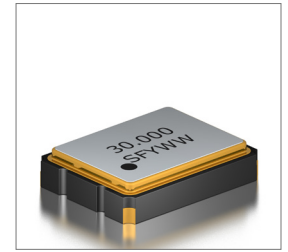


Features
• $\pm 20$ ppm (Frequency Stability) Available
• Ceramic Package
• CMOS
• Programmed VCXO
• Tape and Reel

Applications
• Micro Processors
• FPGA
• Storage Area/Networking
• Digital Video
• Portable Computers



**Part Numbering Guide**

**SQV 32 C 3 A 48 A 2 - 30.000M**

**SUNTSU QUICK TURN VCXO**

3.2mm x 2.5mm

CMOS

Cage Code: 4GUT4  
To customize your parameters contact a Suntsu representative.  
\* For frequency stability option E contact a Suntsu representative.

**SUPPLY VOLTAGE**

2 : 2.5V $\pm 5\%$   
3 : 3.3V $\pm 5\%$

**FREQUENCY STABILITY**

A :  $\pm 50$ ppm  
B :  $\pm 30$ ppm  
C :  $\pm 25$ ppm  
D :  $\pm 20$ ppm  
\*E :  $\pm 15$ ppm

**OPERATING TEMPERATURE RANGE**

07 : 0°C - +70°C  
16 : -10°C - +60°C  
17 : -10°C - +70°C  
27 : -20°C - +70°C  
38 : -30°C - +85°C  
48 : -40°C - +85°C

**FREQUENCY**  
MHz

**TRI-STATE (ENABLE/DISABLE)**  
2 : Pin 2

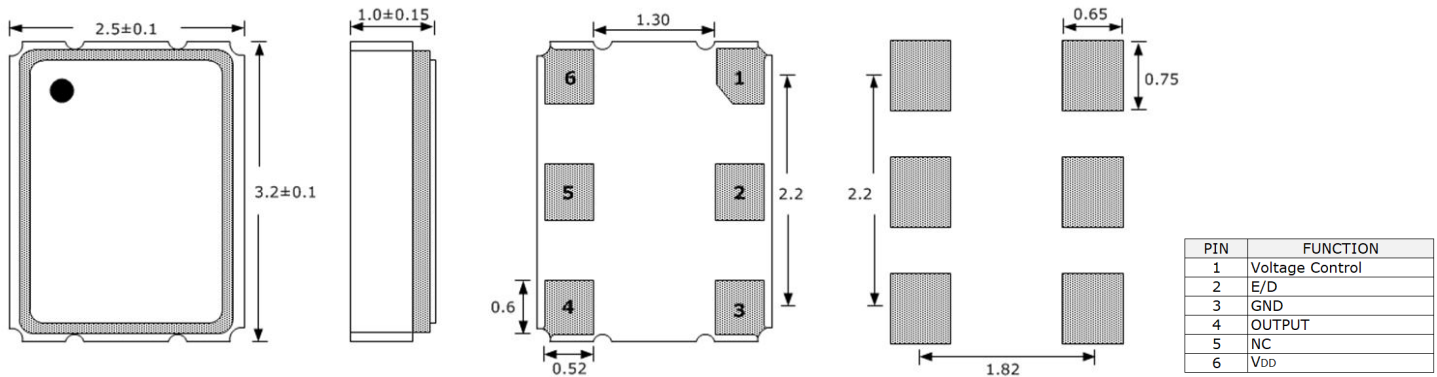
**PULLABILITY**

A :  $\pm 150$ ppm  
B :  $\pm 100$ ppm  
C :  $\pm 80$ ppm

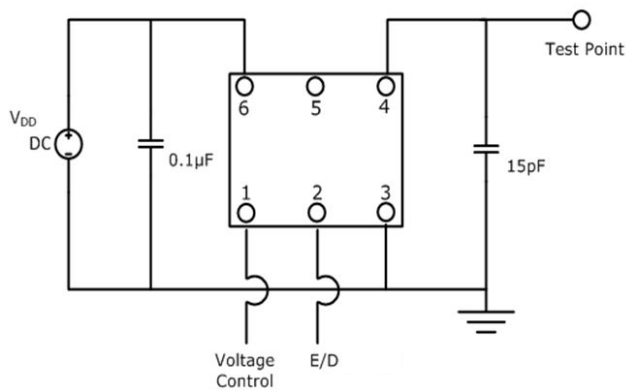
Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency Range	MHz	8		1500	
Frequency Stability (Includes Initial Tolerance at 25°C, Frequency Stability over Operating Temperature, Output Load Change, Supply Voltage Change, and First Year Aging at 25°C.)	ppm	-20		20	See part numbering guide for options.
Operating Temperature	°C	-40		85	See part numbering guide for options.
Storage Temperature	°C	-55		125	
Supply Voltage (V <sub>DD</sub> ) 2.5V Option	V	2.375	2.5	2.625	
Supply Voltage (V <sub>DD</sub> ) 3.3V Option	V	3.135	3.3	3.465	
Current (I <sub>DD</sub> ) 2.5V Option	mA			35	
Current (I <sub>DD</sub> ) 3.3V Option	mA			45	
Current Voltage (V <sub>C</sub> ) 2.5V Option	V	0		2.5	
Current Voltage (V <sub>C</sub> ) 3.3V Option	V	0		3.3	
Pullability	ppm	$\pm 50$	$\pm 100$	$\pm 150$	See part numbering guide for options.
Linearity	%			10	
Output Load (CMOS)	pF			15	
Output Logic HIGH Level (V <sub>OH</sub> )	V	0.9*V <sub>DD</sub>			
Output Logic LOW Level (V <sub>OL</sub> )	V			0.1*V <sub>DD</sub>	
Rise (T <sub>R</sub> ) And Fall (T <sub>F</sub> ) Time	ns			3	
Symmetry (Duty Cycle)	%	45	50	55	
Tri-State Input Voltage - Enable	V	0.7*V <sub>DD</sub>			
Tri-State Input Voltage - Disable	V			0.3*V <sub>DD</sub>	
Start-Up Time	ms			10	
Phase Jitter (12KHz ~ 20MHz)	ps		0.7	1.5	

