

| FEATURES   | APPLICATIONS  |
|--|---|
| <ul style="list-style-type: none"> <li>±0.5ppm (Frequency Stability) Available</li> <li>CMOS</li> <li>(VC)TCXO</li> <li>RoHS Compliant</li> <li>Tape and Reel</li> </ul> | <ul style="list-style-type: none"> <li>GPS</li> <li>Mobile Communication Equipment</li> <li>Base Stations</li> <li>WLAN/WiMAX/WiFi</li> </ul> |



### PART NUMBERING GUIDE

**SUNTSU TCXO** → **STC 75 C 33 R 48 V E - 16.000M** ← **FREQUENCY (MHz)**

**7.0mm x 5.0mm**

**CMOS**

**SUPPLY VOLTAGE**  
 33: 3.3V±5%  
 50: 5.0V±5%

**FREQUENCY STABILITY**  
 N: ±5.0ppm  
 O: ±2.5ppm  
 P: ±2.0ppm  
 Q: ±1.5ppm  
 R: ±1.0ppm  
 F: ±0.5ppm

**PULLABILITY**  
 BLANK: TCXO  
 E: ±12.0ppm  
 F: ±8.0ppm  
 G: ±5.0ppm

**TCXO/ VCTCXO**  
 BLANK: TCXO  
 V: VCTCXO

**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.

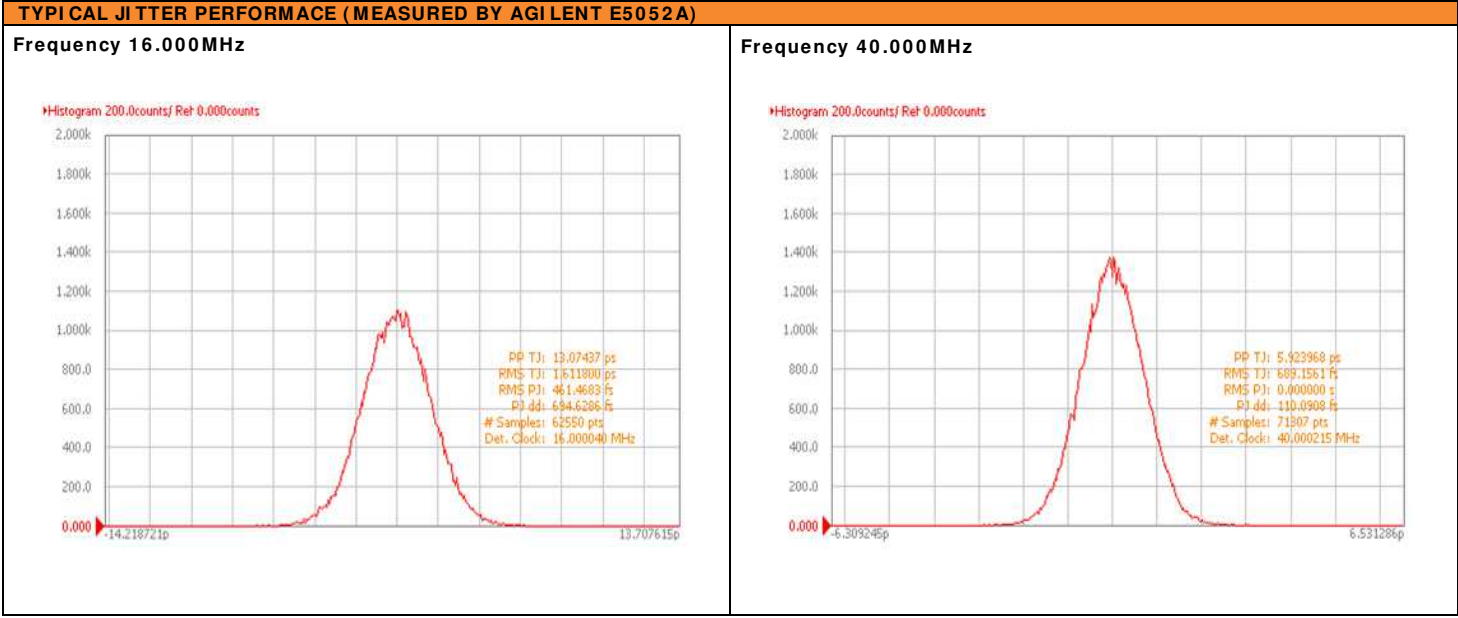
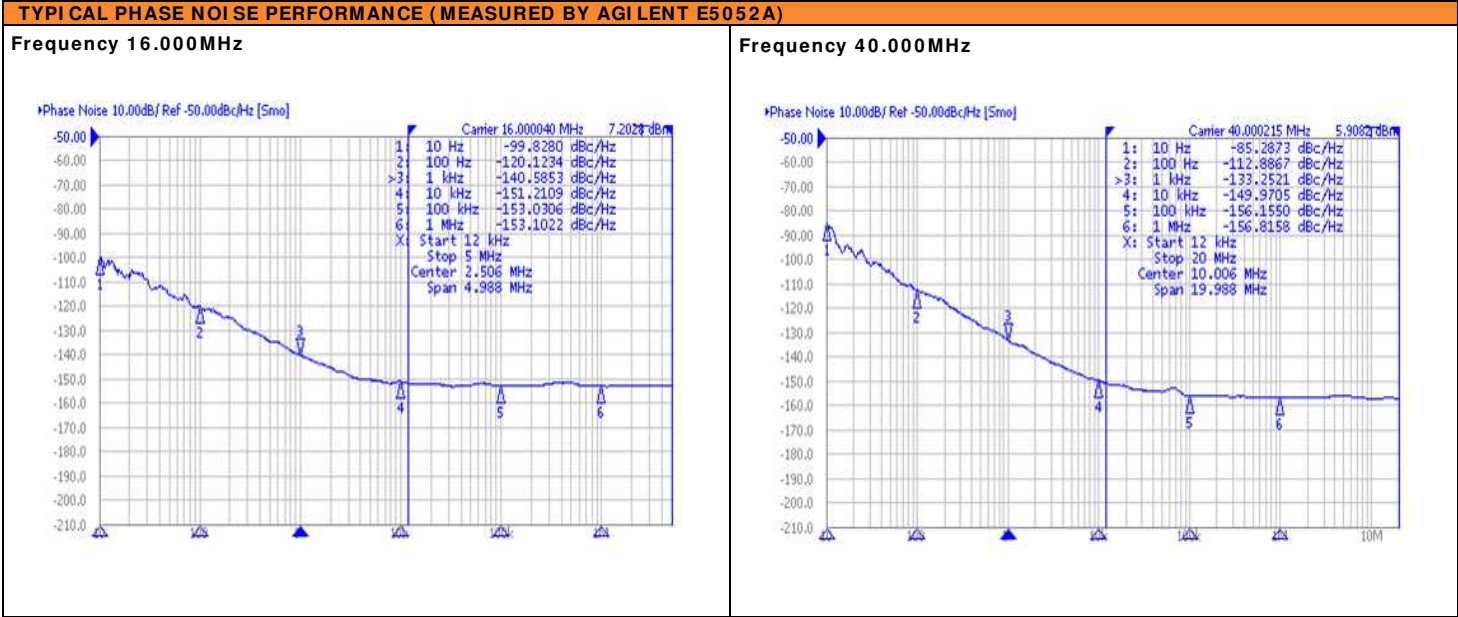
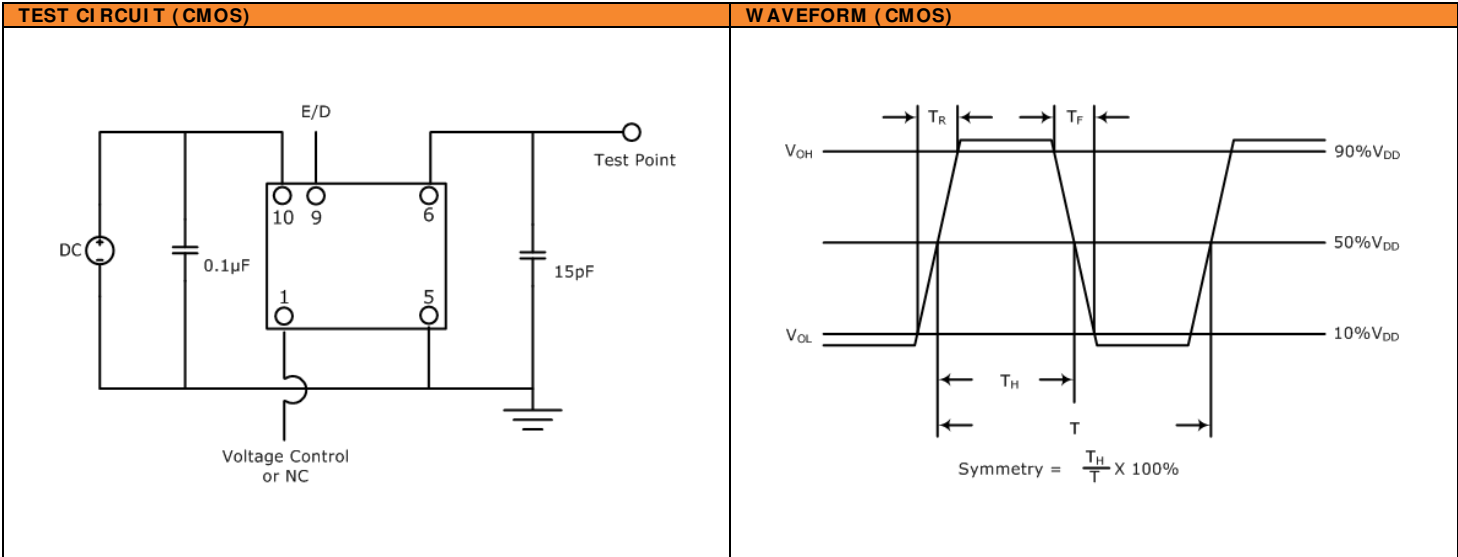
| ELECTRICAL PARAMETERS                                     | UNITS                                | MIN.                | TYP. | MAX.                | REMARKS                                |
