SUNTSU

Ceramic SMD 4 Pad Clipped Sinewave (VC)TCXO

STH21K Series

2.0mm x 1.6mm

Features

- ±0.5ppm (Frequency Stability) Available
- Clipped Sinewave
- (VC)TCXO
- Tape and Reel
- H-Type Package

Applications

- GPS
- Mobile Communication Equipment
- IoT, Wearable Electronics
- WiMAX, WLAN

Part Numbering Guide

STH 21 K 18 R 48 V G - 26.000M

- **STH** — SUNTSU TCXO H-Type
- **21** — 2.0mm x 1.6mm
- **K** — CLIPPED SINEWAVE
- **18** — SUPPLY VOLTAGE
  - 18 : 1.8V±5%
  - 25: 2.5V±5%
  - 28: 2.8V±5%
  - 30: 3.0V±5%
  - 33: 3.3V±5%
- **R** — FREQUENCY STABILITY
  - O : ±2.5ppm
  - P : ±2.0ppm
  - Q : ±1.5ppm
  - R : ±1.0ppm
  - F : ±0.5ppm
- **48** — 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
- **V** — TCXO/VCTCXO
  - BLANK : TCXO
  - V : VCTCXO
- **G** — PULLABILITY
  - BLANK : TCXO
  - G : ±5.0ppm
- **26.000M** — FREQUENCY MHz

RoHS COMPLIANT

Cage Code: 4GUT4

To customize your parameters contact a Suntsu representative.

Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency Range	MHz	13		52	
Frequency Tolerance at +25°C	ppm	-2.5		2.5	
Freq. Stability vs. Op Temp.	ppm	-0.5		0.5	See part numbering guide for options.
Freq. Stability vs. Supply Voltage	ppm	-0.2		0.2	V_{DD}±5% change.
Freq. Stability vs. Load	ppm	-0.2		0.2	±10% change
Freq. Stability vs. Aging 1 Year	ppm	-1.0		1.0	
Freq. Stability vs. Aging 10 Years	ppm	-5.0		5.0	
Operating Temperature	°C	-30		85	See part numbering guide for options.
Storage Temperature	°C	-40		85	
Supply Voltage (V_{DD})	V	1.8		3.3	See part numbering guide for options.
Current (I_{DD})	mA			2.0	
Control Voltage (VCTCXO)	V	0.4		2.4	
Pullability (VCTCXO)	ppm	±7.0		±16.0	See part numbering guide for options.
Linearity (VCTCXO)	%	-10		10	
Output Load (Clipped Sinewave)	kΩ//pF			10//10	
Output Logic Levels	V_{P-P}	0.8			
Symmetry (Duty Cycle)	%	40	50	60	
Start-Up Time	ms			5.0	
VC Input Impedance (VCTCXO)	kΩ	500			
Phase Noise (Typical) 1KHz Offset	dBc/Hz		-130		At 19.2MHz

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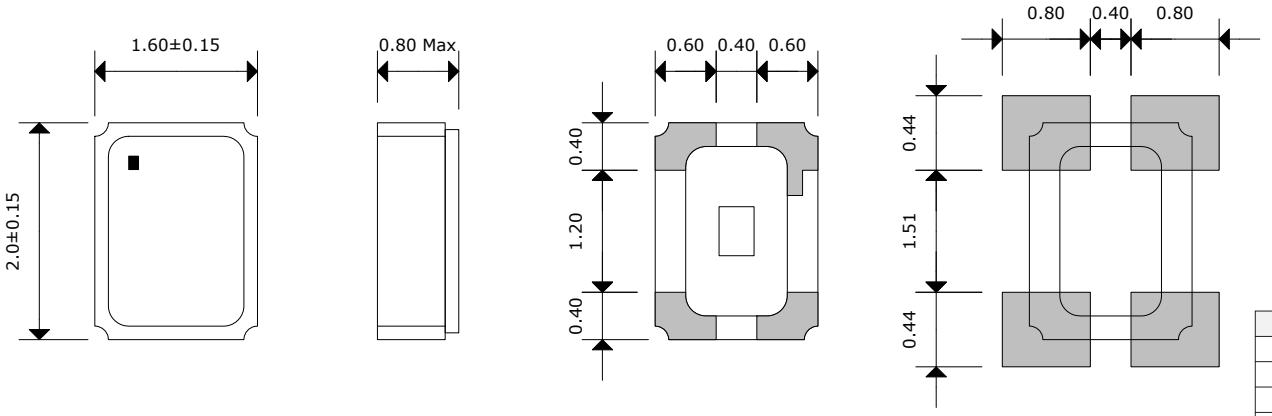
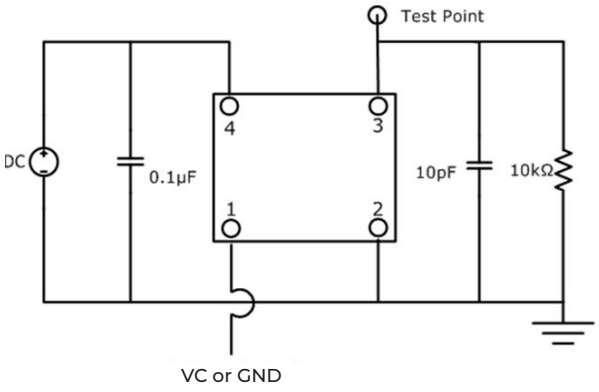
Outline Drawing & Land Pattern

