

FEATURES	APPLICATIONS
<ul style="list-style-type: none"> <li>- ±10ppm (Tolerance) Available</li> <li>- RoHS Compliant</li> <li>- Miniature Package</li> </ul>	<ul style="list-style-type: none"> <li>- Real Time Clock</li> <li>- Measurement instruments</li> <li>- Wireless Applications</li> </ul>



**PART NUMBERING GUIDE**

**SUNTSU WATCH CRYSTAL** → **SWT 62 2 12 D 48 - 32.768kHz** ← **FREQUENCY (kHz)**

**6.2mm x 2.1mm** → **OPERATING TEMPERATURE RANGE**  
 16: -10°C to + 60°C  
 48: -40°C to + 85°C

**2 LEAD** → **FREQUENCY TOLERANCE**  
 D: ±20ppm  
 F: ±10ppm

**LOAD CAPACITANCE**  
 18: 18.0pF  
 12: 12.5pF  
 10: 10.0pF  
 8: 8.0pF  
 6: 6.0pF

Cage Code: 4GUT4  
 To customize your parameters contact a Suntsu representative.

ELECTRICAL PARAMETERS	UNITS	MIN.	TYP.	MAX.	REMARKS
Frequency Range	kHz		32.768		
Frequency Tolerance at +25°C	ppm	-20		+20	See part numbering guide for options.
Frequency Stability vs. Aging	ppm	-3		+3	First year @ +25°C.
Frequency Coefficient (β)	ppm/T <sup>2</sup>	-0.040	-0.035	-0.030	
Operating Temperature	°C	-40		+85	See part numbering guide for options.
Turnover Temperature	°C	+20	+25	+30	
Storage Temperature	°C	-55		+125	
Load Capacitance	pF		12.5		See part numbering guide for options.
Shunt Capacitance	pF		1.5		
Drive Level	μW			1	
Insulation Resistance	MΩ	500			@ 100V <sub>DC</sub> ± 15V.
Equivalent Series Resistance	kΩ			50	

OUTLINE DRAWING	MARKING
	<p>Line 1: <b>XX.XXX Y WW</b></p> <p>Frequency in kHz → <b>XX.XXX</b> → <b>Y</b> → <b>WW</b> → Week</p> <p>Year</p>
NOTE: Dimensions in millimeters (mm).	

ENVIRONMENTAL SPECIFICATIONS		MECHANICAL SPECIFICATIONS	
Temperature Cycling	MIL-STD-883, Method 1010, Condition B	Moisture Resistance	MIL-STD-883, Method 1004
Fine Leak Test	MIL-STD-883, Method 1014, Condition A	Moisture Sensitivity	Hermetically Sealed, MSL=N/A: Not Applicable
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