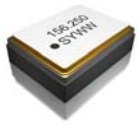
SQG22P SERIES

2.5mm x 2.0mm CERAMIC SMT QUICK TURN LVPECL OSCILLATOR

FEATURES	APPLICATIONS
- ±20ppm (Frequency Stability) Available - LVPECL - RoHS Compliant - Programmed Oscillator - Wide Frequency Range	- Ethernet (10G/40G/100G) - Base Stations - Wi-Fi - DSL/ADSL - Communications



PART NUMBERING GUIDE

SUNTSU QUICK TURN OSC → SQG 22 P 3 A 48 1 – 156.250M ← FREQUENCY (MHz)

2.5 mm x 2.0mm

LVPECL

SUPPLY VOLTAGE
2: 2.5V±5%
3: 3.3V±5%

FREQUENCY STABILITY
A: ±50ppm
B: ±30ppm
C: ±25ppm
*D: ±20ppm

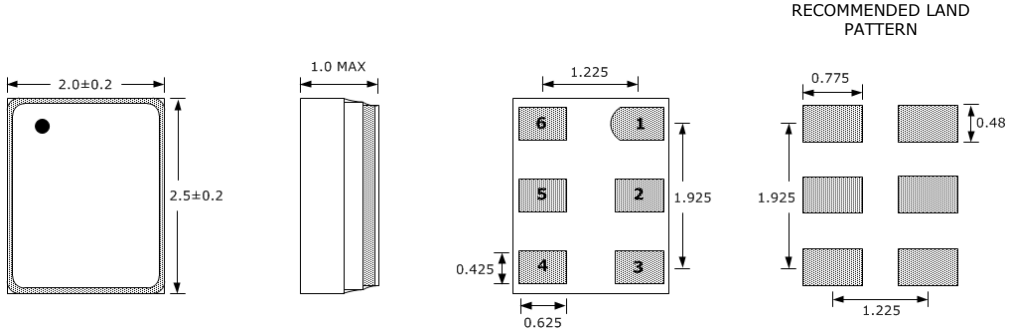
TRI-STATE (ENABLE/DISABLE)
1: Pin 1
2: Pin 2

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			60	
	3.3V Option				65	
Output Load (LVPECL)		Ω			50	50 Ω into V_{DD}–2.0V_{DC}
Output Logic Levels	Output Logic High (V_{OH})	V	V_{DD}-1.025			
	Output Logic Low (V_{OL})				V_{DD}-1.62	
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	

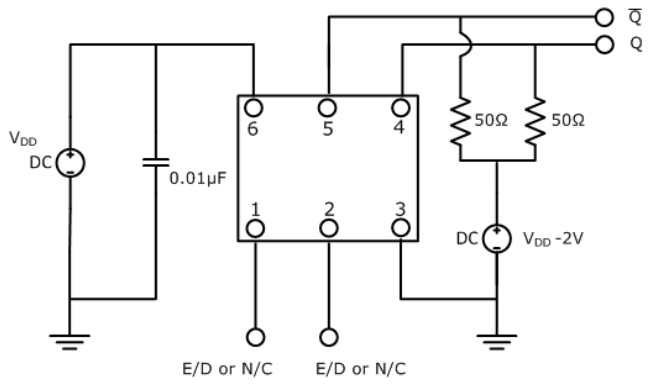
OUTLINE DRAWING



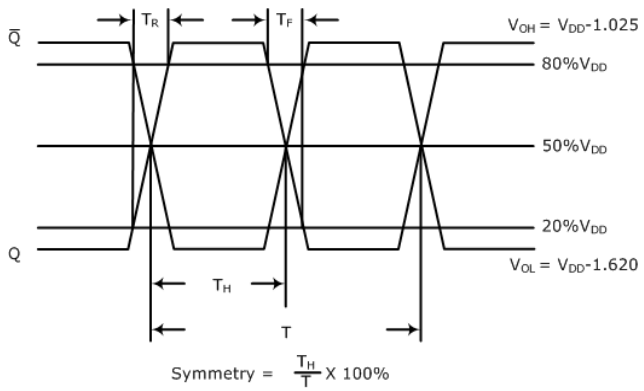
PIN	FUNCTION
1	TRI-STATE or NC
2	TRI-STATE or NC
3	GND
4	OUTPUT
5	COMP OUTPUT
6	V_{DD}

NOTE: Dimensions in millimeters (mm).