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

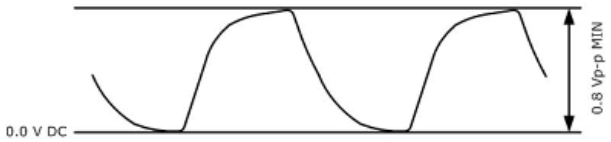


PIN	FUNCTION
1	VC or GND
2	GND
3	OUTPUT
4	V_{DD}

Test Circuit (Clipped Sinewave)



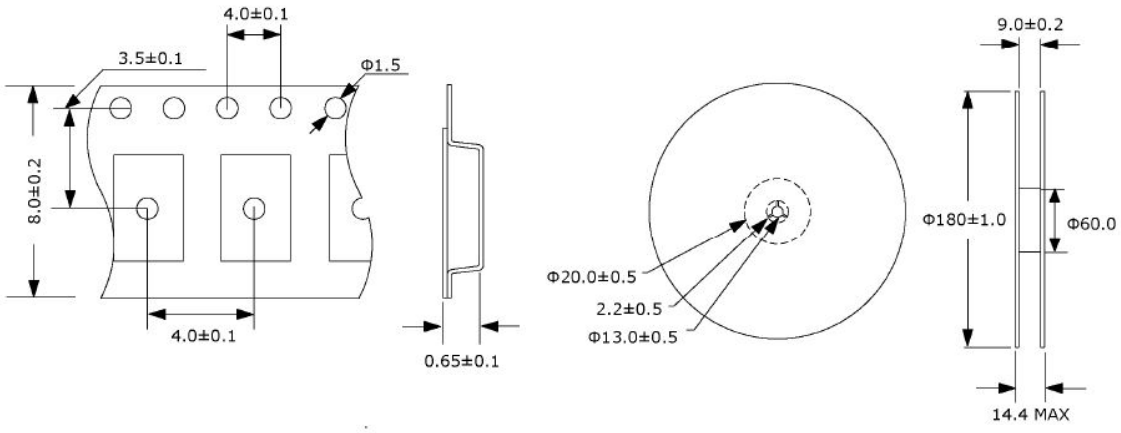
Waveform (Clipped Sinewave)



Tape And Reel Dimensions

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

3,000pcs/Reel



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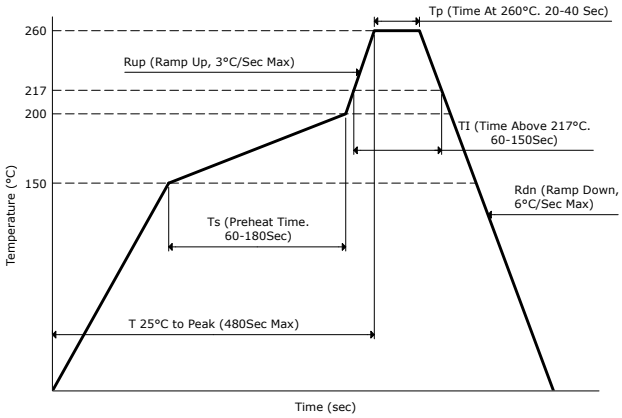
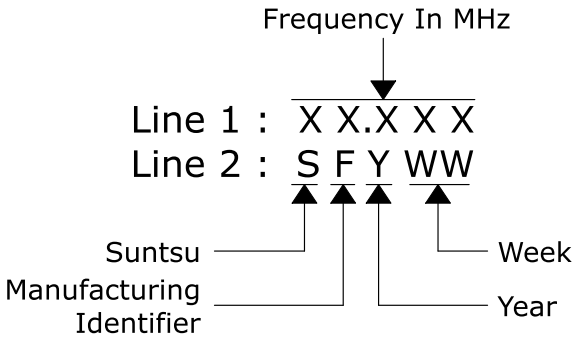
Reflow Profile & Part Marking





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

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