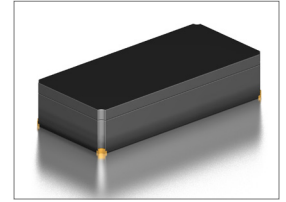
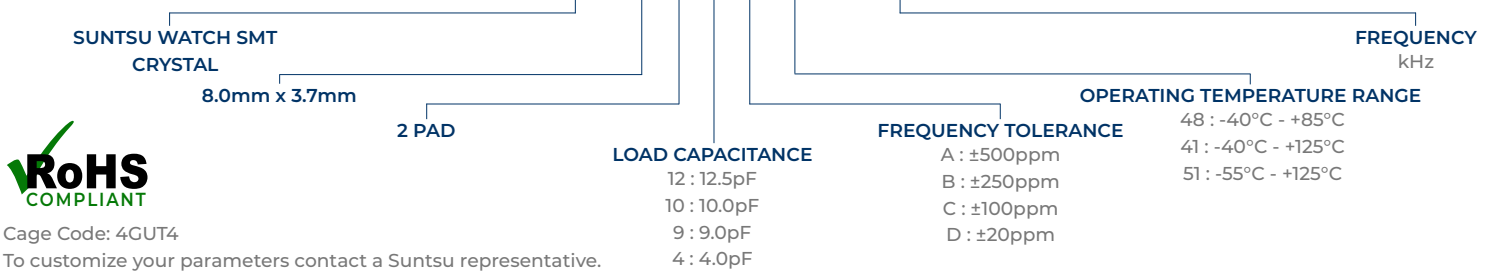


Features
<ul style="list-style-type: none"> <li>±20ppm (Tolerance) Available</li> <li>High Shock and Vibration Resistant</li> <li>Tape and Reel</li> </ul>

Applications
<ul style="list-style-type: none"> <li>Real Time Clock</li> <li>Measurement instruments</li> <li>Wireless Applications</li> <li>Harsh Environments</li> </ul>


**Part Numbering Guide**

**SWS 83 2 12 D 48 - 40.000K**



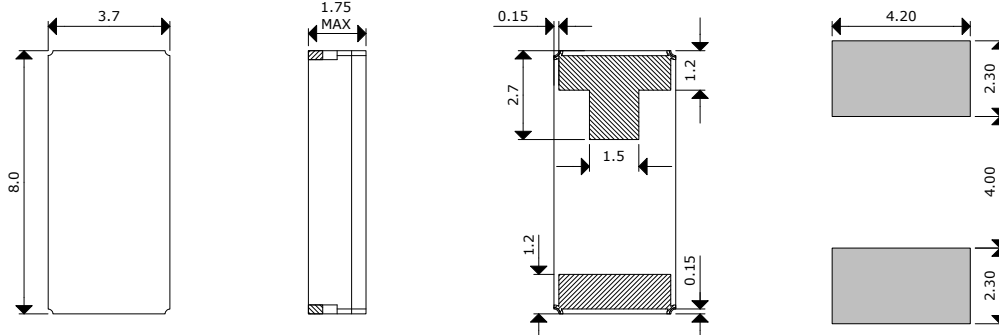
Cage Code: 4GUT4

To customize your parameters contact a Suntsu representative.

Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency Range	kHz	30		2000	See part numbering guide for options.
Frequency Tolerance at +25°C	ppm	±20		±100	30kHz - 200kHz
		±100		±250	201kHz - 560kHz
		±100		±500	561kHz - 2000kHz
Frequency Stability vs. Aging	ppm	-3		+3	First year @ +25°C.
Frequency Coefficient (β)	ppm/T <sup>2</sup>	-0.039	-0.035	-0.032	
Operating Temperature	°C	-55		+125	See part numbering guide for options.
Storage Temperature	°C	-55		+125	
Load Capacitance	pF	9.0	4.0	12.5	30kHz - 200kHz
			10.0		201kHz - 560kHz
					561kHz - 2000kHz
Series Resistance	kΩ		40	60	30kHz - 200kHz
			1.4	3.5	201kHz - 560kHz
			0.12	0.04	561kHz - 2000kHz
Turnover Temperature	°C	20	25	30	30kHz - 200kHz
		27	32	37	201kHz - 560kHz
		28	33	38	561kHz - 2000kHz
Drive Level	μW			1.0	
Insulation Resistance	MΩ	500			@ 100VDC ± 15V.

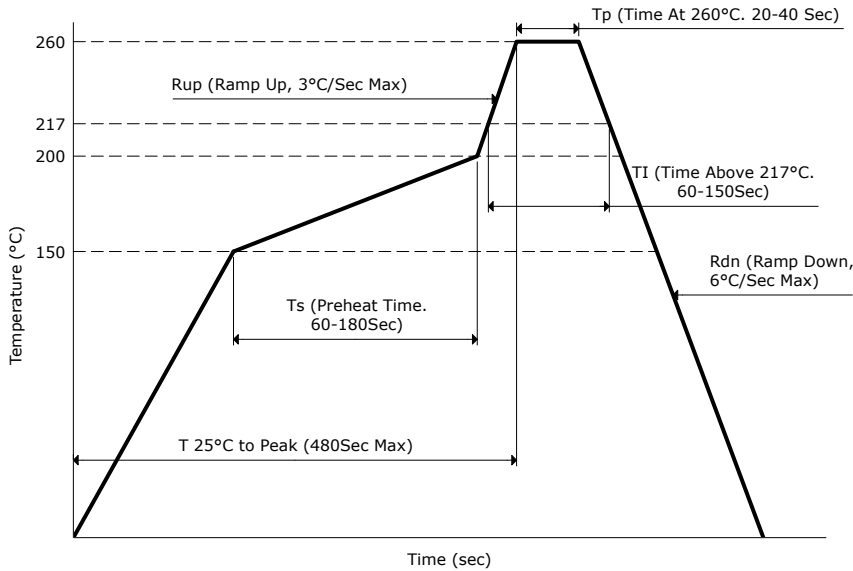
**Outline Drawing & Land Pattern**

All dimensions are in millimeters (mm) unless otherwise noted. Drawings are not to scale.



Environmental Specifications		Mechanical Specifications	
Temperature Cycling	MIL-STD-883, Method 1010, Condition B	Shock Resistance	5000g, 0.3ms, ½sine
Fine Leak Test	MIL-STD-883, Method 1014, Condition A	Vibration Resistance	20g / 10-2000Hz
Gross Leak Test	MIL-STD-883, Method 1014, Condition C	Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition K
Moisture Resistance	MIL-STD-883, Method 1004	Resistance to Solvents	MIL-STD-202, Method 215
Moisture Sensitivity	J-STD-020, MSL 1	Solderability	MIL-STD-883, Method 2003

**Reflow Profile & Part Marking**



Line 1: XXXXX  
 ↑  
 Lot Code

**Tape And Reel Dimensions**

All dimensions are in millimeters (mm) unless otherwise noted. Drawings are not to scale.

4,000pcs / Reel