TEST CIRCUIT (LVPECL)

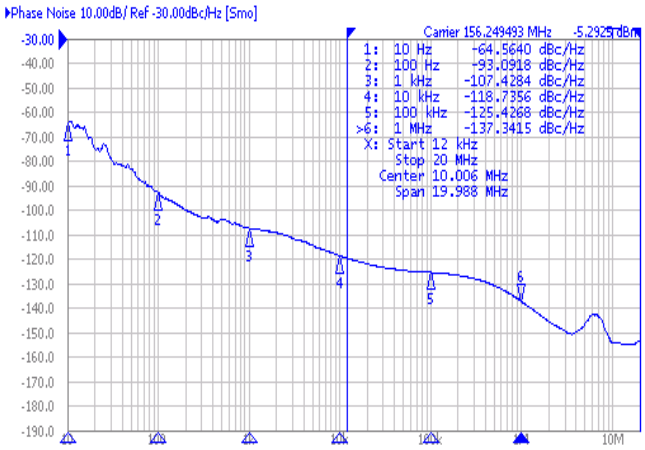


WAVEFORM (LVPECL)

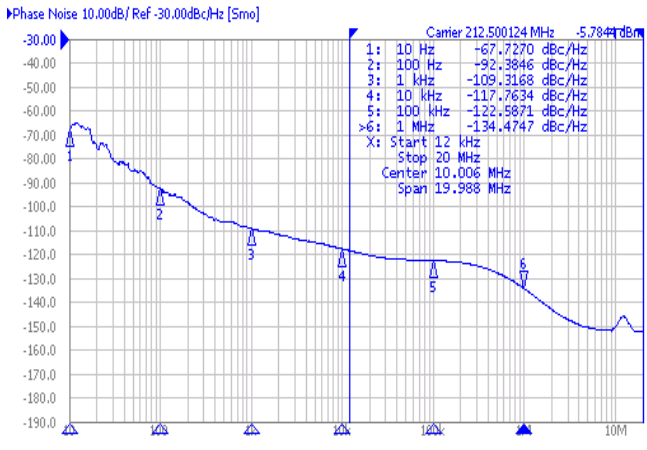


TYPICAL PHASE NOISE PERFORMANCE (MEASURED BY AGILENT E5052A)

Frequency 156.250MHz

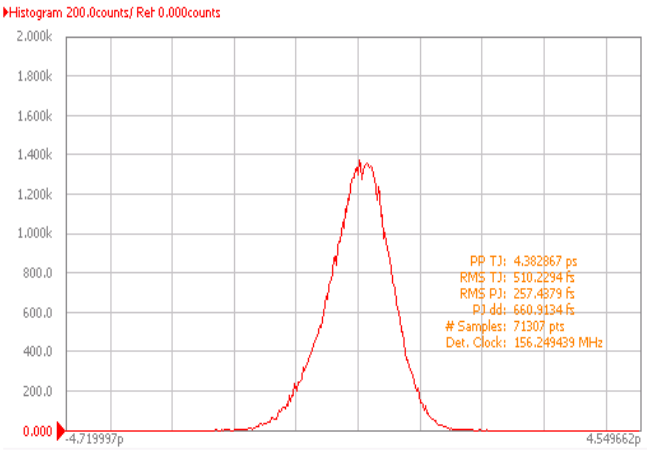


Frequency 212.500MHz

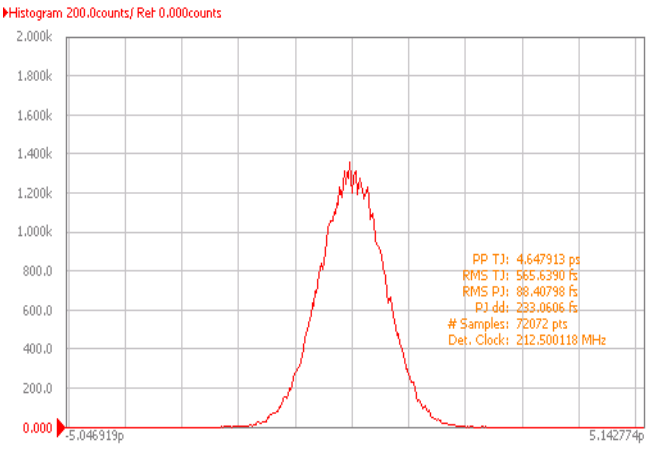


TYPICAL JITTER PERFORMACE (MEASURED BY AGILENT E5052A)

