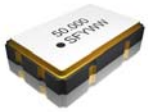
SXO53C SERIES

5.0mm x 3.2mm CERAMIC SMT 4 PAD CMOS OSCILLATOR

FEATURES	APPLICATIONS
- ±20ppm (Frequency Stability) Available - Ceramic Package - CMOS - RoHS Compliant - Tape and Reel	- Micro Processors - SONET/SDH/DWDM - Storage Area/Networking - Digital Video - Base Stations



PART NUMBERING GUIDE

SXO 53 C 3 A 48 1 X – 50.000M

- **SUNTSU OSC**
- **5.0mm x 3.2mm**
- **CMOS**
- **SUPPLY VOLTAGE**
  - 1: 1.8V±5%
  - 2: 2.5V±5%
  - 3: 3.3V±5%
- **FREQUENCY STABILITY**
  - A: ±50ppm
  - B: ±30ppm
  - C: ±25ppm
  - *D: ±20ppm
- **OPERATING TEMPERATURE RANGE**
  - 07: 0°C to + 70°C
  - 16: -10°C to + 60°C
  - 17: -10°C to + 70°C
  - 27: -20°C to + 70°C
  - 38: -30°C to + 85°C
  - 48: -40°C to + 85°C
- **TRI-STATE (ENABLE/DISABLE)**
  - BLANK: NO CONNECTION
  - 1: Pin 1
- **LOAD**
  - BLANK: 15pF
  - X: 30pF
  - Y: 50pF
- **FREQUENCY (MHz)**

Cage Code: 4GUT4

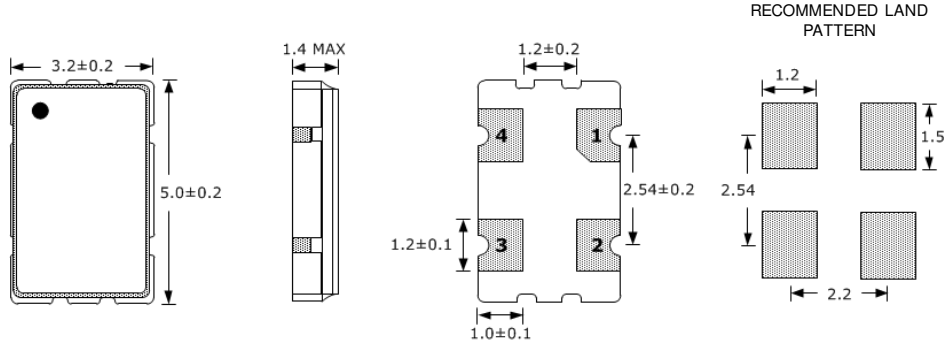
To customize your parameters contact a Suntsu representative.

* For frequency stability option D contact a Suntsu representative.

** For operating temperatures up to -55~125°C contact a Suntsu representative.

ELECTRICAL PARAMETERS		UNITS	MIN.	TYP.	MAX.	REMARKS
Frequency Range		kHz	32.768			
		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			-55		+125	
Supply Voltage (V_{DD})	1.8V Option	V	1.710	1.8	1.890	
	2.5V Option		2.375	2.5	2.625	
	3.3V Option		3.135	3.3	3.465	
Current (I_{DD})	**Frequency Range**		**1.8V**	**2.5V**	**3.3V**	
	32.768kHz	mA	5	5	5	Maximum value.
	1.0000MHz ~ 34.999MHz		8	10	16	Maximum value.
	35.000MHz ~ 59.999MHz		10	20	25	Maximum value.
	60.000MHz ~ 99.999MHz		25	30	40	Maximum value.
	100.00MHz ~ 160.00MHz		35	40	50	Maximum value.
Output Load (CMOS)		pF			15	See part numbering guide for options.
Output Logic Levels	Output Logic High (V_{OH})	V	0.9* V_{DD}			
	Output Logic Low (V_{OL})				0.1* V_{DD}	
Rise (T_R) and Fall (T_F) Time	32.768kHz	ns			200	
	1.0000MHz ~ 34.999MHz				10	
	35.000MHz ~ 99.999MHz				6	
	100.00MHz ~ 160.00MHz				3	
Symmetry (Duty Cycle)		%	45	50	55	
Tri-State Input Voltage	Enable	V	0.7* V_{DD}			No Connection.
	Disable				0.3* V_{DD}	
Start-Up Time		ms			10	
Phase Jitter (12kHz ~ 20MHz)		ps			1	

OUTLINE DRAWING



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

NOTE: Dimensions in millimeters (mm).

