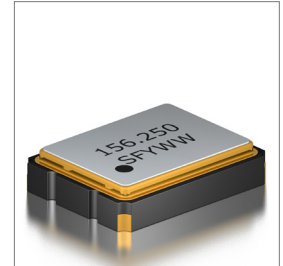


Features
• ± 20 ppm (Frequency Stability) Available
• Wide Frequency Range
• LVDS
• Programmed Oscillator
• Tape and Reel

Applications
• Ethernet (10G/40G/100G)
• Base Stations
• Wi-Fi
• DSL/ADSL
• Communications



Part Numbering Guide

SQG 32 L 3 A 48 1 N - 156.250M

SUNTSU QUICK TURN OSC

3.2mm x 2.5mm

LVDS

SUPPLY VOLTAGE
 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

PROGRAMMING MODE
 BLANK : Fractional Mode
 N : Integer Mode

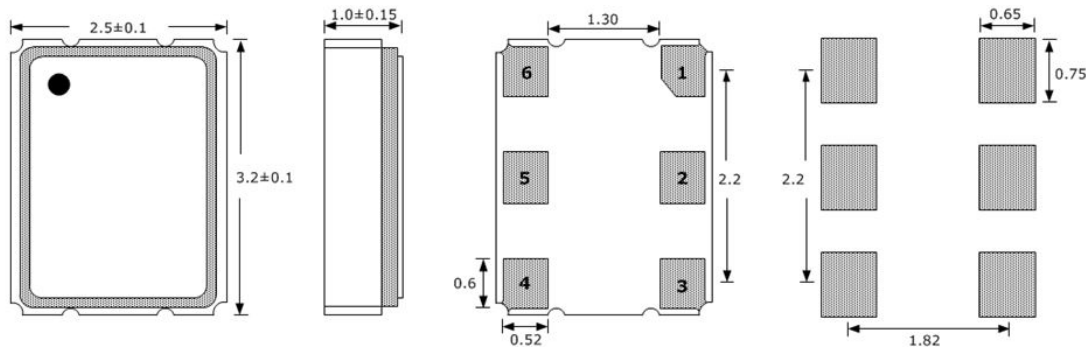
TRI-STATE (ENABLE/DISABLE)
 1 : Pin 1
 2 : Pin 2

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	8		1500	
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	
Supply Voltage (V _{DD}) - 3.3V option	V	3.125	3.3	3.465	
Current (I _{DD}) - 2.5V option	mA			35	
Current (I _{DD}) - 3.3V option	mA			40	
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	330	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	
Rise (TR) and Fall (TF) Time	ns			1	
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		0.5	1.5	Fractional Mode
Phase Jitter (12kHz ~ 20MHz)	ps		0.3	0.5	Integer Mode

