SUNTSU

Ceramic SMT 6 Pad CMOS VCXO

SVC53C Series

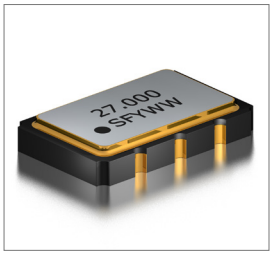
5.0mm x 3.5mm

Features

- ±20ppm (Frequency Stability) Available
- Miniature Package
- CMOS
- Fundamental or PLL (Phase Lock Loop) Available
- Tape and Reel

Applications

- Digital TV
- DVD, STB
- PCMIA, XDSL
- Broadband Access
- Base Stations



Part Numbering Guide

SVC 53 C 3 A 48 A 2 - 27.000M

- **SUNTSU VCXO**
- **5.0mm x 3.5mm**
- **CMOS**
- **SUPPLY VOLTAGE**
  - 2 : 2.5V±5%
  - 3 : 3.3V±5%
  - 5 : 5.0V±5%
- **FREQUENCY STABILITY**
  - A : ±50ppm
  - B : ±30ppm
  - C : ±25ppm
  - D : ±20ppm
  - *E : ±15ppm
- **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
- **PULLABILITY**
  - A : ±150ppm
  - B : ±100ppm
  - C : ±80ppm
  - D : ±50ppm
- **TRI-STATE (ENABLE/DISABLE)**
  - Blank: No Connection
  - 2 : Pin 2
  - 5: Pin 5
- **FREQUENCY**
  - MHz

RoHS COMPLIANT

Cage Code: 4GUT4

To customize your parameters contact a Suntsu representative.

* For frequency stability option E contact a Suntsu representative.

Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency Range	MHz	1		200	
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_{DD}) 2.5V Option	V	2.375	2.5	2.625	Only available with AT-Cut Fundamental.
Supply Voltage (V_{DD}) 3.3V Option	V	3.135	3.3	3.465	Available with AT-Cut Fundamental and PLL.
Supply Voltage (V_{DD}) 5.0V Option	V	4.750	5.0	5.250	Only available with AT-Cut Fundamental.
Current (I_{DD}) 2.5V Option	mA			25	
Current (I_{DD}) 3.3V Option	mA			25	25mA max (AT-Cut Fund) & 50mA max (PLL).
Current (I_{DD}) 5.0V Option	mA			30	
Current Voltage (V_C) 2.5V Option	V	0.2		2.3	
Current Voltage (V_C) 3.3V Option	V	0.3		3.0	
Current Voltage (Vc) 5.0V Option	V	0.5		4.5	
Pullability	ppm	±50	±100	±150	See part numbering guide for options.
Linearity	%			10	
Output Load (CMOS)	pF			15	
Output Logic HIGH Level (V_{OH})	V	0.9*V_{DD}			
Output Logic LOW Level (V_{OL})	V			0.1*V_{DD}	
Rise (T_R) And Fall (T_F) Time	ns			5	
Symmetry (Duty Cycle)	%	45	50	55	
Tri-State Input Voltage Enable	V	0.7*V_{DD}			
Tri-State Input Voltage Disable	V			0.3*V_{DD}	
Start-Up Time	ms			10	
Phase Jitter (12KHz ~ 20MHz)	ps			1	AT-CUT Fundamental
Phase Jitter (12KHz ~ 20MHz)	ps			5	PLL (Phase Lock Loop)

www.suntsu.com

Specifications are subject to change without notice.

