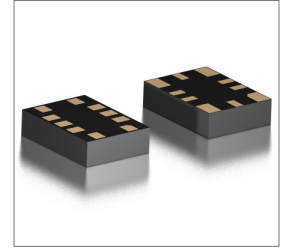


Features
• Stability $\pm 0.05$ ppm Available
• Clipped Sinewave
• (VC)TCXO
• Two Package Types
• Extended Temperature Range

Applications
• Base Stations
• Stratum 3
• Small Cell



**Part Numbering Guide**

**SUS 75 K 33 S 48 V F A - 10.000M**

<p><b>SUNTSU ULTRA STABLE</b></p> <p>7.0mm x 5.0mm</p> <p><b>CLIPPED SINEWAVE</b></p> <p><b>SUPPLY VOLTAGE</b> 33 : 3.3V<math>\pm 5\%</math> 50 : 5.0V<math>\pm 5\%</math></p>	<p><b>FREQUENCY STABILITY</b> F : <math>\pm 0.50</math>ppm S : <math>\pm 0.37</math>ppm T : <math>\pm 0.28</math>ppm J : <math>\pm 0.1</math>ppm **K : <math>\pm 0.05</math>ppm</p>	<p><b>OPERATING TEMPERATURE RANGE</b> 07 : 0°C - +70°C 16 : -10°C - +60°C 27 : -20°C - +70°C 48 : -40°C - +85°C *50 : -50°C - +90°C *59 : -55°C - +95°C</p>	<p><b>FREQUENCY</b> MHz</p> <p><b>PACKAGE TYPE</b> A : Package A B : Package B</p> <p><b>PULLABILITY</b> BLANK : TCXO F : <math>\pm 8.0</math>ppm G : <math>\pm 5.0</math>ppm H : <math>\pm 12.0</math>ppm</p> <p><b>TCXO/VCTCXO</b> BLANK : TCXO V : VCTCXO</p>
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Cage Code: 4GUT4

To customize your parameters contact a Suntsu representative.

\* For operating temperature options 50 & 59 contact a Suntsu representative.

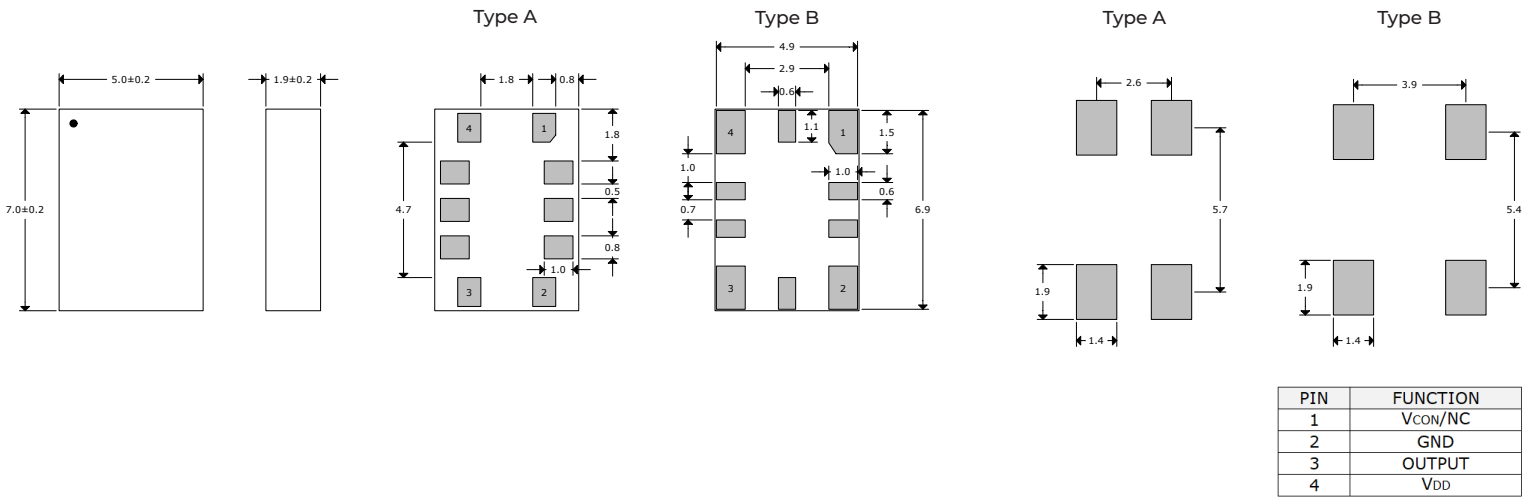
\*\* For frequency stability option K contact a Suntsu representative; only available with Operating Temperature of -40°C - +85°C



Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency Range	MHz	10		52	
Frequency Tolerance	ppm	-0.5		0.5	at 25°C
Freq Stability vs Op Temp (ref at 25°C)	ppm	$\pm 0.05$		$\pm 0.5$	See part numbering guide for options.
Supply Sensitivity	ppm			$\pm 0.1$	V <sub>DD</sub> $\pm 5\%$
Load Sensitivity	ppm			$\pm 0.2$	Load $\pm 5\%$
Aging/First Year	ppm			$\pm 1.0$	Standard
Operating Temperature	°C	-55		95	See part numbering guide for options.
Storage Temperature	°C	-55		125	
Supply Voltage (V <sub>DD</sub> ) - 3.3V Option	V	3.135	3.3	3.465	
Supply Voltage (V <sub>DD</sub> ) - 5.0V Option	V	4.750	5.0	5.250	
Current (I <sub>DD</sub> )	mA			15	
Voltage (VC, VCTCXO) - 3.3V Option	V	0.5		2.5	
Voltage (VC, VCTCXO) - 5.0V Option	V	0.5		2.5	
Pullability (VCTCXO)	ppm	$\pm 5.0$		$\pm 12.0$	See part numbering guide for options.
Linearity (VCTCXO)	%			10	
Output Level (Clipped Sinewave)	Vp-p	0.8			
Output Load (Clipped Sinewave)	k $\Omega$ //pF		10//10		
Tuning Slope			Positive		
Start-Up Time	ms			10	
VC Input Impedance (VCTCXO)	k $\Omega$	200			
Phase Noise (Typical) 10Hz Offset	dBc/Hz			-95	
Phase Noise (Typical) 100Hz Offset	dBc/Hz			-120	
Phase Noise (Typical) 1KHz Offset	dBc/Hz			-140	
Phase Noise (Typical) 10KHz Offset	dBc/Hz			-145	
Phase Noise (Typical) 100kHz Offset	dBc/Hz			-150	

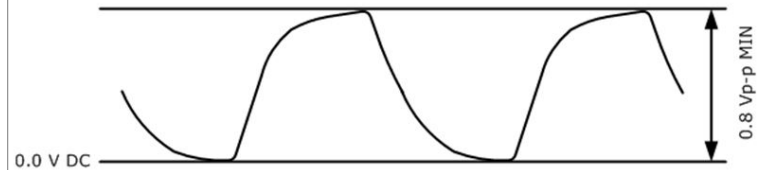
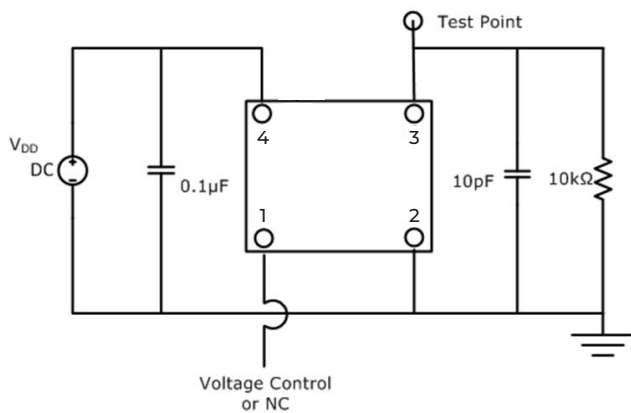
**Outline Drawing & Land Pattern**