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SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

REV. 05/05/15

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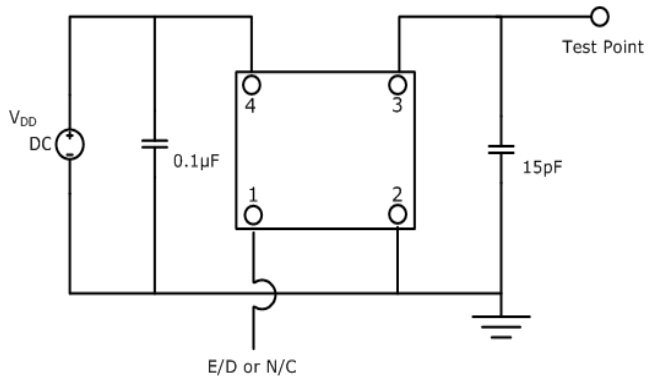
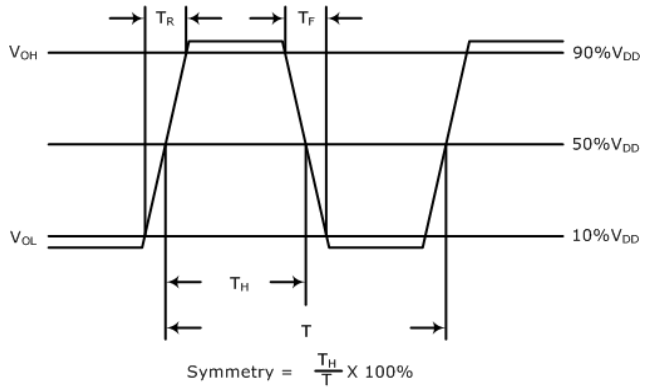
Facsimile • 949.305.0221

TEST CIRCUIT (CMOS)

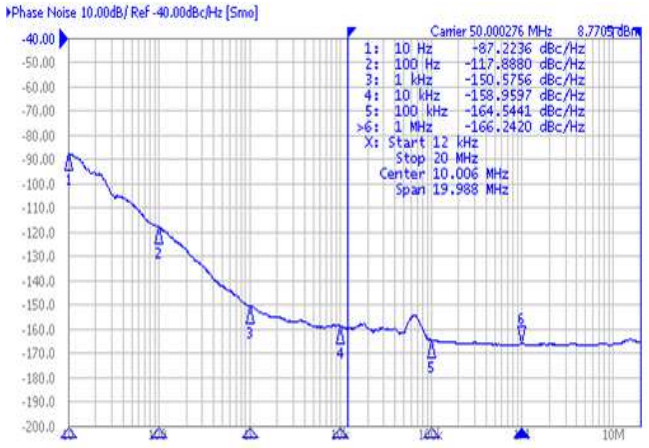


WAVEFORM (CMOS)

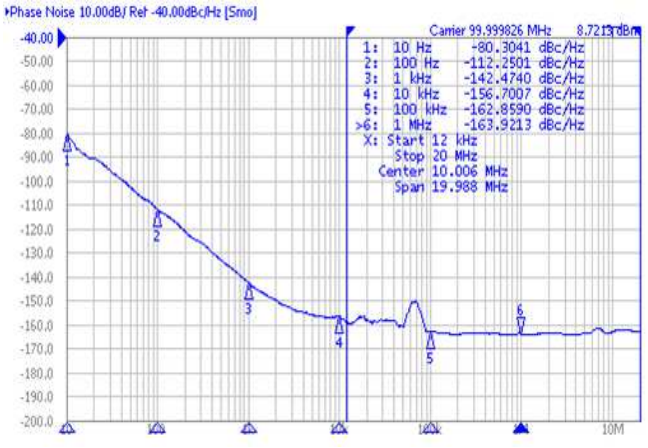


TYPICAL PHASE NOISE PERFORMANCE (MEASURED BY AGILENT E5052A)

Frequency 50.000MHz

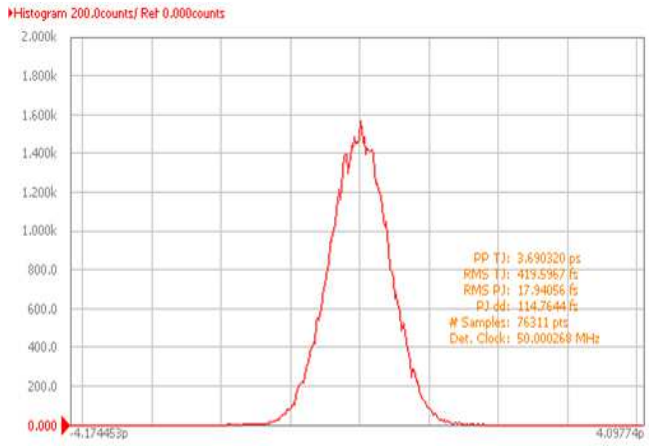


Frequency 100.000MHz

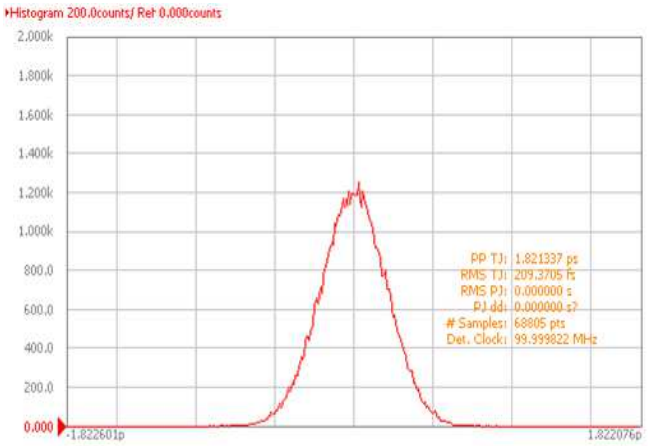


TYPICAL JITTER PERFORMACE (MEASURED BY AGILENT E5052A)

