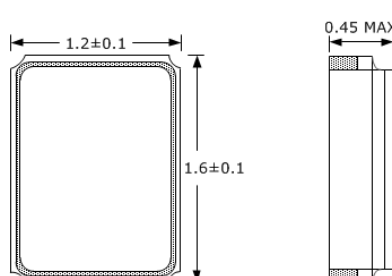
**OPERATING TEMPERATURE RANGE**  
 07: 0°C to + 70°C  
 16: -10°C to + 60°C  
 17: -10°C to + 70°C  
 27: -20°C to + 70°C  
 38: -30°C to + 85°C  
 48: -40°C to + 85°C

**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:  $\pm 10\text{ppm}$ \*

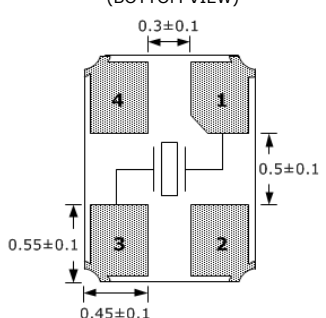
Cage Code: 4GUT4  
 To customize your parameters contact a Suntsu representative.  
 \* For frequency stability option F contact a Suntsu representative.

ELECTRICAL PARAMETERS		UNITS	MIN.	TYP.	MAX.	REMARKS
Frequency Range		MHz	24		54	AT-Cut Fundamental.
Frequency Tolerance at +25°C		ppm	-10		+10	See part numbering guide for options.
Frequency Stability vs. Operating Temperature (Ref. 25°C) vs. Aging		ppm	-10		+10	See part numbering guide for options.
			-2		2	First year @ +25°C.
Operating Temperature		°C	-40		+85	See part numbering guide for options.
Storage Temperature		°C	-40		+85	
Load Capacitance		pF	8		12	See part numbering guide for options.
Shunt Capacitance		pF			3	
Drive Level		μW		10	100	
Insulation Resistance		MΩ	500			@ 100V <sub>DC</sub> ± 15V.
Equivalent Series Resistance	26.000MHz ~ 29.999MHz	Ω			150	AT-Cut Fundamental.
	30.000MHz ~ 54.000MHz				100	AT-Cut Fundamental.

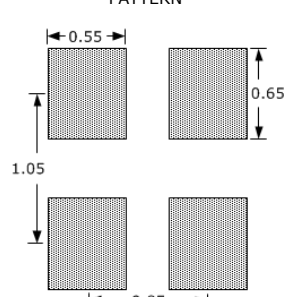
**OUTLINE DRAWING**



**ELECTRODE ARRANGEMENT (BOTTOM VIEW)**



**RECOMMENDED LAND PATTERN**

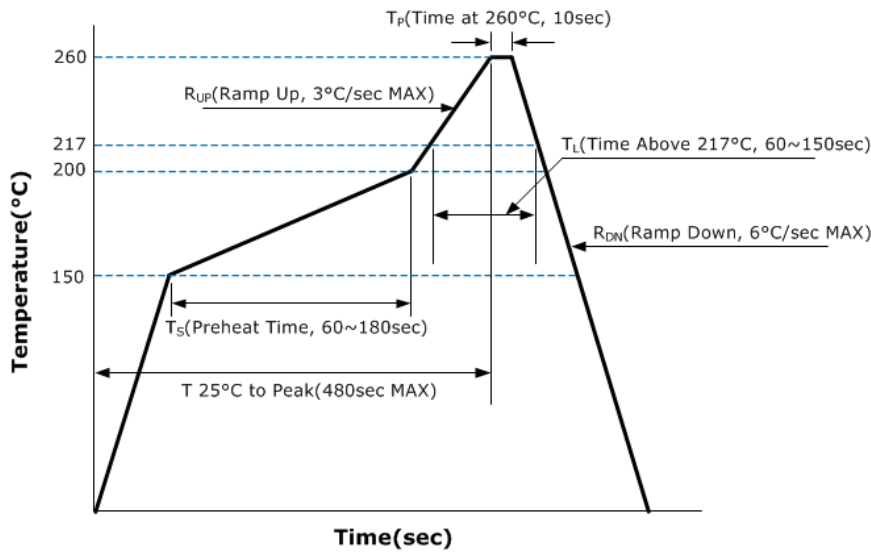


NOTE: Dimensions in millimeters (mm).

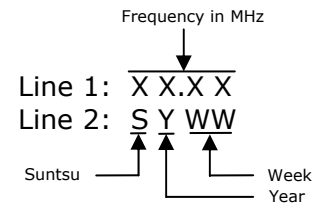
### ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

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

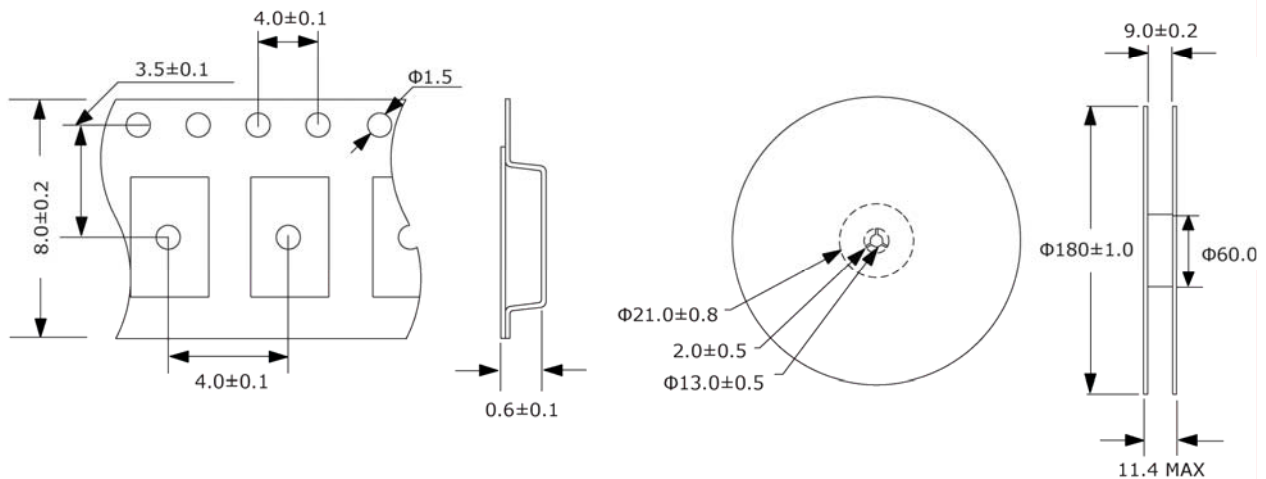


### MARKING



### TAPE AND REEL DIMENSIONS

3,000pcs/reel



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