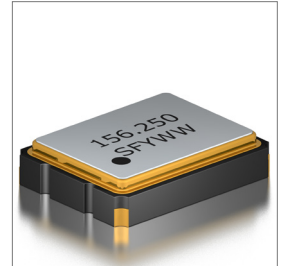
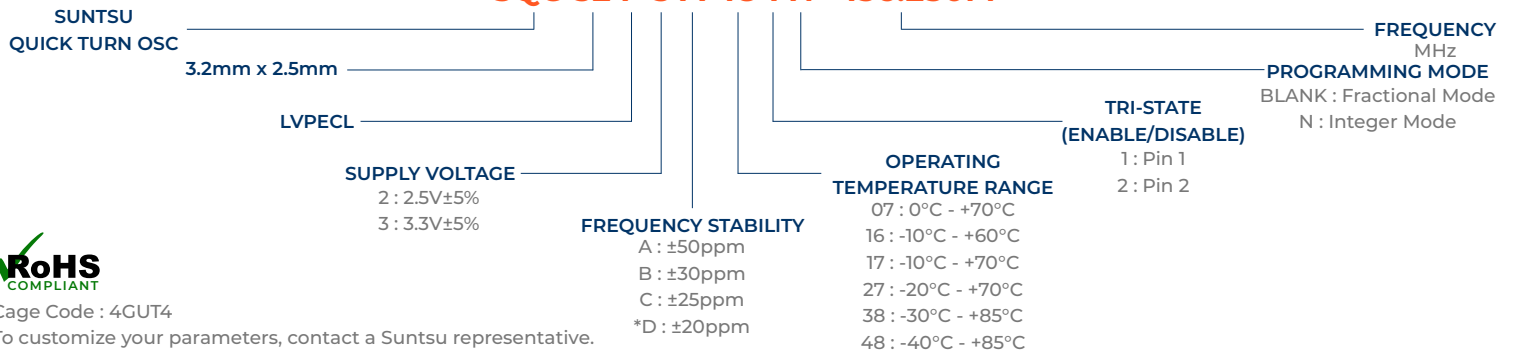


| Features                                       |
|--|
| • $\pm 20$ ppm (Frequency Stability) Available |
| • Wide Frequency Range                         |
| • LVPECL                                       |
| • Programmed Oscillator                        |
| • Tape and Reel                                |

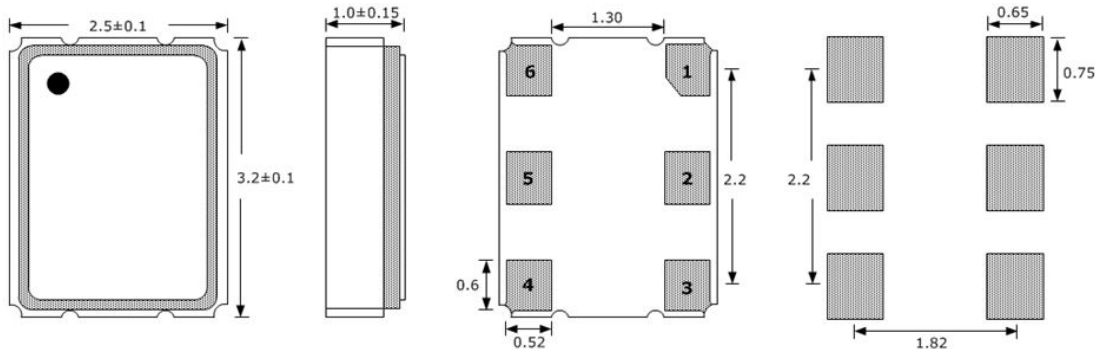
| Applications              |
|---------------------------|
| • Ethernet (10G/40G/100G) |
| • Base Stations           |
| • Wi-Fi                   |
| • DSL/ADSL                |
| • Communications          |