Suntsu Electronics, Inc.
142 TECHNOLOGY DR., SUITE 150
IRVINE, CA 92618

Call: +1-949-783-7300 | Fax: +1-949-783-7301

SUNTSU

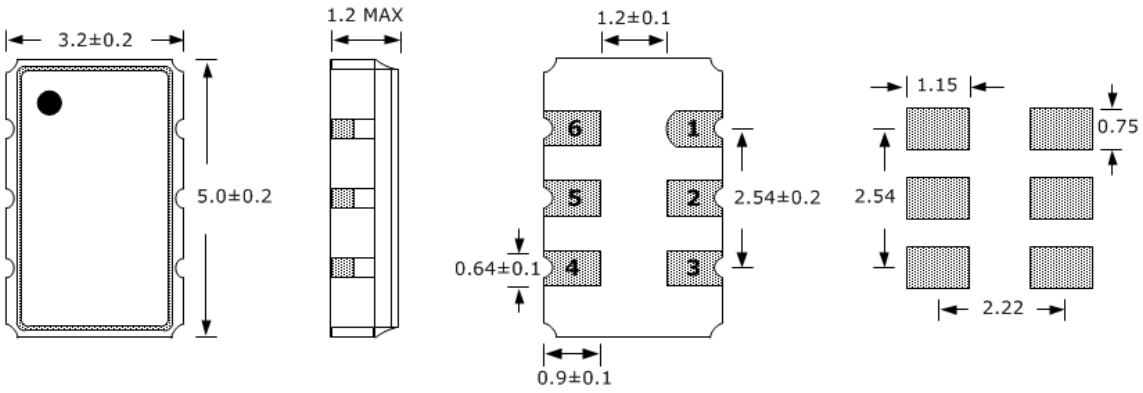
Ceramic SMT 6 Pad CMOS VCXO

SVC53C Series

5.0mm x 3.5mm

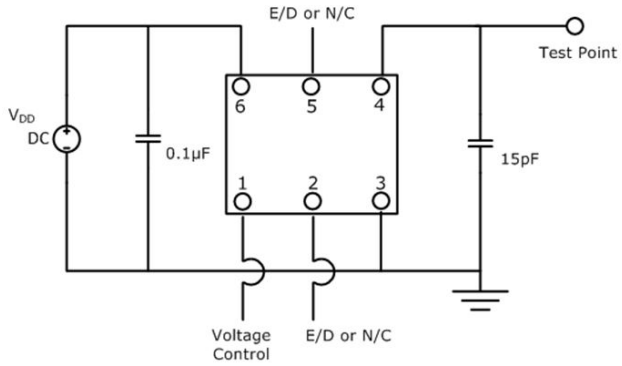
Outline Drawing & Land Pattern

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

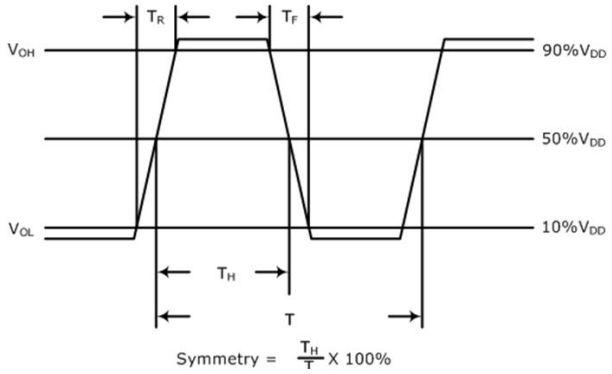


PIN	FUNCTION
1	VOLTAGE CONTROL
2	TRI-STATE or NC
3	GND
4	OUTPUT
5	TRI-STATE or NC
6	V_{DD}

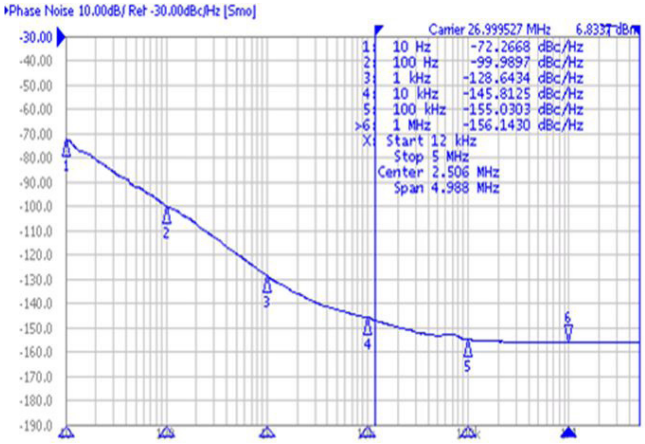
Test Circuit (CMOS)



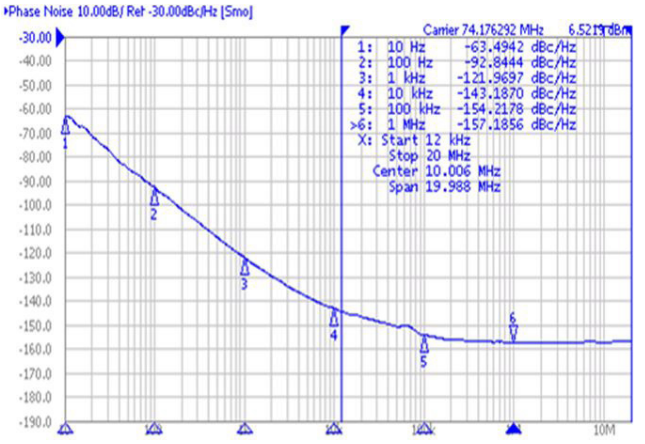
Waveform (CMOS)



Typical Phase Noise Performance (Measured By Agilent E5052A)



Frequency - 27.000MHz



Frequency - 74.1758MHz

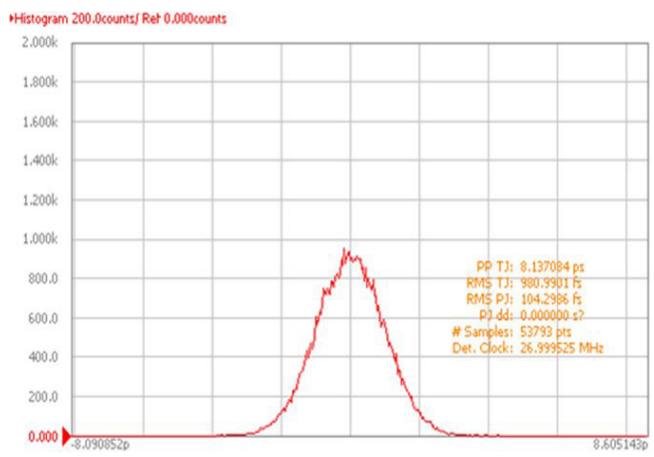
www.suntsu.com

Specifications are subject to change without notice.

