SUNTSU

Ceramic SMD Ultra Low Jitter 6 Pad LVPECL Oscillator

SUO32P Series

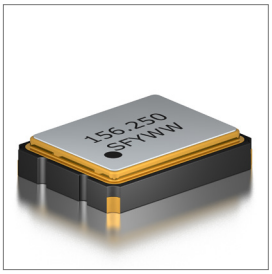
3.2mm x 2.5mm

Features

- ±20ppm (Frequency Stability) Available
- Ceramic Package
- LVPECL
- Ultra Low Phase Jitter (47fs Typical)
- Tape and Reel
- Fundamental or 3rd Overtone Crystal Design

Applications

- Fiber Channel
- Gigabit Ethernet
- PCI Express



Part Numbering Guide

SUO 32 P 3 A 48 1 - 156.250M

- **SUO** — SUNTSU ULTRA LOW JITTER OSC
- **32** — 3.2mm x 2.5mm
- **P** — LVPECL
- **3** — SUPPLY VOLTAGE: 2 : 2.5V±5%; 3 : 3.3V±5%
- **A** — FREQUENCY STABILITY: A : ±50ppm; B : ±30ppm; C : ±25ppm; *D : ±20ppm
- **48** — 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
- **1** — TRI-STATE (ENABLE/DISABLE): BLANK : No Connection; 1 : Pin 1
- **156.250M** — FREQUENCY: MHz

RoHS COMPLIANT

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	
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	3.135	3.3	3.465	
Current (I_{DD})	mA			70	
Output Load (LVPECL)	Ω			50	50 Ω into V_{DD}-2.0V_{DC}
Output Logic Levels High (V_{OH} at 2.5V)	V	1.415		1.760	
Output Logic Levels Low (V_{OL} at 2.5V)	V	0.670		1.195	
Output Logic Levels High (V_{OH} at 3.3V)	V	2.215		2.420	
Output Logic Levels Low (V_{OL} at 3.3V)	V	1.470		1.745	
Rise (TR) and Fall (TF) Time	ns		0.15	0.3	Measured at 20% to 80% of Waveform
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	
Phase Jitter (12kHz ~ 20MHz)	fs		47	100	

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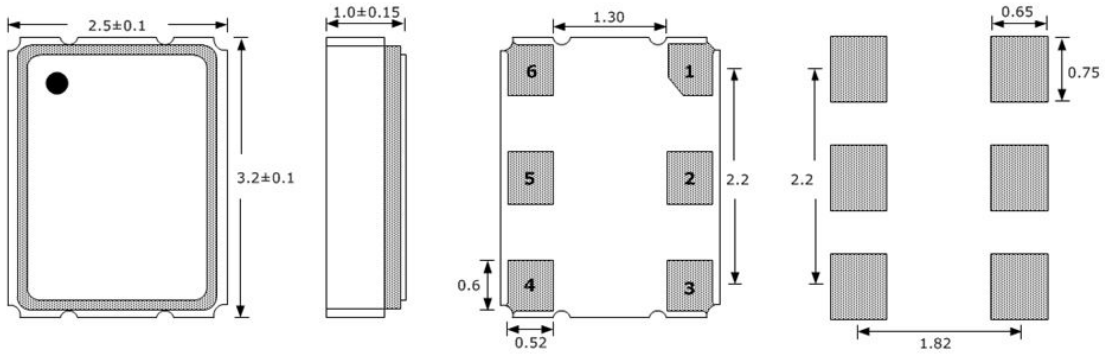
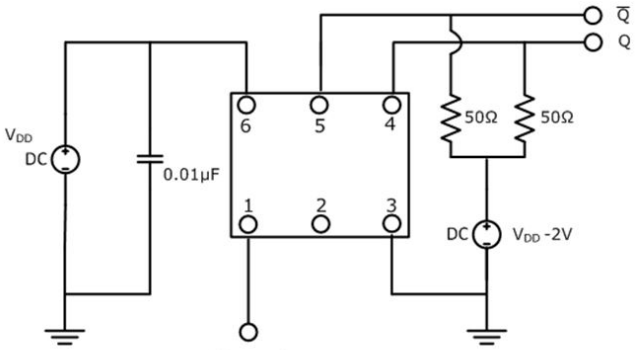
Outline Drawing & Land Pattern

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



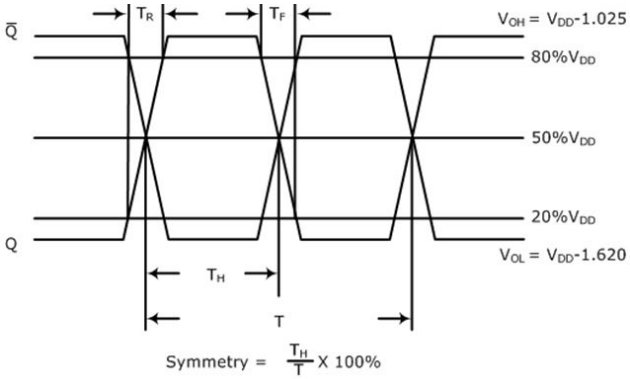
PIN	FUNCTION
1	TRI-STATE or NC
2	NC
3	GND
4	OUTPUT
5	COMP OUTPUT
6	V_{DD}

