

Features

- ± 20 ppm (Frequency Stability) Available
- Ceramic Package
- LVDS
- Low Current Consumption
- Fundamental or 3rd Overtone Crystal Design

Applications

- Fiber Channel
- Gigabit Ethernet
- PCI Express



Part Numbering Guide

SLO 53 L 3 A 48 1 - 156.250M

SUNTSU LOW
CURRENT OSC
5.0mm x 3.2mm

LVDS

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

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

FREQUENCY
MHz

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



Cage Code : 4GUT4

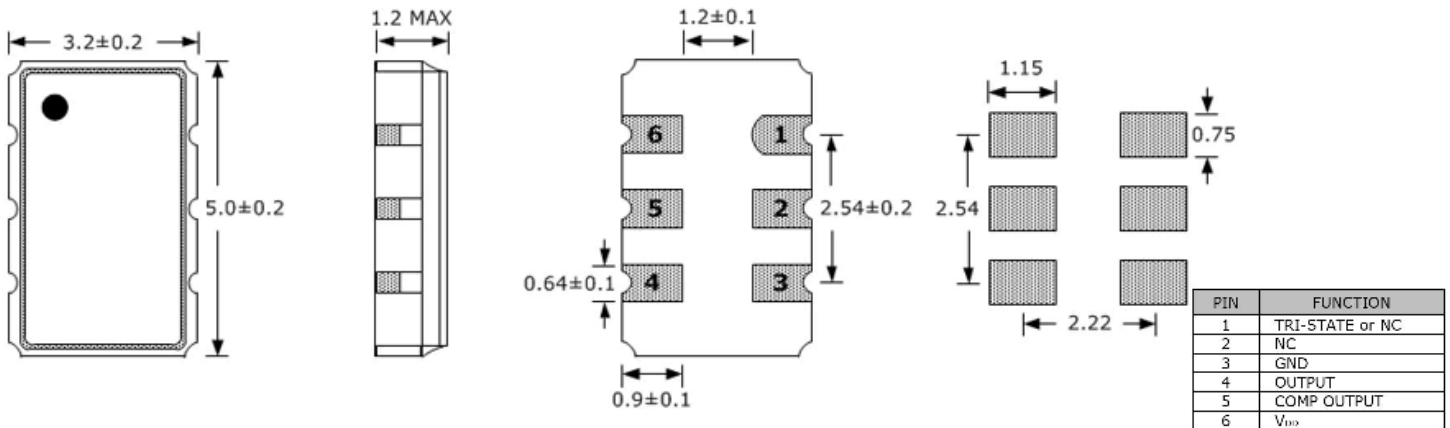
To customize your parameters, contact a Suntsu representative.

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

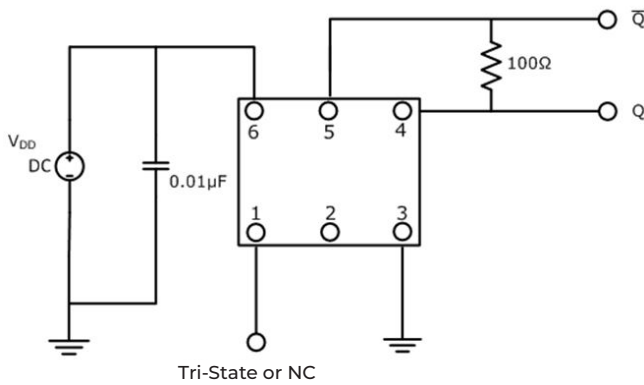
Electrical Parameters	Units	Minimum	Typical	Maximum	Remarks
Frequency Range	MHz	100		320	135~175MHz(1.8V), 100~320MHz(2.5&3.3V)
Frequency Stability (Includes Initial Tolerance at 25°C, Frequency Stability over Operating Temperature, Output Load Change, Supply Voltage Change, and First Year Aging at 25°C.)	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	
Current (I _{DD})	mA		15	20	
Output Load (LVDS)	Ω			100	
Output Logic Levels High (V _{OH})	V		1.43	1.6	
Output Logic Levels Low (V _{OL})	V	0.9	1.1		
Differential Output Voltage (V _{OD})	mV	247	350	454	
Differential Output Error (pV _{OD})	mV			50	
Offset Voltage (V _{OS})	V	1.125	1.250	1.375	
Offset Error (pV _{OS})	mV	-50		50	
Rise (TR) and Fall (TF) Time	ns		0.25	0.5	
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			5.0	
Phase Jitter (12kHz ~ 20MHz)	ps		0.12	0.15	

Outline Drawing & Land Pattern

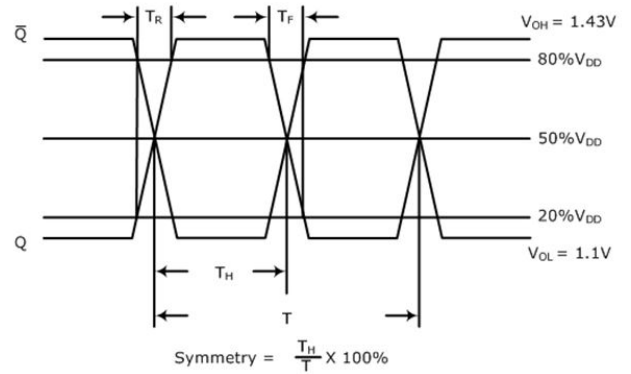
All dimensions are in millimeters (mm) unless otherwise noted. Drawings are not to scale.