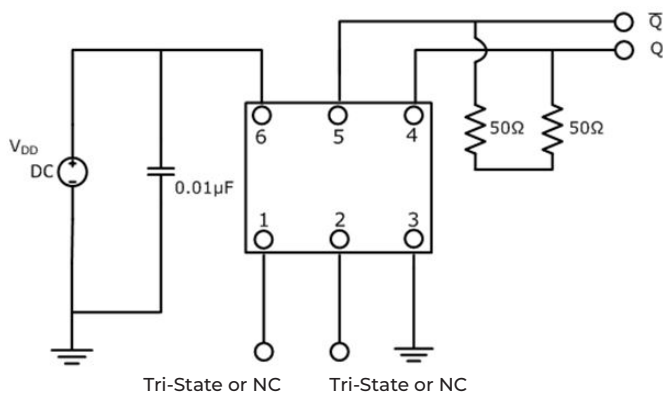
Outline Drawing & Land Pattern

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

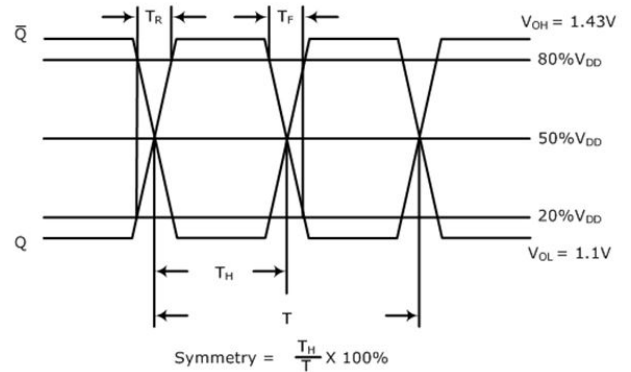


PIN	FUNCTION
1	TRI-STATE or NC
2	TRI-STATE or NC
3	GND
4	OUTPUT
5	COMP OUTPUT
6	V _{DD}

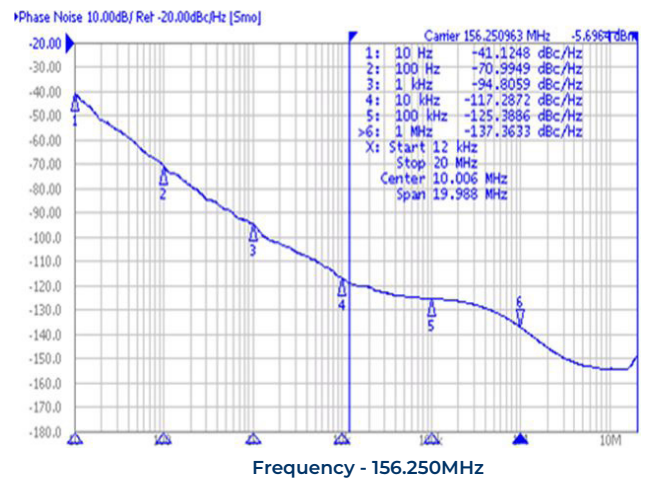
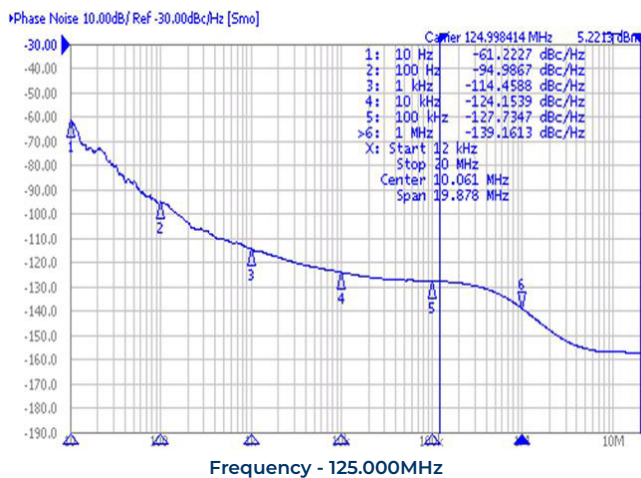
Test Circuit (LVDS)



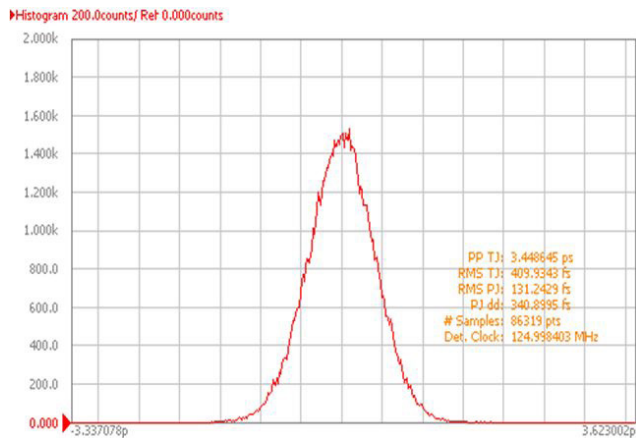
Waveform (LVDS)