**Outline Drawing & Land Pattern**

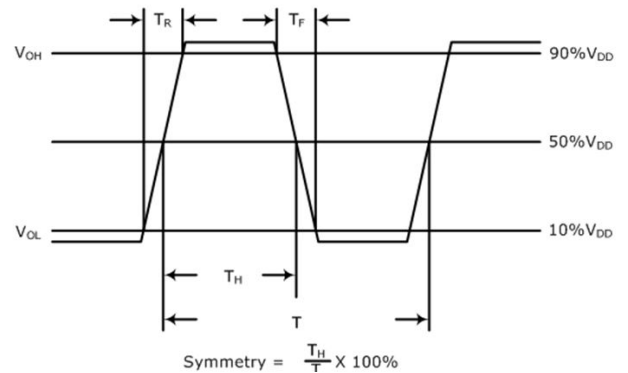
All dimensions are in millimeters (mm) unless otherwise noted. Drawings are not to scale.



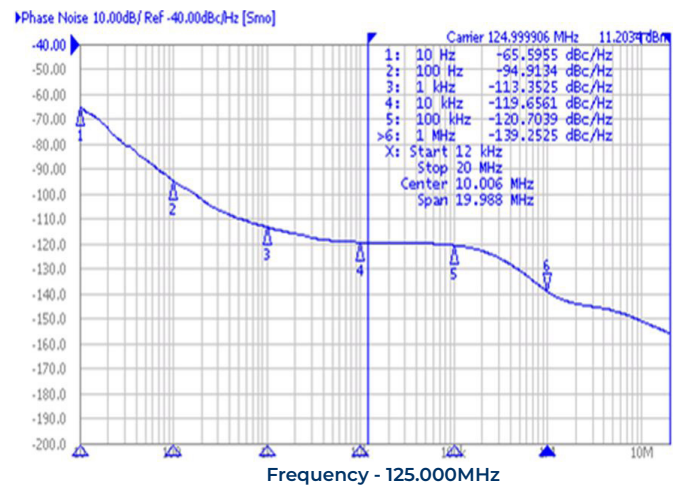
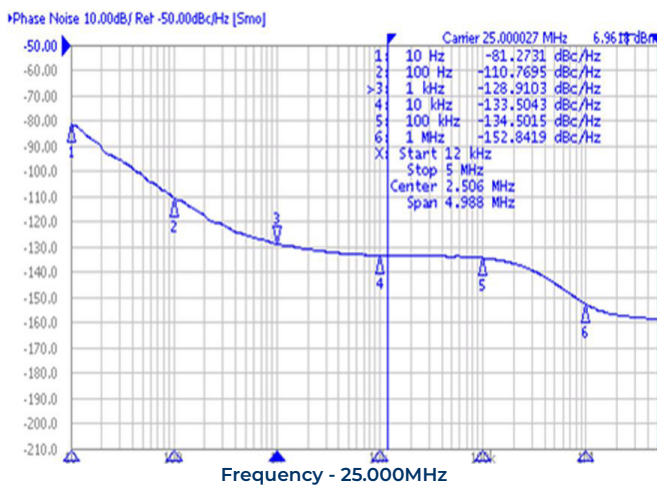
**Test Circuit (CMOS)**



