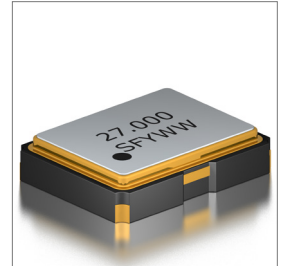


Features
• ± 20 ppm (Frequency Stability) Available
• Ceramic Package
• CMOS
• Tape and Reel

Applications
• Micro Processors
• SONET/SDH/DWDM
• Storage Area/Networking
• Digital Video
• Base Stations



Part Numbering Guide

SXO 22 C 3 A 48 1 - 27.000M

SUNTSU OSC

2.5mm x 2.0mm

CMOS

SUPPLY VOLTAGE

1 : 1.8V \pm 5%

2 : 2.5V \pm 5%

3 : 3.3V \pm 5%

FREQUENCY STABILITY

A : ± 50 ppm

B : ± 30 ppm

C : ± 25 ppm

*D : ± 20 ppm

FREQUENCY
MHz

TRI-STATE
(ENABLE/DISABLE)
BLANK : No Connection
1 : Pin 1

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



Cage Code : 4GUT4

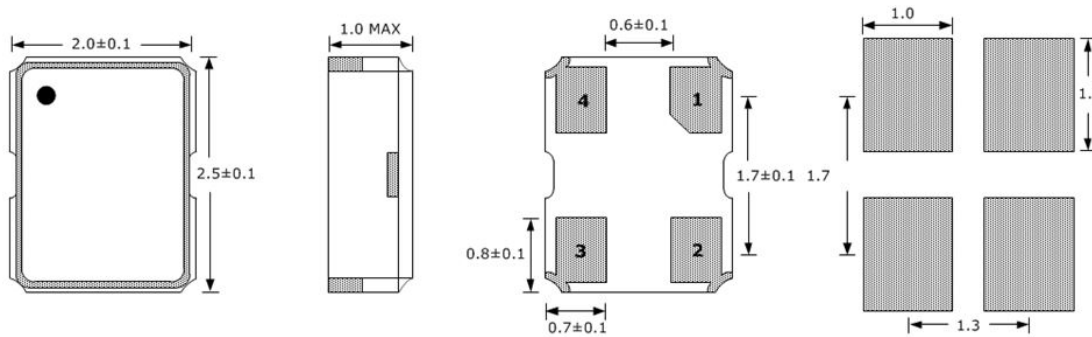
To customize your parameters, contact a Suntsu representative.

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

Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency Range	KHz	32.768			
Frequency Range	MHz	1		110	
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	3	4	5	Maximum Value
1.0000MHz - 15.999MHz	mA	3	5	7	Maximum Value
16.000MHz - 39.999MHz	mA	5	7	10	Maximum Value
40.000MHz - 59.999MHz	mA	10	13	15	Maximum Value
60.000MHz - 110.000MHz	mA	15	20	35	Maximum Value
Output Load (CMOS)	pF			15	
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 - 15.999MHz	ns			8	
16.000MHz - 39.999MHz	ns			6	
40.000MHz - 59.999MHz	ns			4	
60.000MHz - 110.000MHz	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

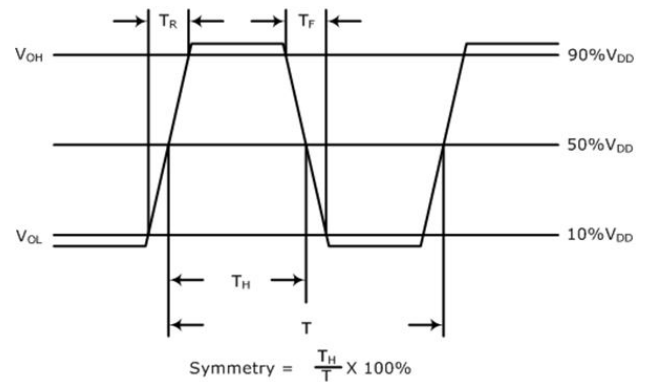
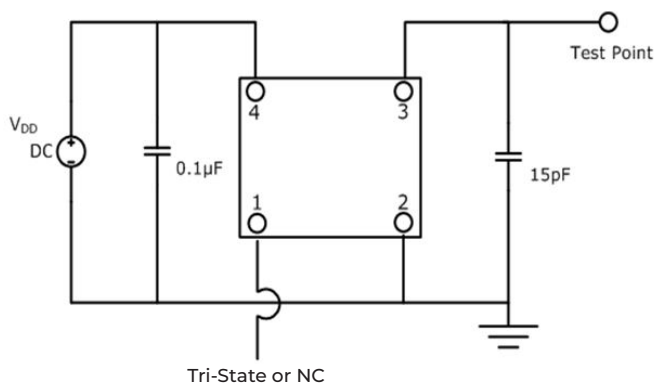
All dimensions are in millimeters (mm) unless otherwise noted. Drawings are not to scale.