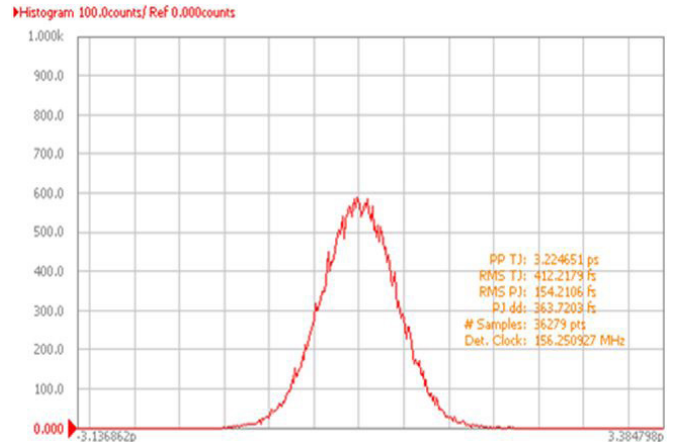
Typical Phase Noise Fractional Performance (Measured By Agilent E5052A)



Typical Jitter Fractional Performance (Measured By Agilent E5052A)

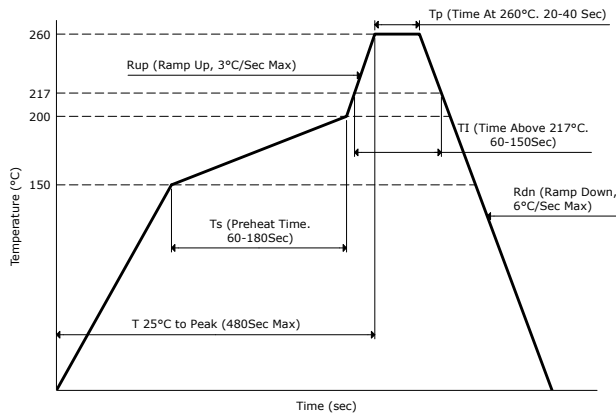


Frequency - 125.000MHz

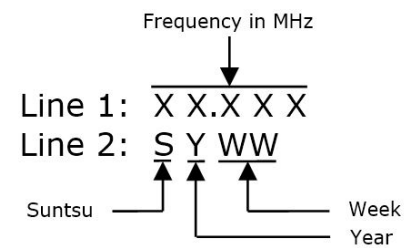


Frequency - 156.250MHz

Reflow Profile



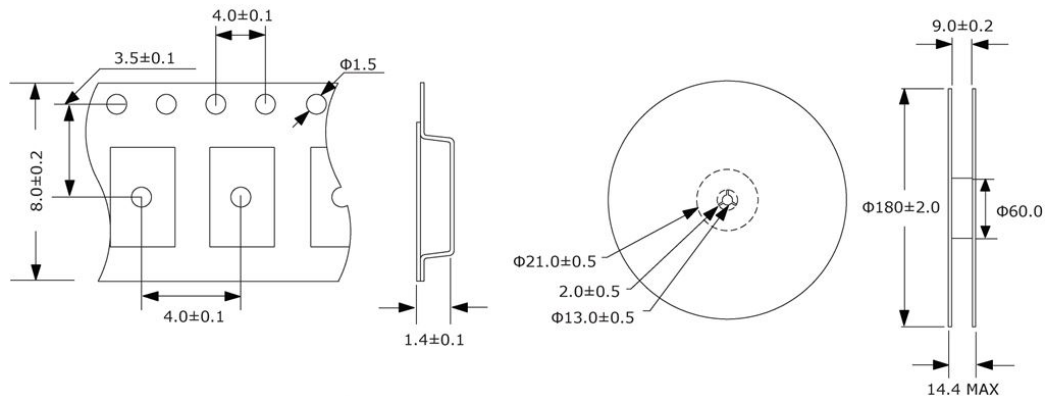
Part Marking



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