Frequency 156.250MHz



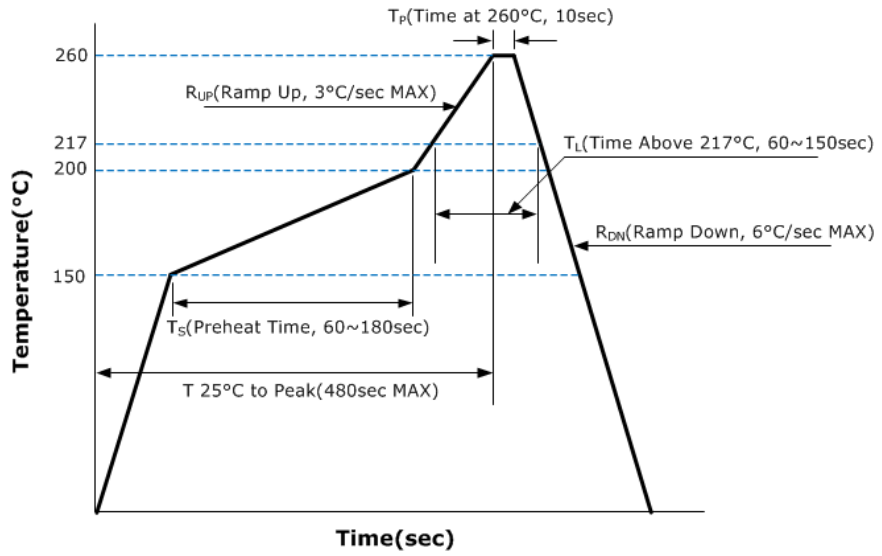
Frequency 212.500MHz



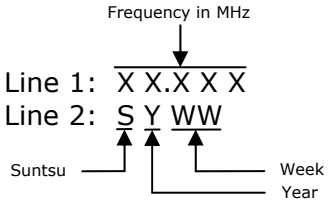
ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

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

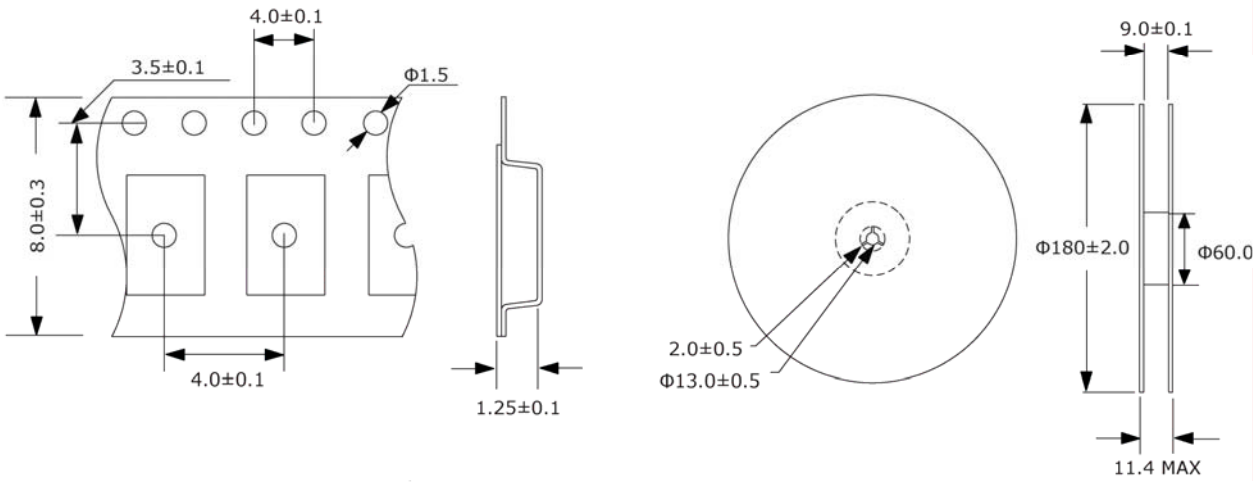


MARKING



TAPE AND REEL DIMENSIONS

3,000pcs/reel



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