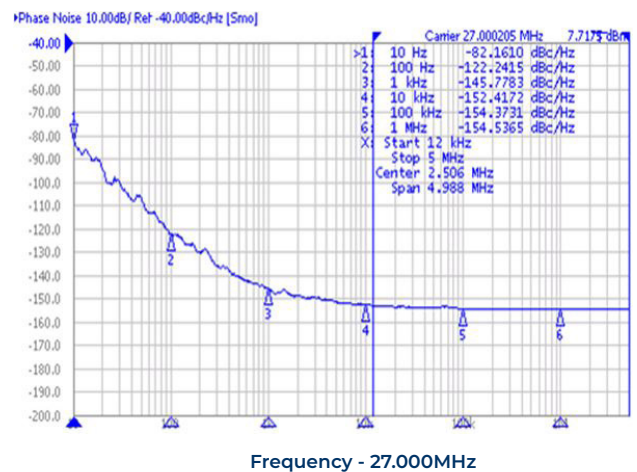
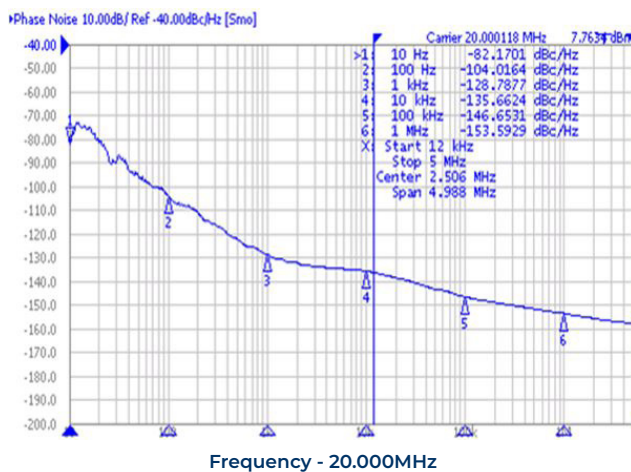
PIN	FUNCTION
1	TRI-STATE or NC
2	GND
3	OUTPUT
4	V _{DD}

Test Circuit (CMOS)

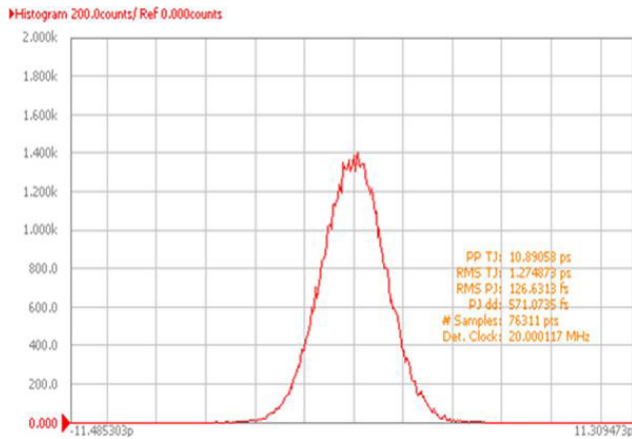
Waveform (CMOS)