Test Circuit (LVPECL)



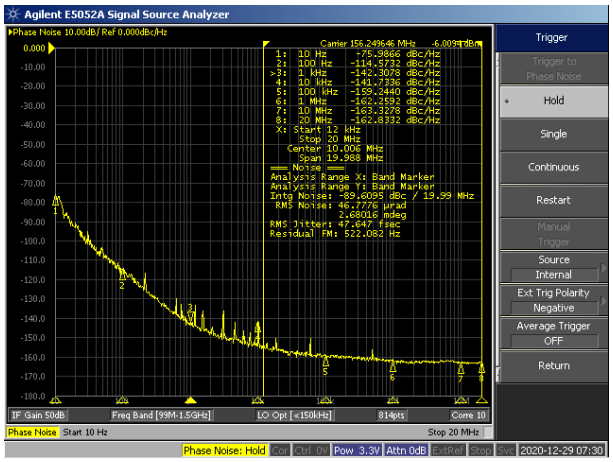
Tri-State or NC

Waveform (LVPECL)

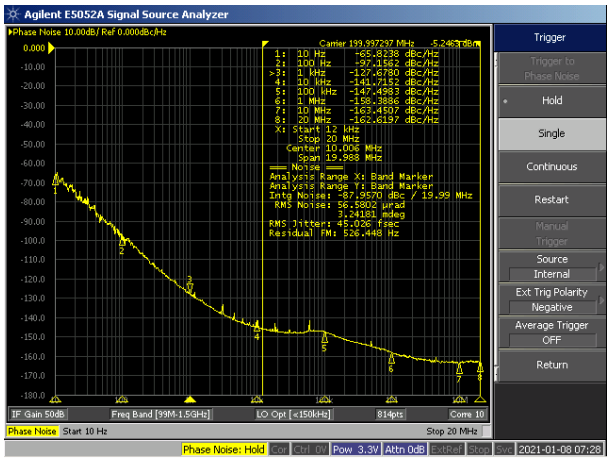


Symmetry = $\frac{T_H}{T}$ X 100%

Typical Phase Noise Performance (Measured By Agilent E5052A)



Frequency - 156.250MHz



Frequency - 200.000MHz

www.suntsu.com

Specifications are subject to change without notice.

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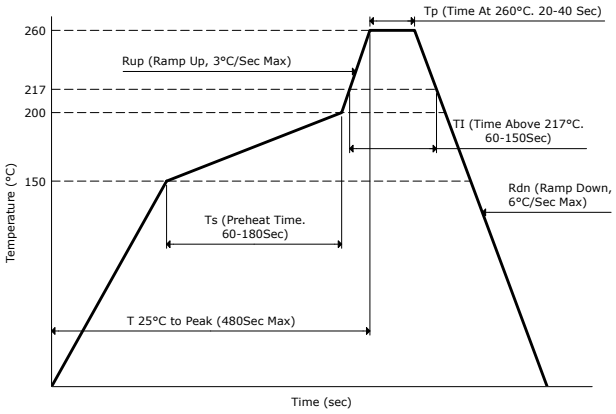
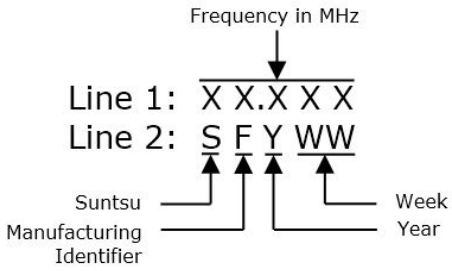
Reflow Profile



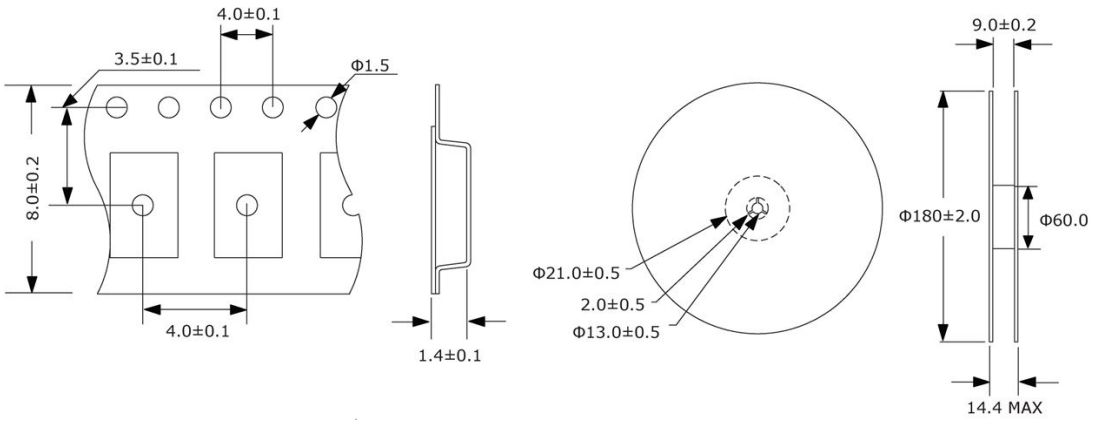
Part Marking



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

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