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



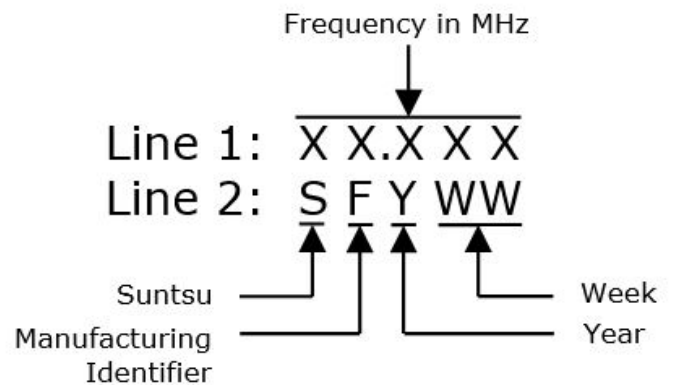
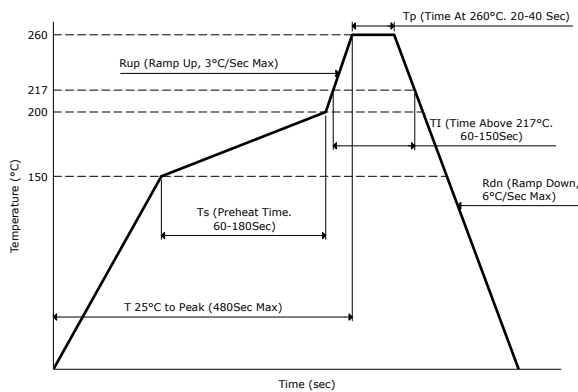
**Test Circuit (Clipped Sinewave)**

**Waveform (Clipped Sinewave)**



**Reflow Profile**

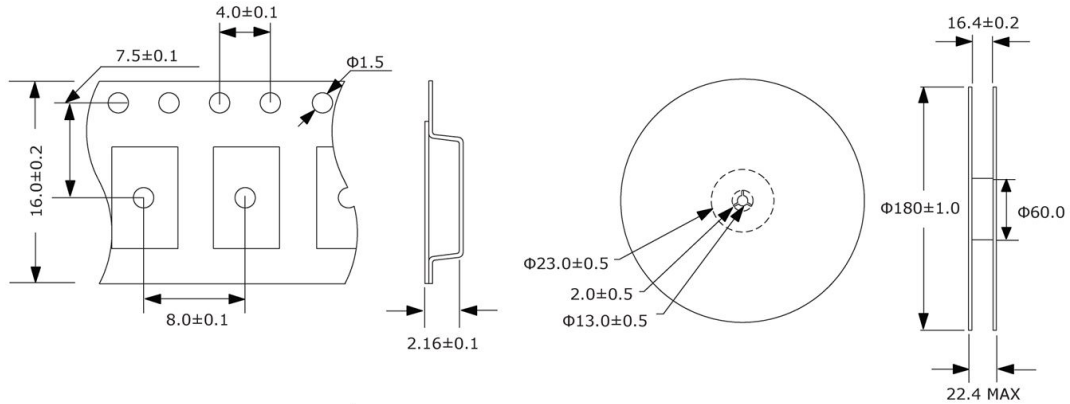
**Part Marking**



**Tape And Reel Dimensions**

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

1,000pcs/Reel



**Reliability**

Temperature Stress Test	IEC60068, GJB360B
Mechanical Stress Test	IEC60068, GJB360B
EMC Test (ESD)	IEC61000, JESD22
Solderability	EIA/JESD22-B102-C
Contact Pads	Gold over Nickel
RoHS	RoHS Directive 2011/65/EU Annex II Recasting 2002/95/EC