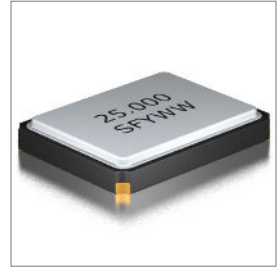


Features

- $\pm 10\text{ppm}/\pm 30\text{ppm}$ (Tolerance/Stability) Available
- Ultra-Miniature Package
- High Reliability for Automotive
- Wide Temperature Range Available
- AEC-Q200 Compliant

Applications

- Automotive Electronics
- Infotainment System
- ADAS
- TPMS
- Ethernet



Part Numbering Guide

SAX 21 4 18 A A 4A - 20.000M

SUNTSU AUTOMOTIVE
CRYSTAL

2.0mm x 1.6mm

4 PAD

LOAD CAPACITANCE
S : Series
6-32 : 6pF - 32pF

FREQUENCY TOLERANCE
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 : $\pm 10\text{ppm}$

FREQUENCY STABILITY
X : $\pm 150\text{ppm}$
Y : $\pm 100\text{ppm}$
A : $\pm 50\text{ppm}$
B : $\pm 30\text{ppm}$

FREQUENCY
MHz

OPERATING TEMPERATURE
RANGE

4A : $-40^{\circ}\text{C} - +105^{\circ}\text{C}$
4B : $-40^{\circ}\text{C} - +125^{\circ}\text{C}$
*4C : $-40^{\circ}\text{C} - +150^{\circ}\text{C}$



Cage Code: 4GUT4

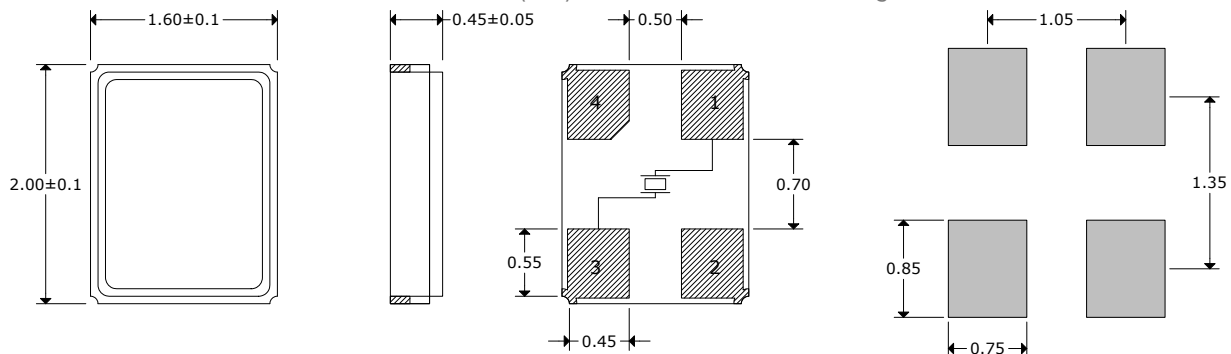
To customize your parameters contact a Suntsu representative.

*For Operating Temperature Range 4C, contact a Suntsu representative

Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency Range	MHz	16		54	AT-Cut Fundamental.
Frequency Tolerance at $+25^{\circ}\text{C}$	ppm	-10		10	See part numbering guide for options.
Frequency Stability vs. Op Temp	ppm	-30		30	See part numbering guide for options.
Frequency Stability vs. Aging	ppm	-3		3	First year @ $+25^{\circ}\text{C}$.
Operating Temperature	$^{\circ}\text{C}$	-40		150	See part numbering guide for options.
Storage Temperature	$^{\circ}\text{C}$	-40		150	
Load Capacitance	pF	6		32	See part numbering guide for options.
Shunt Capacitance	pF			3	
Drive Level	μW		50	100	
Insulation Resistance	M Ω	500			@ 100VDC $\pm 15\text{V}$.
16.000MHz ~ 19.999MHz	Ω			200	
ESR - 20.000MHz ~ 23.999MHz	Ω			150	
24.000MHz ~ 25.999MHz	Ω			80	
26.000MHz ~ 54.000MHz	Ω			60	

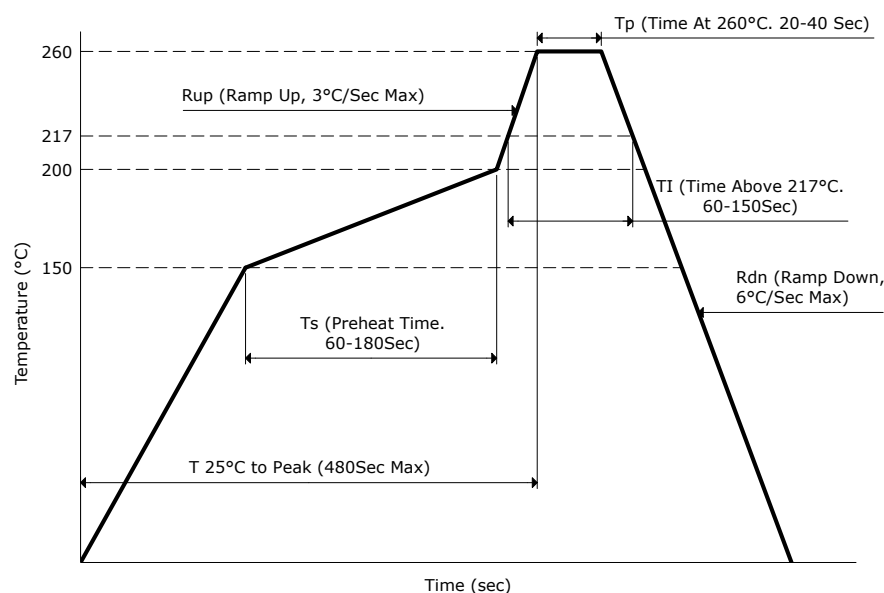
Outline Drawing & Recommended Landed Pattern

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	Mechanical Shock	MIL-STD-202, Method 213, Condition B
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

Reflow Profile & Part Marking



Frequency In MHz

Line 1 : X X . X X X

Line 2 : S F Y W W

Suntsu Manufacturing Identifier

Week

Year

Tape And Reel Dimensions

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

3,000pcs / Reel