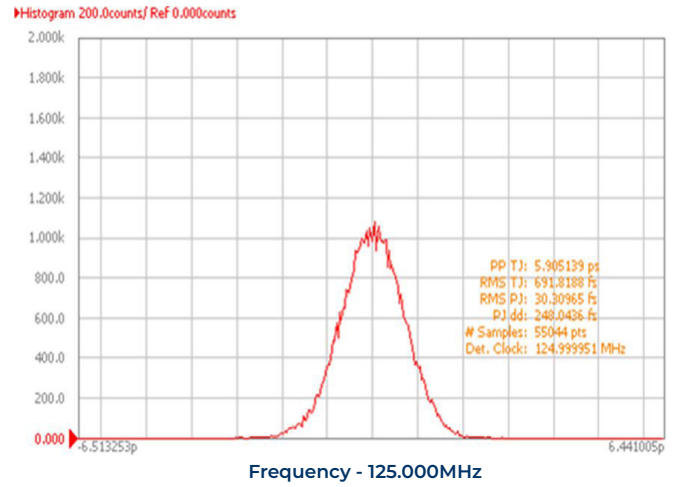
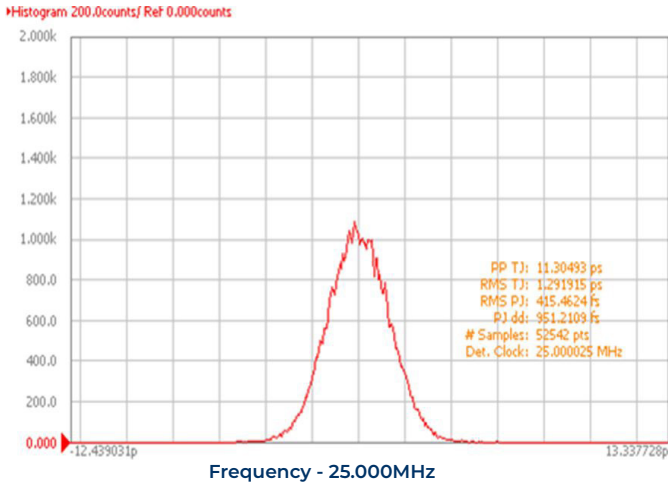
**Waveform (CMOS)**



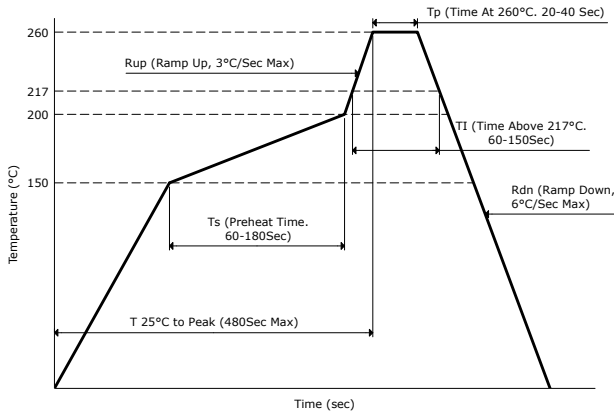
**Typical Phase Noise Performance (Measured By Agilent E5052A)**



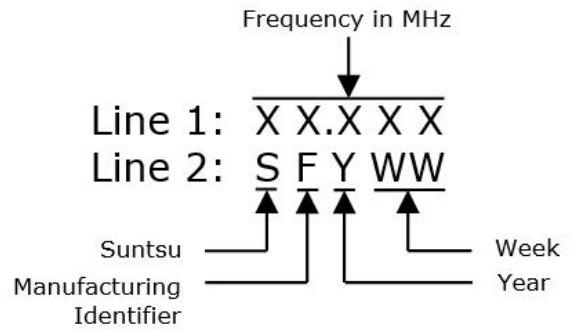
Typical Jitter Performance (Measured By Agilent E5052A)



Reflow Profile



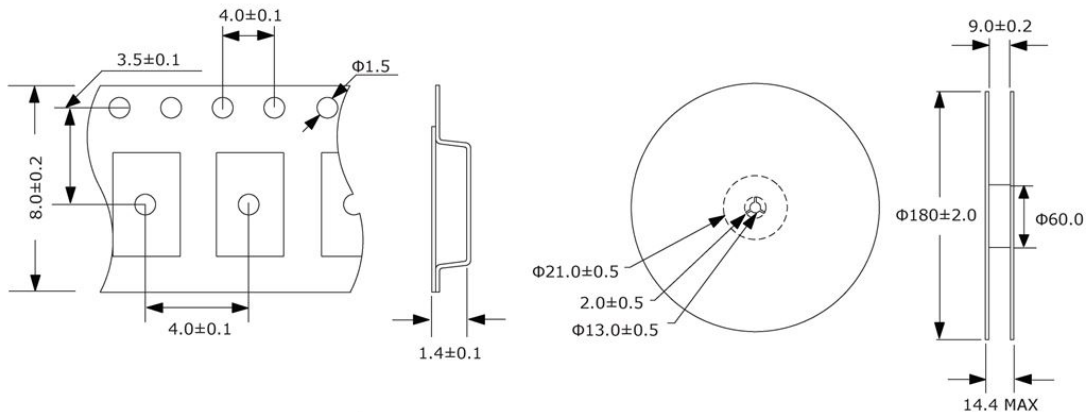
Part Marking



Tape And Reel Dimensions

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

3,000pcs/Reel



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	Moisture Resistance	MIL-STD-883, Method 1004
Solderability	MIL-STD-883, Method 2003	Resistance to Solvents	MIL-STD-202, Method 215
Moisture Sensitivity	J-STD-020, MSL 1	Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition K