

FEATURES	APPLICATIONS
<ul style="list-style-type: none"> ±20ppm (Frequency Stability) Available LVDS RoHS Compliant Programmed Oscillator Wide Frequency Range 	<ul style="list-style-type: none"> Ethernet (10G/40G/100G) Base Stations Wi-Fi DSL/ADSL Communications



PART NUMBERING GUIDE

SUNTSU QUICK TURN OSC → **SOQ 22 L 3 A 48 1 - 156.250M** ← **FREQUENCY (MHz)**

- 2.5 mm x 2.0mm** →
- LVDS** →
- SUPPLY VOLTAGE**
 - 2: 2.5V±5%
 - 3: 3.3V±5%
- FREQUENCY STABILITY**
 - A: ±50ppm
 - B: ±30ppm
 - C: ±25ppm
 - *D: ±20ppm
- TRI-STATE (ENABLE/DISABLE)**
 - 1: Pin 1
 - 2: Pin 2
- OPERATING TEMPERATURE RANGE**
 - 07: 0°C to +70°C
 - 16: -10°C to +60°C
 - 17: -10°C to +70°C
 - 27: -20°C to +70°C
 - 38: -30°C to +85°C
 - 48: -40°C to +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	MIN.	TYP.	MAX.	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			-55		+125	
Supply Voltage (V _{DD})	2.5V Option	V	2.375	2.5	2.625	
	3.3V Option		3.135	3.3	3.465	
Current (I _{DD})	2.5V Option	mA			35	
	3.3V Option				40	
Output Load (LVDS)		Ω			100	
Output Logic Levels	Output Logic High (V _{OH})	V		1.43	1.6	
	Output Logic Low (V _{OL})		0.9	1.1		
Differential Output Voltage (V _{OD})		mV	247	330	454	
Differential Output Error (δV _{OD})		mV			50	
Offset Voltage (V _{OS})		V	1.125	1.250	1.375	
Offset Error (δV _{OS})		mV			50	
Rise (T _R) and Fall (T _F) Time		ns			1	
Symmetry (Duty Cycle)		%	45	50	55	
Tri-State Input Voltage	Enable	V	0.7*V _{DD}			No Connection.
	Disable				0.3*V _{DD}	
Start-Up Time		ms			10	
Phase Jitter (12kHz ~ 20MHz)		ps		0.5	1.5	

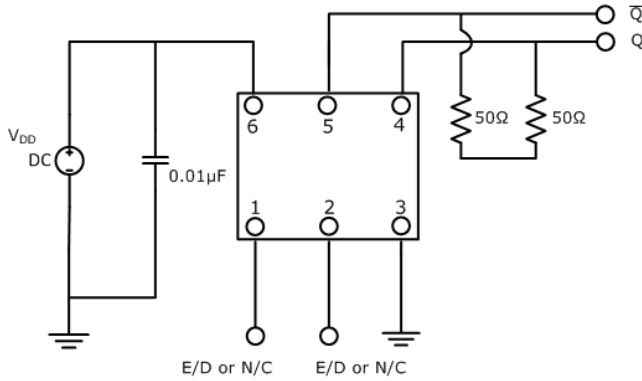
OUTLINE DRAWING

RECOMMENDED LAND PATTERN

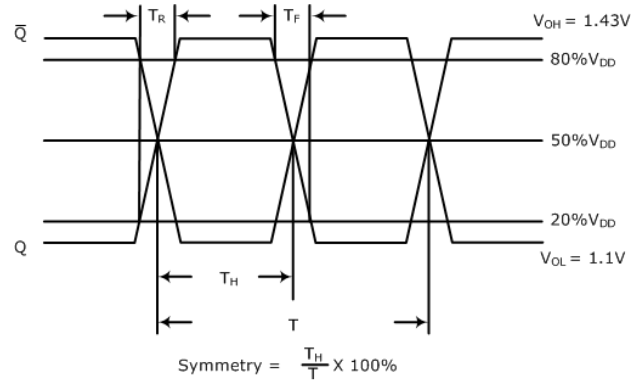
PIN	FUNCTION
1	TRI-STATE or NC
2	TRI-STATE or NC
3	GND
4	OUTPUT
5	COMP OUTPUT
6	V _{DD}

NOTE: Dimensions in millimeters (mm).

