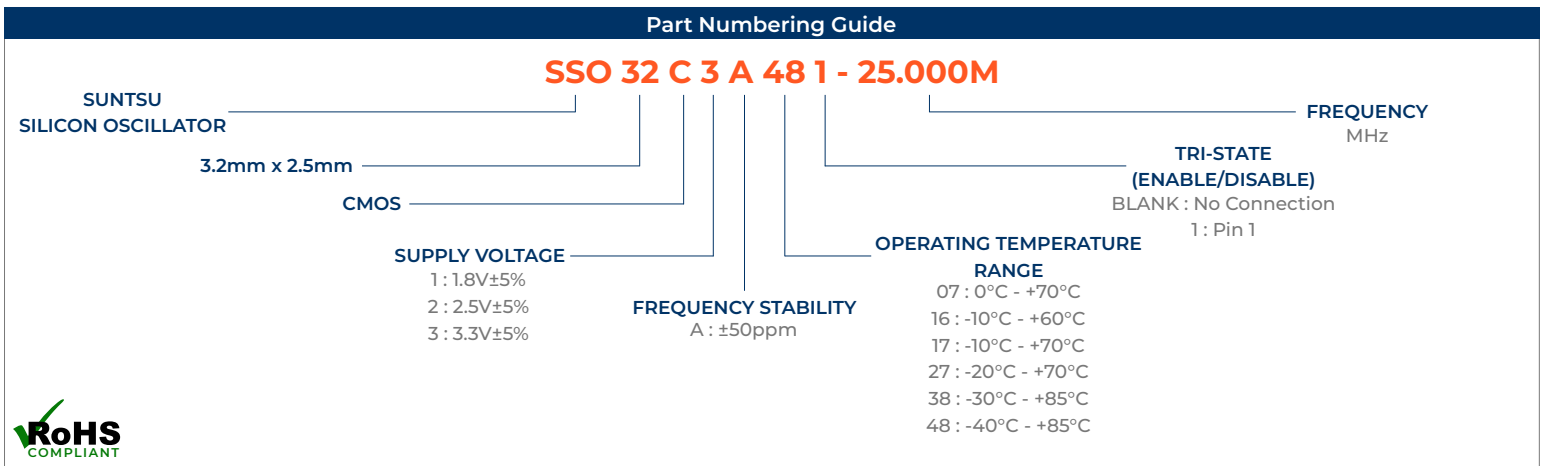
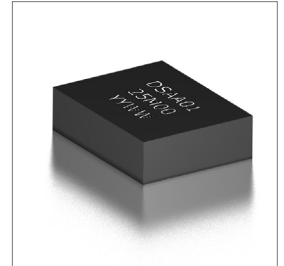


| Features                                       |
|--|
| • $\pm 50$ ppm (Frequency Stability) Available |
| • All Silicon without Quartz and MEMS          |
| • CMOS Output                                  |
| • Low Jitter                                   |
| • Built in LDO and Power Filter Circuit        |

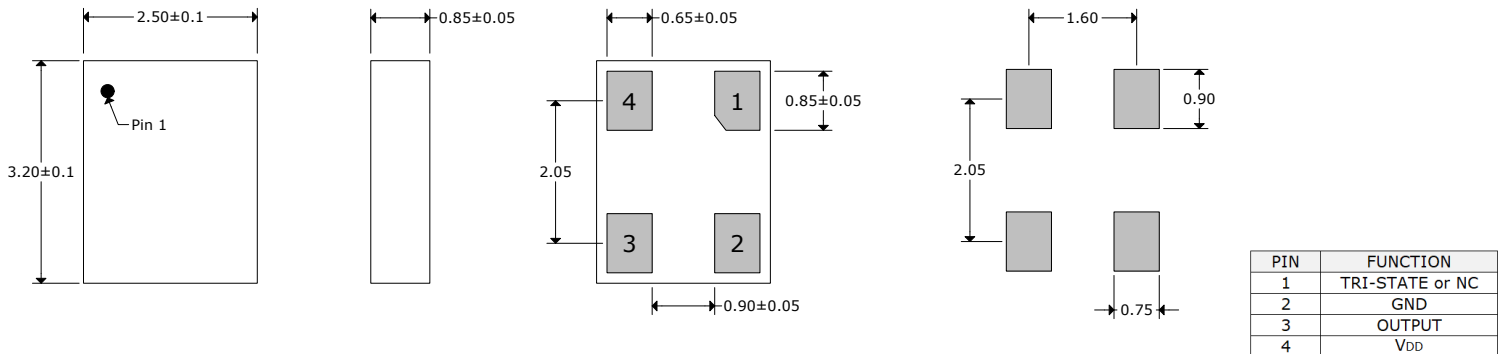
| Applications              |
|---------------------------|
| • Automotive Electronics  |
| • Intelligent Terminal    |
| • Ethernet                |
| • Consumer Electronics    |
| • Communication Equipment |