**Part Numbering Guide**
**SQG 32 P 3 A 48 1 N - 156.250M**


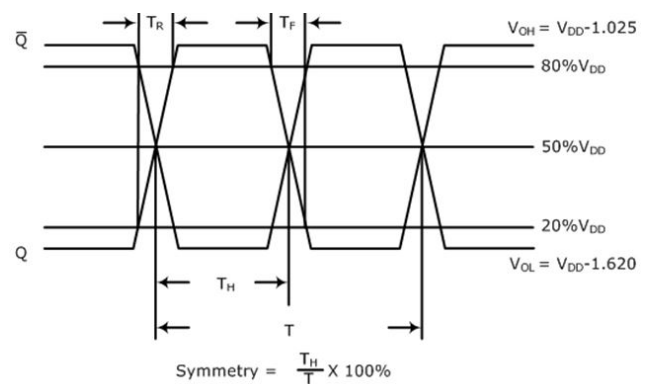
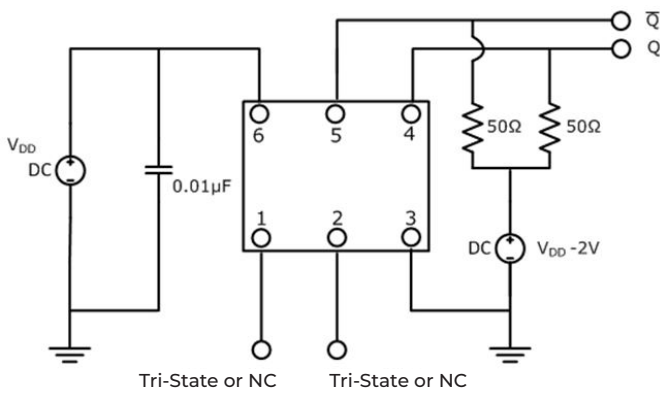
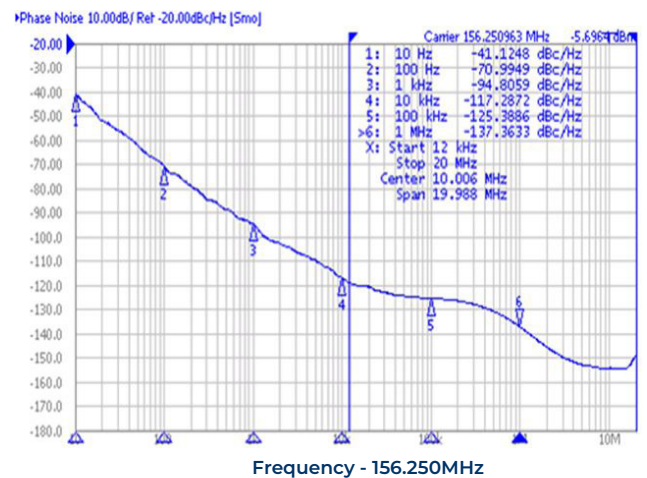
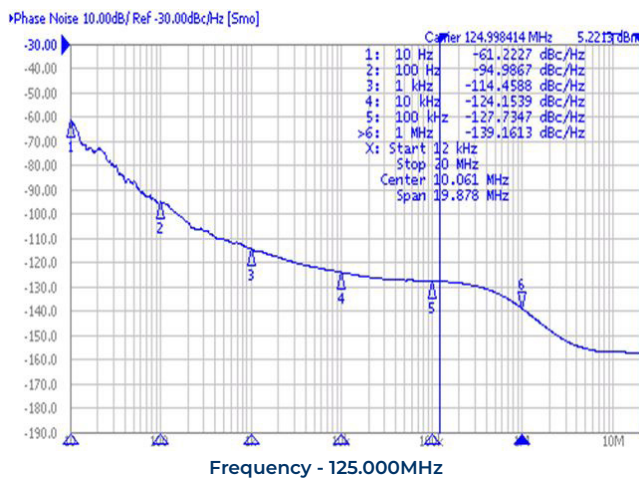
| Electrical Parameters  | Units | Minimum                | Typical | Maximum               | Remarks                                       |
|--|-------|------------------------|---------|-----------------------|---|
| Frequency Range  | MHz   | 8                      |         | 1500                  |   |
| 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 <sub>DD</sub> ) - 2.5V option  | V     | 2.375                  | 2.5     | 2.625                 |   |
| Supply Voltage (V <sub>DD</sub> ) - 3.3V option  | V     | 3.125                  | 3.3     | 3.465                 |   |
| Current (I <sub>DD</sub> ) - 2.5V option   | mA    |                        |         | 60                    |   |
| Current (I <sub>DD</sub> ) - 3.3V option   | mA    |                        |         | 65                    |   |
| Output Load (LVPECL)   | Ω     |                        |         | 50                    | 50 Ω into V <sub>DD</sub> -2.0V <sub>DC</sub> |
| Output Logic Levels High (V <sub>OH</sub> )  | V     | V <sub>DD</sub> -1.025 |         |                       |   |
| Output Logic Levels Low (V <sub>OL</sub> )   | V     |                        |         | V <sub>DD</sub> -1.62 |   |
| Rise (TR) and Fall (TF) Time   | ns    |                        |         | 1                     |   |
| Symmetry (Duty Cycle)  | %     | 45                     | 50      | 55                    |   |
| Tri-State Input Voltage - Enable   | V     | 0.7*V <sub>DD</sub>    |         |                       | No Connection                                 |
| Tri-State Input Voltage - Disable  | V     |                        |         | 0.3*V <sub>DD</sub>   |   |
| 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**