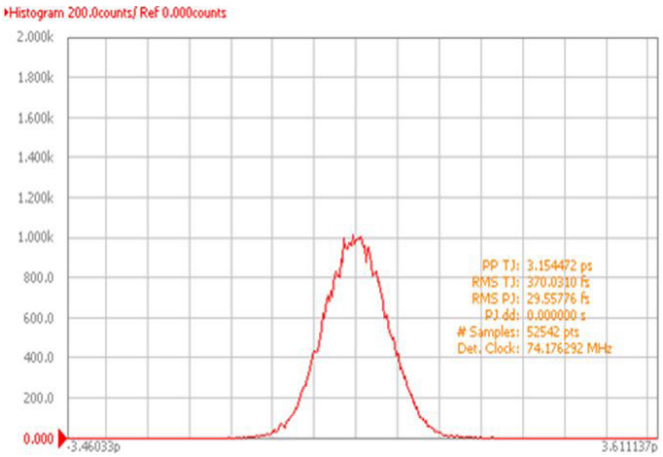
Suntsu Electronics, Inc.
142 TECHNOLOGY DR., SUITE 150
IRVINE, CA 92618

Call: +1-949-783-7300 | Fax: +1-949-783-7301

Typical Jitter Performance (Measured By Agilent E5052A)

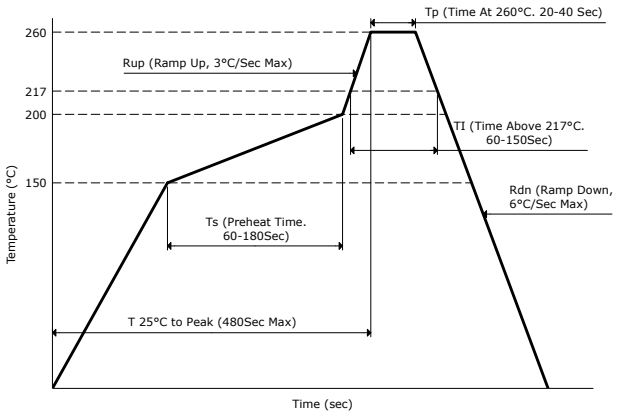


Frequency - 27.000MHz

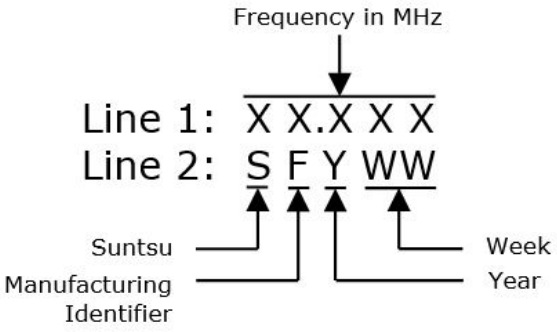


Frequency - 74.1758MHz

Reflow Profile



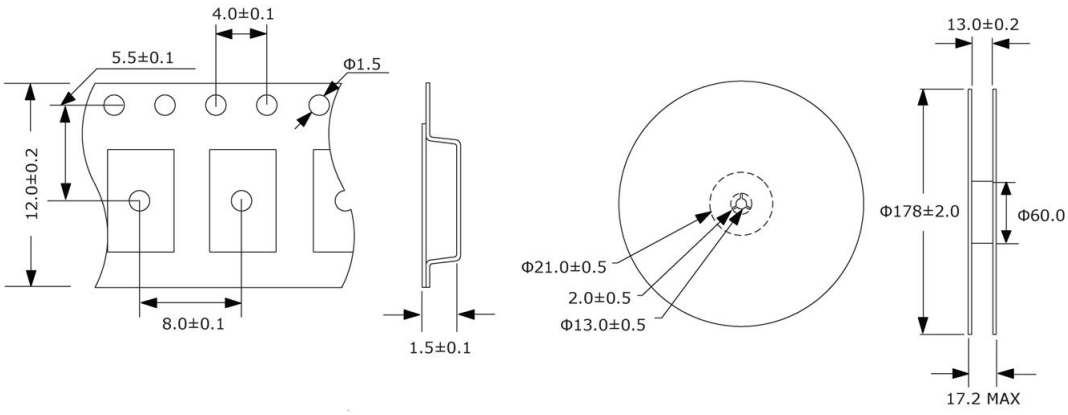
Part Marking



Tape And Reel Dimensions

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

1,000pcs/Reel



Suntsu Electronics, Inc.
142 TECHNOLOGY DR., SUITE 150
IRVINE, CA 92618

Call: +1-949-783-7300 | Fax: +1-949-783-7301

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

Suntsu Electronics, Inc.
142 TECHNOLOGY DR., SUITE 150
IRVINE, CA 92618

Call: +1-949-783-7300 | Fax: +1-949-783-7301