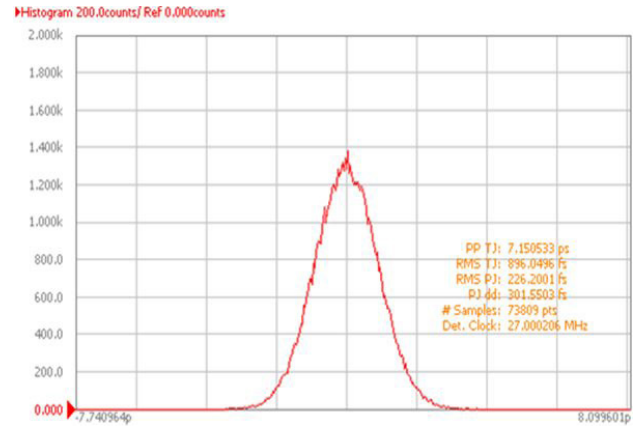
Typical Phase Noise Performance (Measured By Agilent E5052A)



Typical Jitter Performance (Measured By Agilent E5052A)

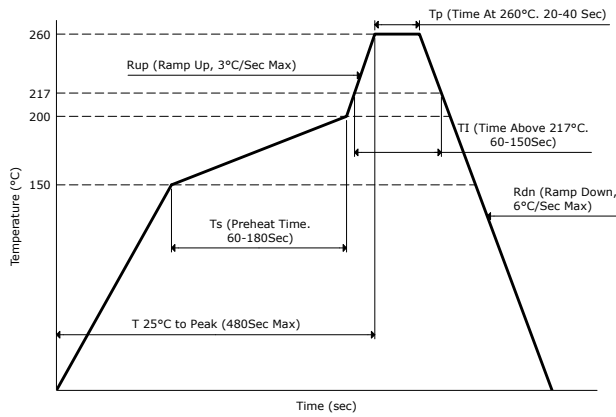


Frequency - 20.000MHz

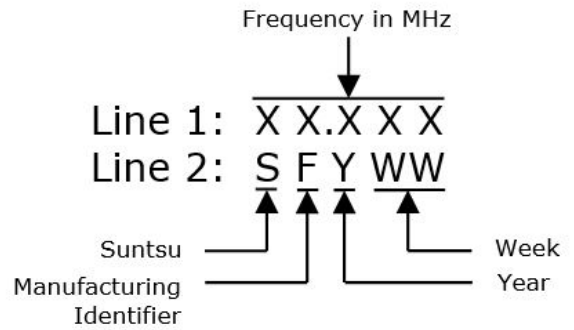


Frequency - 27.000MHz

Reflow Profile



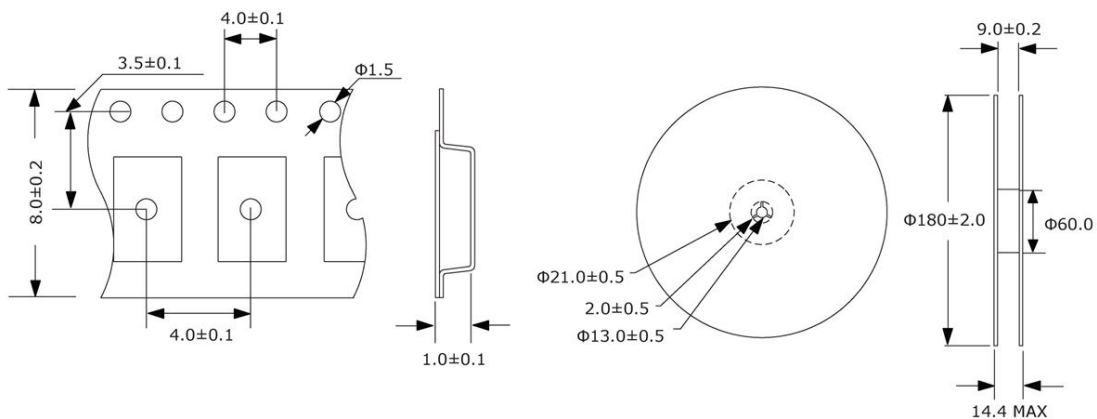
Part Marking



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