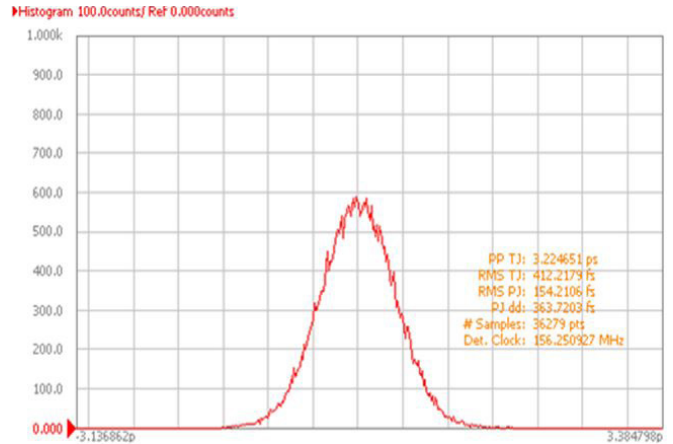
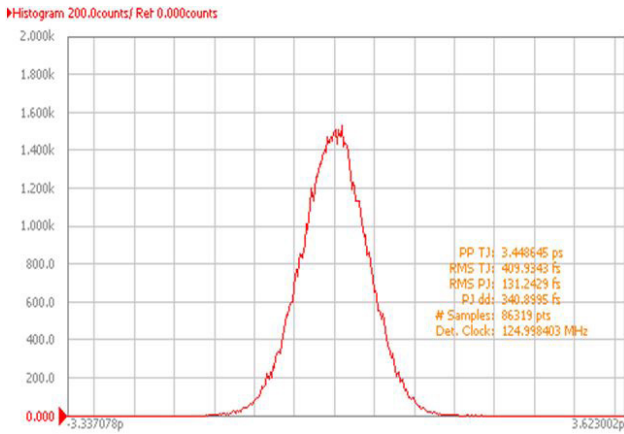
All dimensions are in millimeters (mm) unless otherwise noted. Drawings are not to scale.



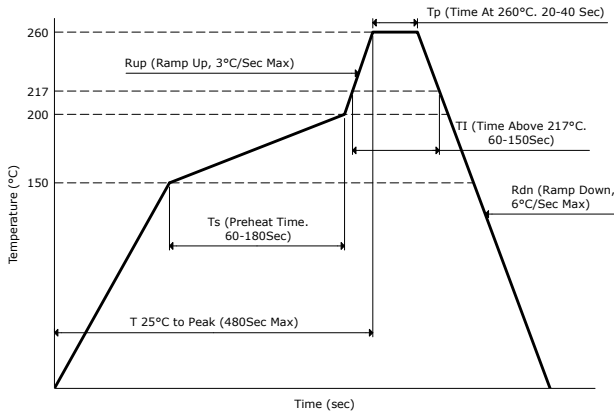
| PIN | FUNCTION        |
|-----|-----------------|
| 1   | TRI-STATE or NC |
| 2   | TRI-STATE or NC |
| 3   | GND             |
| 4   | OUTPUT          |
| 5   | COMP OUTPUT     |
| 6   | V <sub>DD</sub> |

**Test Circuit (LVPECL)**
**Waveform (LVPECL)**

**Typical Phase Noise Fractional Performance (Measured By Agilent E5052A)**


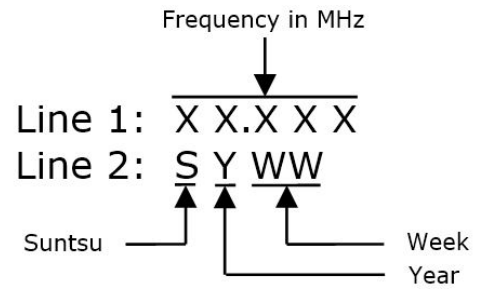
Typical Jitter Fractional Performance (Measured By Agilent E5052A)



Reflow Profile



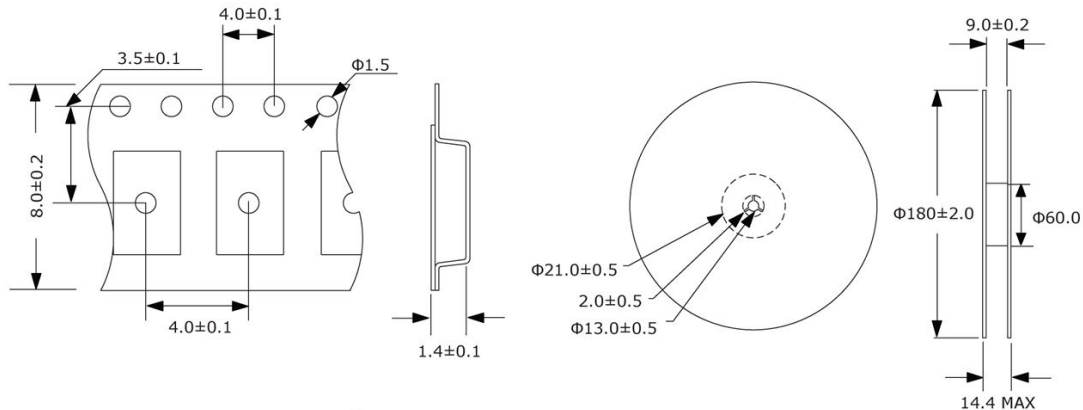
Part Marking



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  |