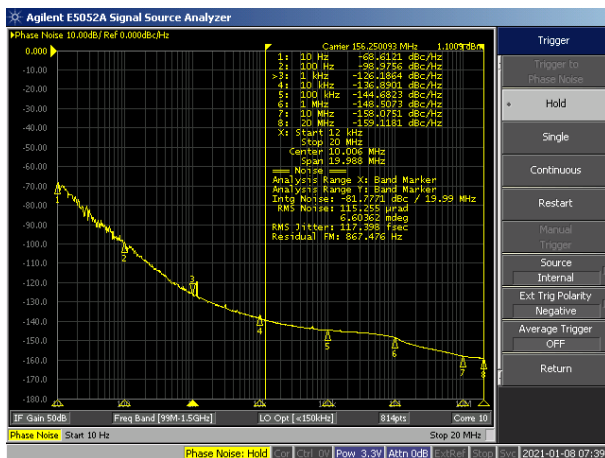
Test Circuit (LVDS)



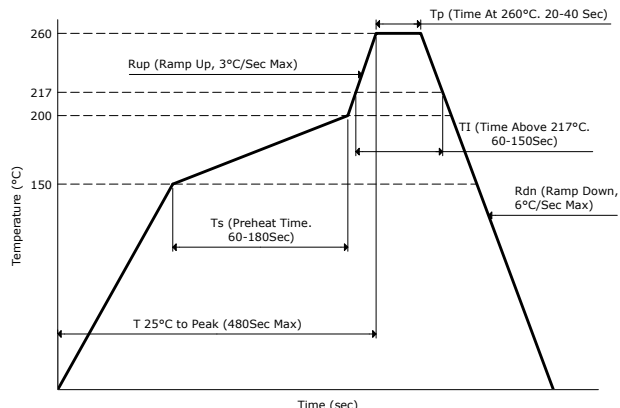
Waveform (LVDS)



Typical Phase Noise Performance (Measured By Agilent E5052A)



Reflow Profile



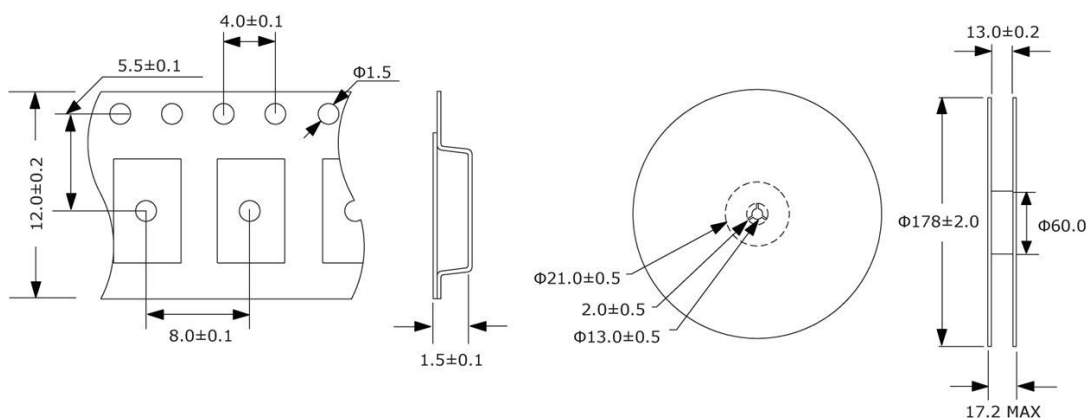
Part Marking

Frequency in MHz
 Line 1: X X.X X X
 Line 2: S F Y W W
 Suntsu Manufacturing Identifier Week Year

Tape And Reel Dimensions

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

1,000pcs/Reel



Environmental 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
Solderability	MIL-STD-883, Method 2003
Moisture Sensitivity	J-STD-020, MSL 1

Mechanical Specifications

Mechanical Shock	MIL-STD-202, Method 213, Condition B
Vibration	MIL-STD-883, Method 2007, Condition A
Moisture Resistance	MIL-STD-883, Method 1004
Resistance to Solvents	MIL-STD-202, Method 215
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition K