

FEATURES	APPLICATIONS
<ul style="list-style-type: none"> <li>- <math>\pm 10\text{ppm}/\pm 10\text{ppm}</math> (Tolerance/Stability) Available</li> <li>- RoHS Compliant</li> <li>- RESISTANCE WELD</li> <li>- AT-Cut or BT-Cut</li> <li>- Bulk Packing</li> </ul>	<ul style="list-style-type: none"> <li>- Microprocessors</li> <li>- Computers</li> <li>- Modems</li> <li>- Wireless Applications</li> </ul>



PART NUMBERING GUIDE	
<p><b>SUNTSU CRYSTAL</b> → <b>SXT HS 2 18 A A 48 3 T</b> ← <b>FREQUENCY (MHz)</b></p> <p><b>HC-49/ US DIP</b></p> <p><b>2 LEAD</b></p> <p><b>LOAD CAPACITANCE</b> S: SERIES 7 - 30: 7pF - 30pF</p> <p><b>FREQUENCY TOLERANCE</b> A: <math>\pm 50\text{ppm}</math> B: <math>\pm 30\text{ppm}</math> C: <math>\pm 25\text{ppm}</math> D: <math>\pm 20\text{ppm}</math> E: <math>\pm 15\text{ppm}</math> F: <math>\pm 10\text{ppm}</math></p> <p>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 <math>-55\sim 125^\circ\text{C}</math> contact a Suntsu representative.</p>	<p><b>MODE OF OPERATION</b> BLANK: FUNDAMENTAL B: BT-CUT FUNDAMENTAL T: THIRD OVERTONE</p> <p><b>THE HEIGHT OF PACKAGE</b> 2: 2.5mm MAX 3: 3.5mm MAX</p> <p><b>OPERATING TEMPERATURE RANGE**</b> 07: <math>0^\circ\text{C}</math> to <math>+70^\circ\text{C}</math> 16: <math>-10^\circ\text{C}</math> to <math>+60^\circ\text{C}</math> 17: <math>-10^\circ\text{C}</math> to <math>+70^\circ\text{C}</math> 27: <math>-20^\circ\text{C}</math> to <math>+70^\circ\text{C}</math> 38: <math>-30^\circ\text{C}</math> to <math>+85^\circ\text{C}</math> 48: <math>-40^\circ\text{C}</math> to <math>+85^\circ\text{C}</math></p> <p><b>FREQUENCY STABILITY</b> A: <math>\pm 50\text{ppm}</math> B: <math>\pm 30\text{ppm}</math> C: <math>\pm 25\text{ppm}</math> D: <math>\pm 20\text{ppm}</math> E: <math>\pm 15\text{ppm}</math> F: <math>\pm 10\text{ppm}</math>*</p>

ELECTRICAL PARAMETERS	UNITS	MIN.	TYP.	MAX.	REMARKS
Frequency Range	MHz	3		40	AT-Cut Fundamental.
		20		50	BT-Cut Fundamental.
		24		90	3 <sup>rd</sup> Overtone.
Frequency Tolerance at +25°C	ppm	-10		+10	See part numbering guide for options.
Frequency Stability vs. Operating Temperature (Ref. 25°C)	ppm	-10		+10	See part numbering guide for options.
vs. Aging	ppm	-3		+3	First year @ +25°C.
Operating Temperature	°C	-40		+85	See part numbering guide for options.
Storage Temperature	°C	-40		+125	
Load Capacitance	pF	7		30	See part numbering guide for options.
Shunt Capacitance	pF			7	
Drive Level	μW		100	500	
Insulation Resistance	MΩ	500			@ 100V <sub>DC</sub> ± 15V.
Equivalent Series Resistance				180	AT-Cut Fundamental.
	3.000MHz ~ 4.999MHz			120	AT-Cut Fundamental.
	5.000MHz ~ 5.999MHz			100	AT-Cut Fundamental.
	6.000MHz ~ 7.999MHz			80	AT-Cut Fundamental.
	8.000MHz ~ 8.999MHz			60	AT-Cut Fundamental.
	9.000MHz ~ 19.999MHz			30	AT-Cut Fundamental.
	20.000MHz ~ 40.000MHz			40	BT-Cut Fundamental.
	20.000MHz ~ 50.000MHz			100	3 <sup>rd</sup> Overtone.
24.000MHz ~ 39.999MHz			80	3 <sup>rd</sup> Overtone.	
40.000MHz ~ 90.000MHz					

OUTLINE DRAWING	MARKING
<p>NOTE: Dimensions in millimeters (mm).</p>	<p><b>Line 1: XX.XXX S F Y WW</b></p> <p>Frequency in MHz → XX.XXX Suntsu → S Manufacturing Identifier → F Year → Y Week → WW</p>

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