Frequency 50.000MHz



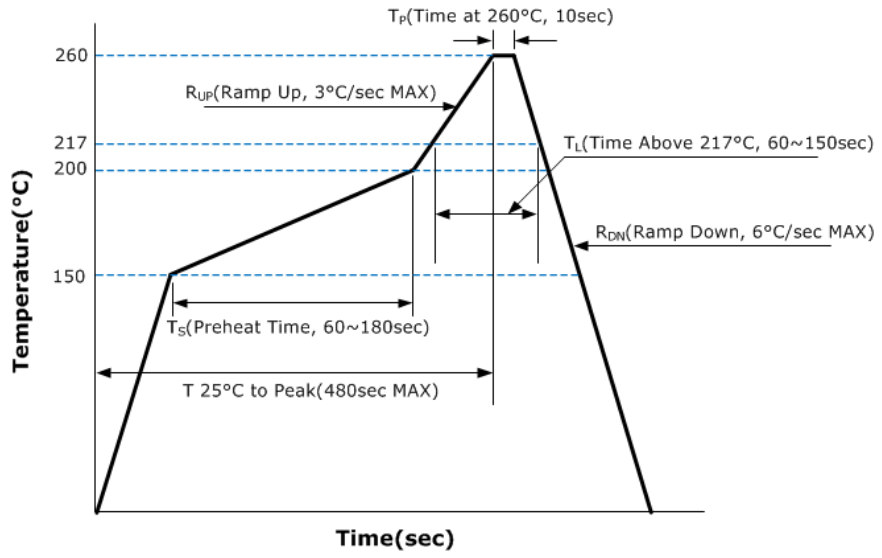
Frequency 100.000MHz



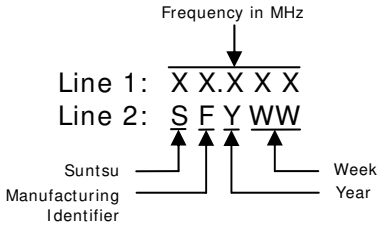
ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

Temperature Cycling	MIL-STD-883, Method 1010, Condition B
Fine Leak Test	MIL-STD-883, Method 1014, Condition A
Gross Leak Test	MIL-STD-883, Method 1014, Condition C
Mechanical Shock	MIL-STD-883, Method 2002, Condition B
Vibration	MIL-STD-883, Method 2007, Condition A
Moisture Resistance	MIL-STD-883, Method 1004
Moisture Sensitivity	J-STD-020, MSL 1
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition K
Resistance to Solvents	MIL-STD-202, Method 215
Solderability	MIL-STD-883, Method 2003

REFLOW PROFILE

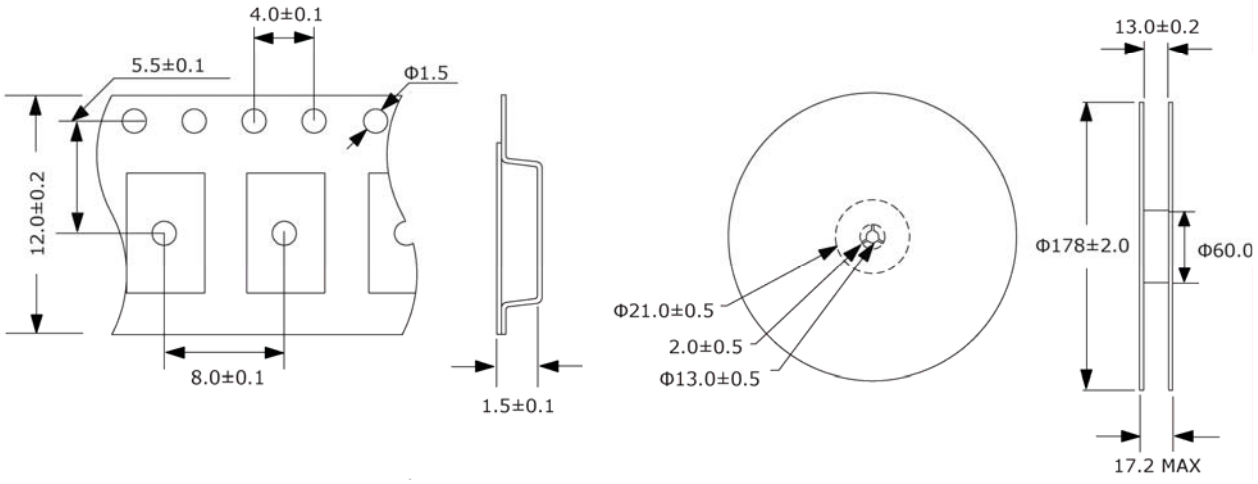


MARKING



TAPE AND REEL DIMENSIONS

1,000pcs/reel



NOTE: Dimensions in millimeters (mm); drawing is not to scale.