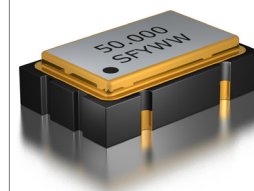


Features

- ± 20 ppm (Frequency Stability) Available
- Ceramic Package
- CMOS
- Tape and Reel

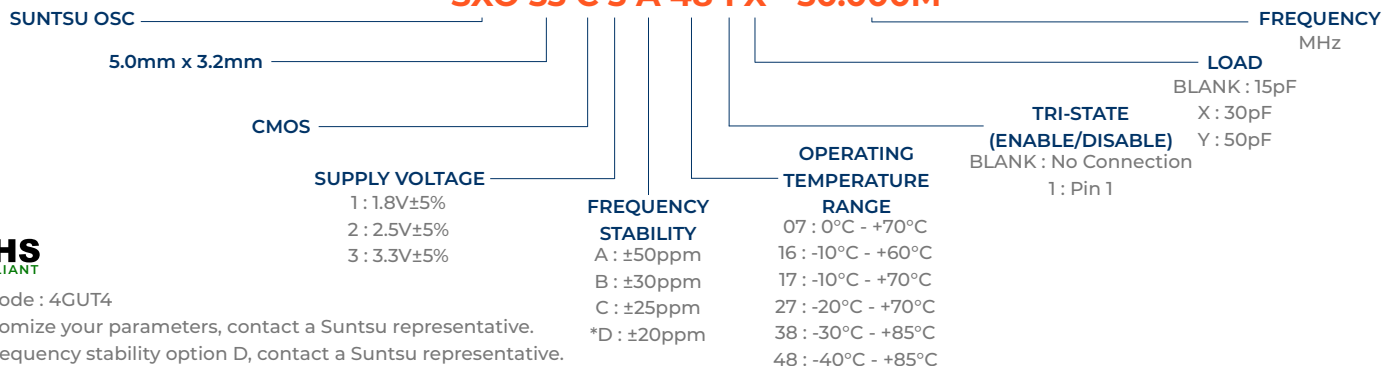
Applications

- 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



Cage Code : 4GUT4

To customize your parameters, contact a Suntsu representative.

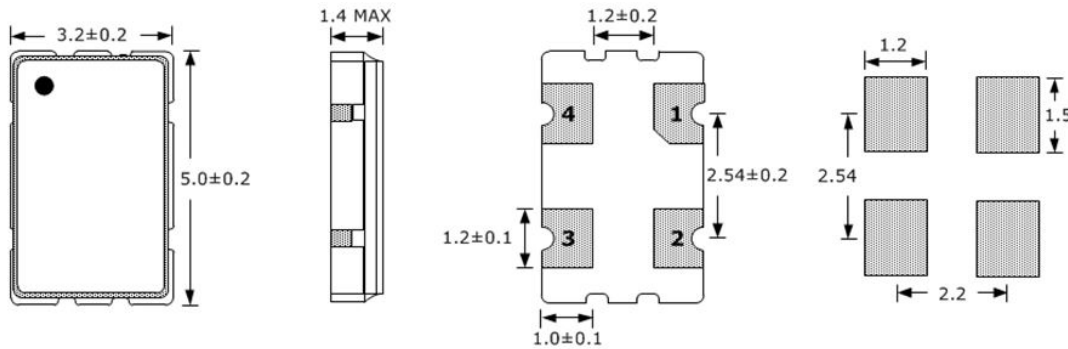
* For Frequency stability option D, contact a Suntsu representative.

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

Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency Range	KHz	32.768			
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}) - 1.8V option	V	1.710	1.8	1.890	
Supply Voltage (V _{DD}) - 2.5V option	V	2.375	2.5	2.625	
Supply Voltage (V _{DD}) - 3.3V option	V	3.135	3.3	3.465	
Frequency Range		1.8V	2.5V	3.3V	
Current (I _{DD})	mA	5	5	5	Maximum Value
32.768KHz	mA	8	10	16	Maximum Value
1.0000MHz - 34.999MHz	mA	10	20	25	Maximum Value
35.000MHz - 59.999MHz	mA	25	30	40	Maximum Value
60.000MHz - 99.000MHz	mA	35	40	50	Maximum Value
100.000MHz - 160.000MHz	mA				Maximum Value
Output Load (CMOS)	pF			15	See part numbering guide for options
Output Logic Levels High (V _{OH})	V	0.9*V _{DD}			
Output Logic Levels Low (V _{OL})	V			0.1*V _{DD}	
Rise (TR) and Fall (TF) Time	ns			200	
32.768KHz	ns			10	
1.0000MHz - 34.999MHz	ns			6	
35.000MHz - 99.999MHz	ns			3	
100.000MHz - 160.000MHz	ns				
Symmetry (Duty Cycle)	%	45	50	55	
Tri-State Input Voltage - Enable	V	0.7*V _{DD}			No Connection
Tri-State Input Voltage - Disable	V			0.3*V _{DD}	
Start-Up Time	ms			10	
Phase Jitter (12kHz ~ 20MHz)	ps			1	

