

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



PART NUMBERING GUIDE	
<p>SUNTSU WATCH CRYSTAL → SWT 83 2 12 D 48 - 32.768kHz ← FREQUENCY (kHz)</p> <p>8.3mm x 3.2mm →</p> <p>2 LEAD →</p> <p>LOAD CAPACITANCE</p> <p>18: 18.0pF 12: 12.5pF 8: 8.0pF 7: 7.0pF 6: 6.0pF</p>	<p>OPERATING TEMPERATURE RANGE</p> <p>16: -10°C to + 60°C 48: -40°C to + 85°C</p> <p>FREQUENCY TOLERANCE</p> <p>D: ±20ppm F: ±10ppm</p>

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 ²	-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 _{DC} ± 15V.
Equivalent Series Resistance	kΩ			35	

OUTLINE DRAWING	MARKING
	<p>Line 1: XX.XXX F Y WW</p> <p>Frequency in kHz → XX.XXX Manufacturing Identifier → F Year → Y Week → WW</p>

NOTE: Dimensions in millimeters (mm).

ENVIRONMENTAL SPECIFICATIONS		MECHANICAL SPECIFICATIONS	
Temperature Cycling	MIL-STD-883, Method 1010, Condition B	Mechanical Shock	MIL-STD-202, Method 213, Condition C
Fine Leak Test	MIL-STD-883, Method 1014, Condition A	Vibration	MIL-STD-883, Method 2007, Condition A
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