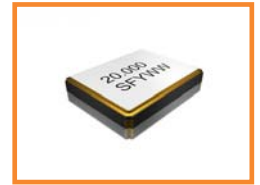


FEATURES	APPLICATIONS
<ul style="list-style-type: none"> - $\pm 10\text{ppm}/\pm 10\text{ppm}$ (Tolerance/Stability) Available - Ultra-Miniature Package - AT-Cut Fundamental - RoHS Compliant - Tape and Reel 	<ul style="list-style-type: none"> - Bluetooth - PCMCIA - Wireless Applications - Computers and Modems - High Density Applications



PART NUMBERING GUIDE

SUNTSU CRYSTAL → **SXT 22 4 18 A A 48 - 20.000M** ← **FREQUENCY (MHz)**

2.5mm x 2.0mm (points to the '22' in the part number)
4 PAD (points to the '4' in the part number)
LOAD CAPACITANCE (points to the '18' in the part number)
 S: SERIES
 8 - 20: 8pF - 20pF
FREQUENCY TOLERANCE (points to the 'A A' in the part number)
 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.
 ** For operating temperatures up to -55~125°C contact a Suntsu representative.

ELECTRICAL PARAMETERS		UNITS	MIN.	TYP.	MAX.	REMARKS
Frequency Range		MHz	12		66	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)		ppm	-10		+10	See part numbering guide for options.
vs. Aging			-2		2	
Operating Temperature		°C	-40		+85	See part numbering guide for options.
Storage Temperature		°C	-40		+125	
Load Capacitance		pF	8		20	See part numbering guide for options.
Shunt Capacitance		pF			5	
Drive Level		μW		50	100	
Insulation Resistance		MΩ	500			@ 100V _{DC} ± 15V.
Equivalent Series Resistance	12.000MHz ~ 15.999MHz	Ω			120	AT-Cut Fundamental.
	16.000MHz ~ 19.999MHz				100	AT-Cut Fundamental.
	20.000MHz ~ 29.999MHz				80	AT-Cut Fundamental.
	30.000MHz ~ 39.999MHz				60	AT-Cut Fundamental.
	40.000MHz ~ 66.000MHz				50	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