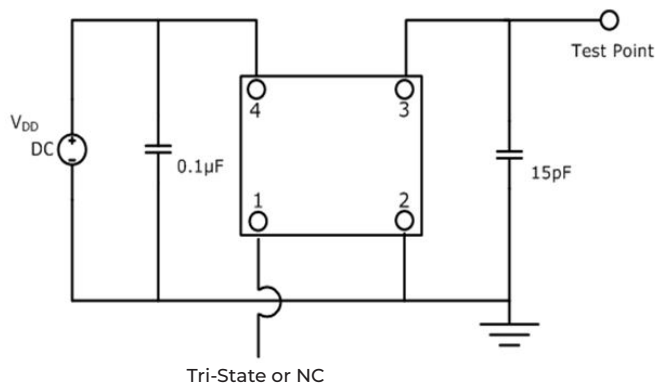
Outline Drawing & Land Pattern

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

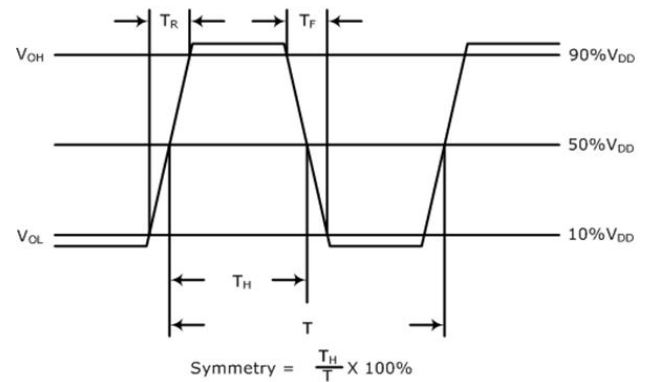


PIN	FUNCTION
1	TRI-STATE or NC
2	GND
3	OUTPUT
4	V _{DD}

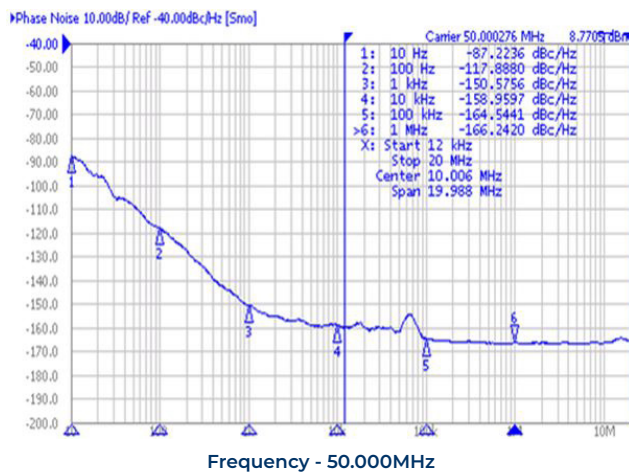
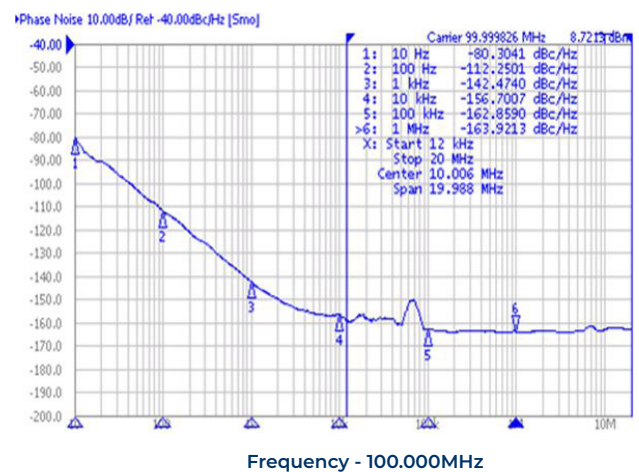
Test Circuit (CMOS)