TEST CIRCUIT (LVDS)

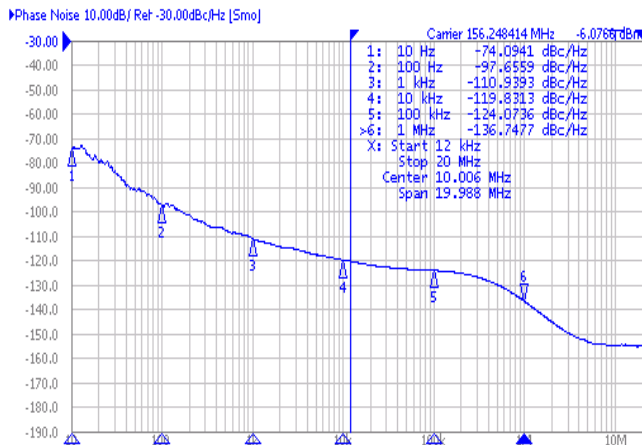


WAVEFORM (LVDS)

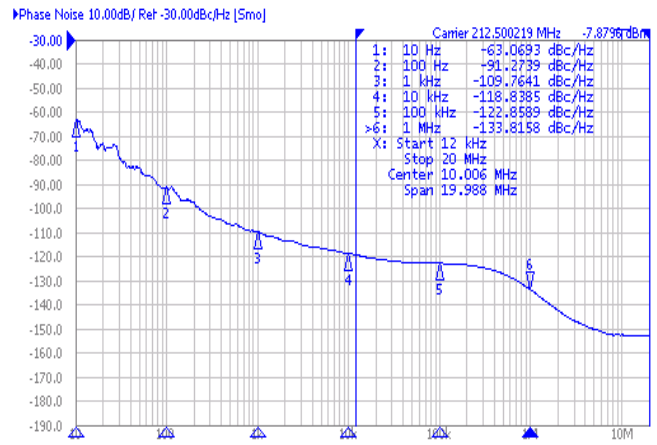


TYPICAL PHASE NOISE PERFORMANCE (MEASURED BY AGILENT E5052A)

Frequency 156.250MHz

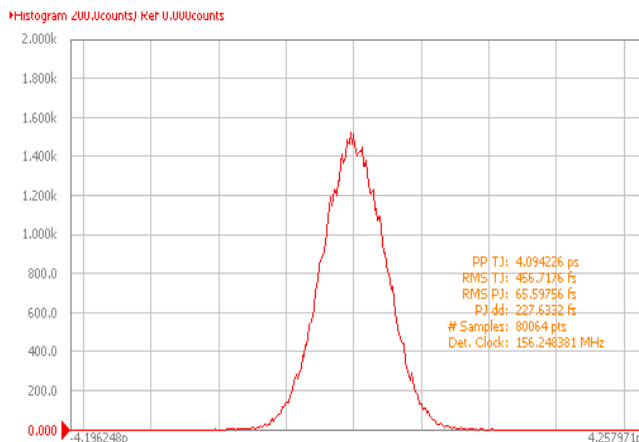


Frequency 212.500MHz

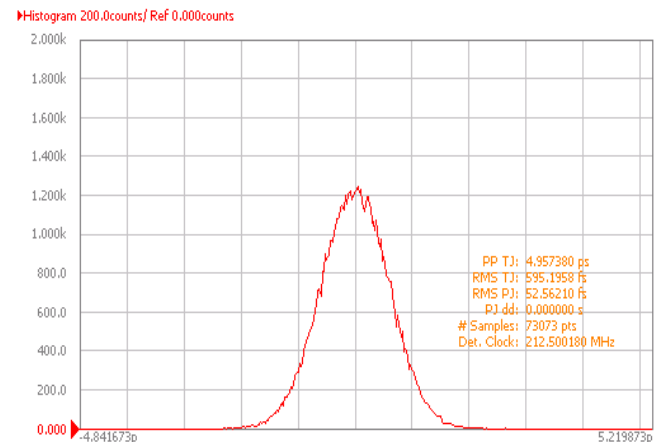


TYPICAL JITTER PERFORMANCE (MEASURED BY AGILENT E5052A)