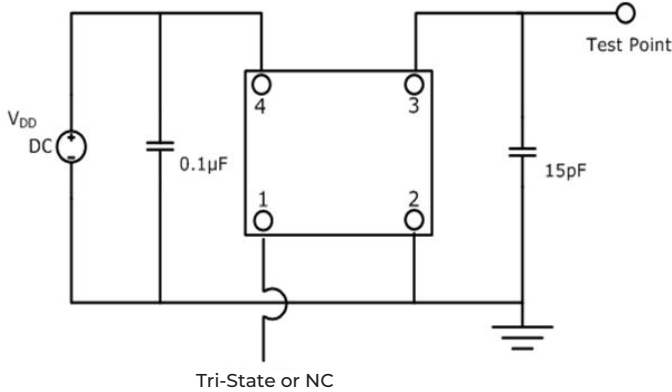
| Electrical Parameters   | Units | Minimum              | Typical | Maximum              | Remarks                              |
|---|-------|----------------------|---------|----------------------|--------------------------------------|
| Frequency Range   | MHz   | 0.01                 |         | 212.5                |                                      |
| Frequency Stability (Includes Initial Tolerance at 25°C, Frequency Stability over Operating Temperature, Output Load Change, Supply Voltage Change, and Ten Years Aging at 25°C.) | ppm   | -50                  |         | 50                   |                                      |
| Operating Temperature   | °C    | -40                  |         | 85                   | See part numbering guide for options |
| Storage Temperature   | °C    | -55                  |         | 105                  |                                      |
| Supply Voltage (V <sub>DD</sub> ) - 1.8V option   | V     | 1.71                 | 1.8     | 1.89                 |                                      |
| 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     | 3.135                | 3.3     | 3.47                 |                                      |
| Current (I <sub>DD</sub> ) - 1.8V to 3.3V   | mA    |                      | 40      | 55                   |                                      |
| Output Load (CMOS)  | pF    |                      |         | 15                   |                                      |
| Output Logic Levels High (V <sub>OH</sub> )   | V     | 0.83*V <sub>DD</sub> |         |                      |                                      |
| Output Logic Levels Low (V <sub>OL</sub> )  | V     |                      |         | 0.17*V <sub>DD</sub> |                                      |
| Rise (TR) and Fall (TF) Time  | ns    |                      | 0.5     | 1.5                  |                                      |
| 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    |                      |         | 4                    |                                      |
| Phase Jitter (12kHz ~ 20MHz)  | fs    |                      | 350     |                      |                                      |

### Outline Drawing & Land Pattern

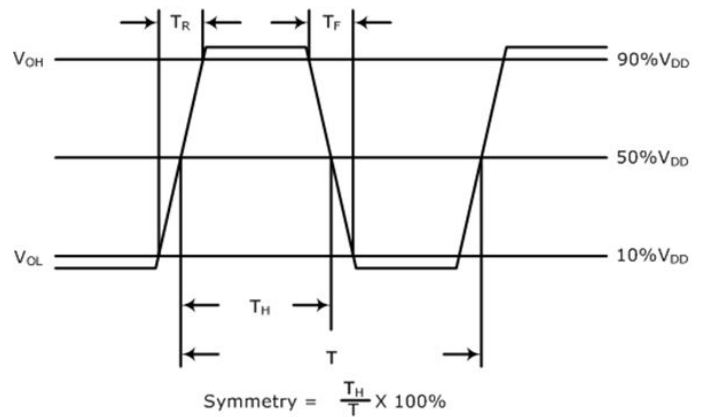
All dimensions are in millimeters (mm) unless otherwise noted. Drawings are not to scale.



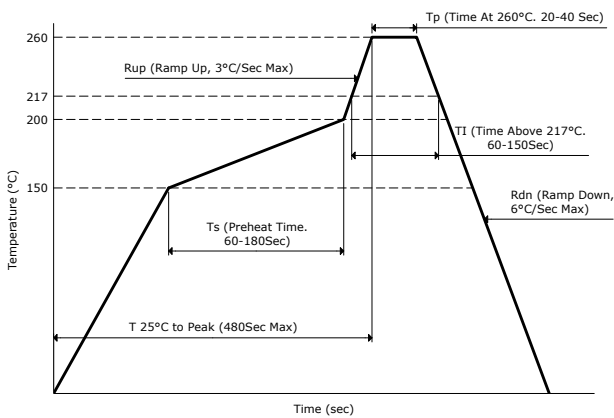
### Test Circuit (CMOS)



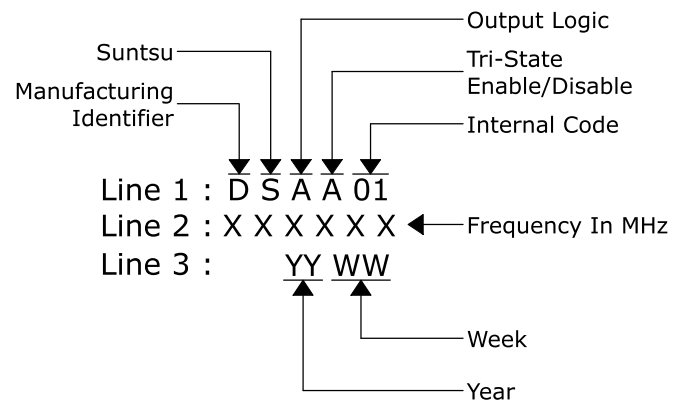
### Waveform (CMOS)



### Reflow Profile



### Part Marking



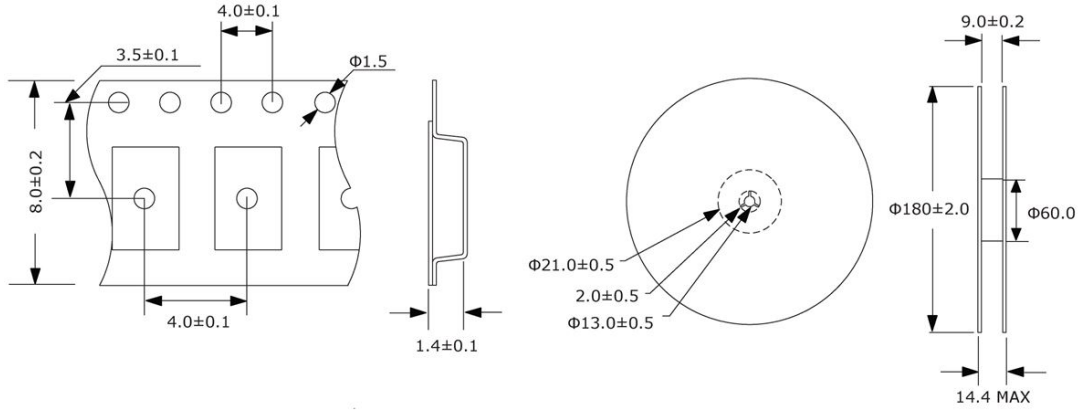
#### Six Character Frequency Info

|        |                  |
|--------|------------------|
| MXXXXX | <1MHz            |
| XMXXXX | ≥1MHz; <10MHz    |
| XXMXXX | ≥10MHz; <100MHz  |
| XXXMXX | ≥100MHz; <350MHz |

### Tape And Reel Dimensions

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

3,000pcs/Reel



### Environmental 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 |
| Solderability        | MIL-STD-883, Method 2003              |
| Moisture Sensitivity | J-STD-020, MSL 1                      |

### Mechanical Specifications

|                              |                                       |
|------------------------------|---------------------------------------|
| Mechanical Shock             | MIL-STD-202, Method 213, Condition B  |
| Vibration                    | MIL-STD-883, Method 2007, Condition A |
| Moisture Resistance          | MIL-STD-883, Method 1004              |
| Resistance to Solvents       | MIL-STD-202, Method 215               |
| Resistance to Soldering Heat | MIL-STD-202, Method 210, Condition K  |