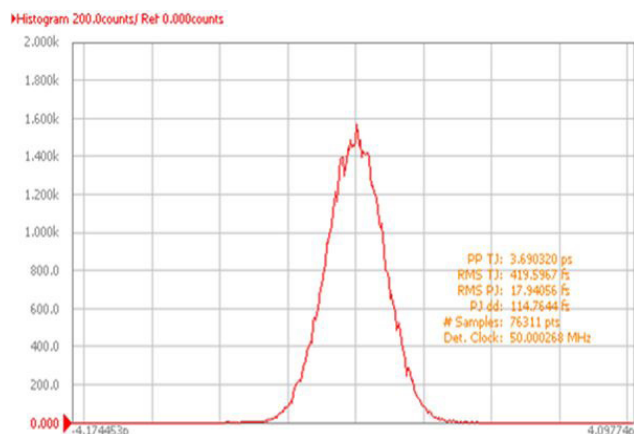
Waveform (CMOS)



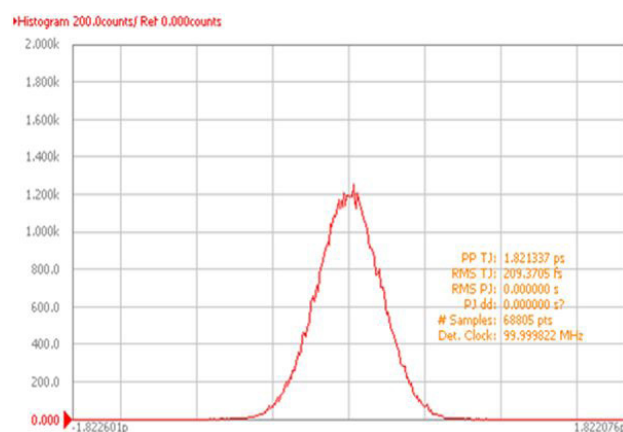
Typical Phase Noise Performance (Measured By Agilent E5052A)



Typical Jitter Performance (Measured By Agilent E5052A)

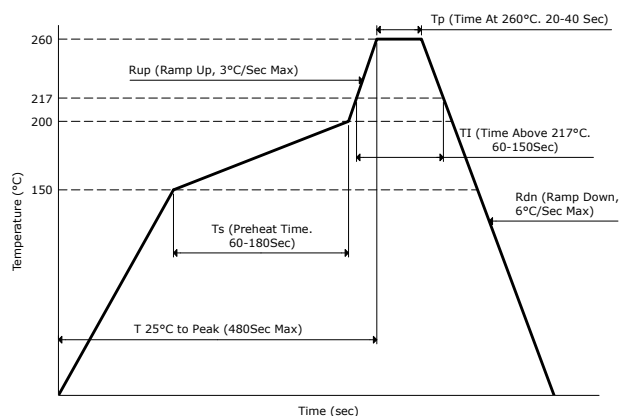


Frequency - 50.000MHz

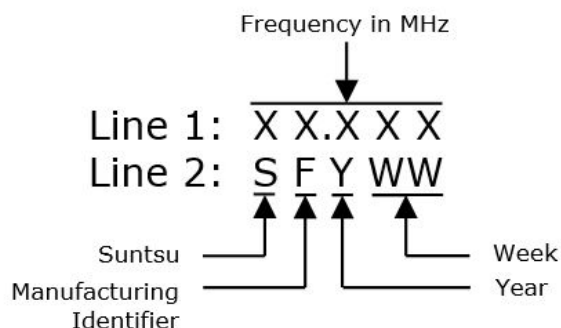


Frequency - 100.000MHz

Reflow Profile



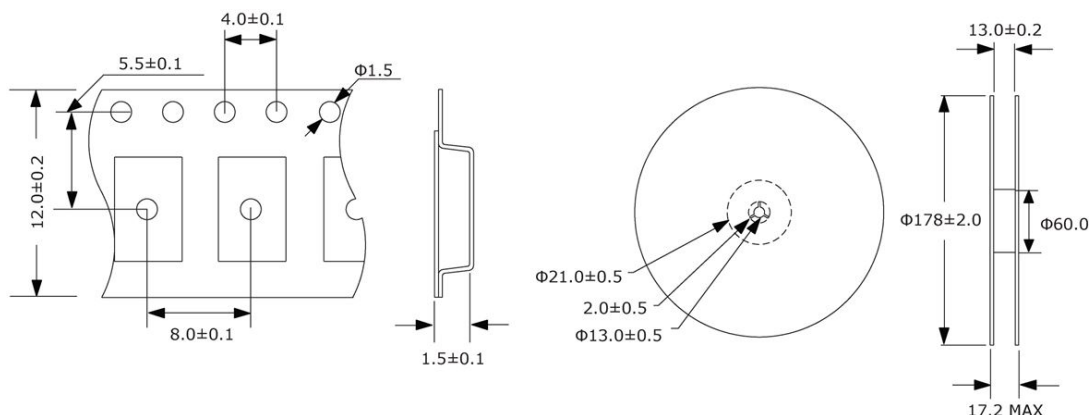
Part Marking



Tape And Reel Dimensions

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

1,000pcs/Reel



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