Frequency 156.250MHz



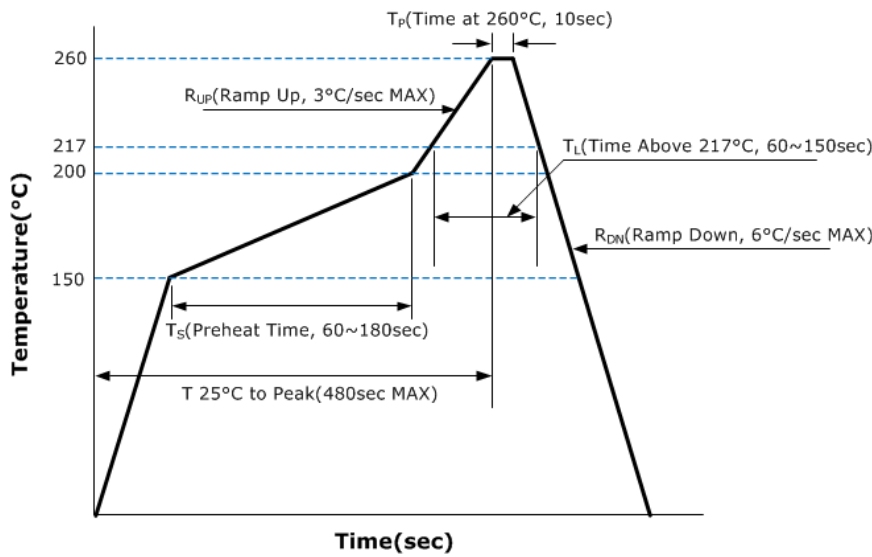
Frequency 212.500MHz



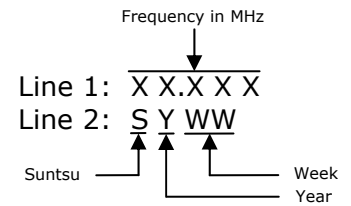
ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

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
Mechanical Shock	MIL-STD-883, Method 2002, Condition B
Vibration	MIL-STD-883, Method 2007, Condition A
Moisture Resistance	MIL-STD-883, Method 1004
Moisture Sensitivity	J-STD-020, MSL 1
Resistance to Soldering Heat	MIL-STD-202, Method 210, Condition K
Resistance to Solvents	MIL-STD-202, Method 215
Solderability	MIL-STD-883, Method 2003

REFLOW PROFILE

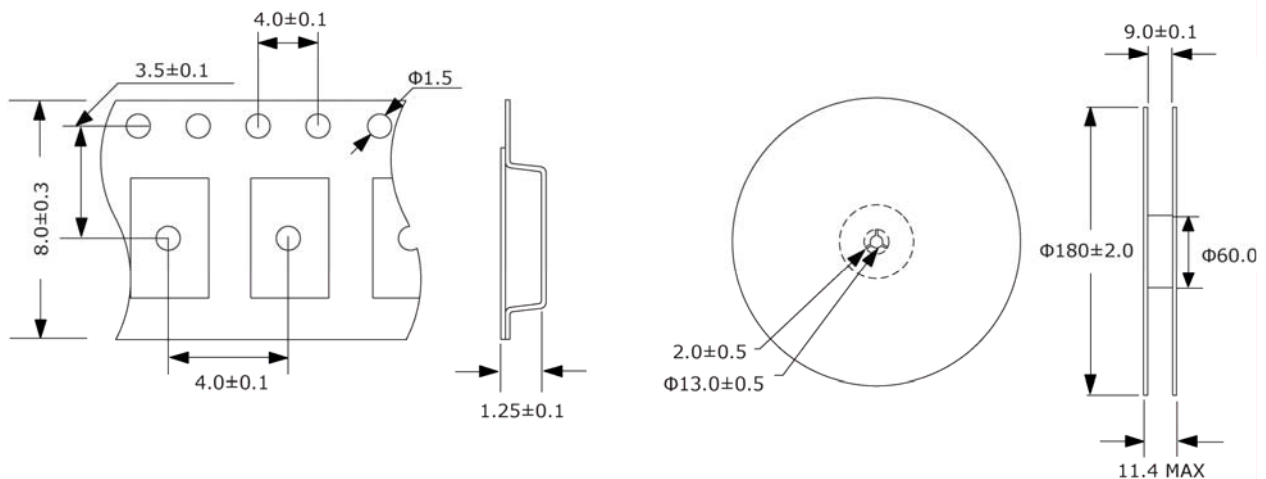


MARKING



TAPE AND REEL DIMENSIONS

3,000pcs/reel



NOTE: Dimensions in millimeters (mm); drawing is not to scale.