|---|--------------------------------------|---------------------|------|---------------------|--|
| Frequency Range   | MHz                                  | 5                   |      | 40                  |  |
| Frequency Tolerance at +25°C                              |                                      | -2                  |      | +2                  | 1 hour after reflow.                   |
| Frequency Stability vs. Operating Temperature (Ref. 25°C) |                                      | -1.0                |      | 1.0                 | See part numbering guide for options.  |
| vs. Supply Voltage  | ppm                                  | -0.5                |      | 0.5                 | V <sub>DD</sub> ±5% change.            |
| vs. Load  |                                      | -0.2                |      | 0.2                 | ±10% change.                           |
| vs. Aging   |                                      | -1.0                |      | 1.0                 | For 1 year.                            |
| Operating Temperature                                     | °C                                   | -40                 |      | +85                 | See part numbering guide for options.  |
| Storage Temperature                                       |                                      | -55                 |      | +125                |  |
| Supply Voltage (V <sub>DD</sub> )                         | V                                    | 3.135               | 3.3  | 3.465               | See part numbering guide for options.  |
| Current (I <sub>DD</sub> )                                | mA                                   |                     |      | 6                   |  |
| Control Voltage (V <sub>C</sub> , VCTCXO)                 | V                                    | 0                   |      | V <sub>DD</sub>     | Center Voltage: 0.5* V <sub>DD</sub> . |
| Pullability (VCTCXO)                                      | ppm                                  | ±5.0                |      | ±12.0               | See part numbering guide for options.  |
| Linearity (VCTCXO)  | %                                    |                     |      | 10                  |  |
| Output Load (CMOS)  | pF                                   |                     |      | 15                  |  |
| Output Logic Levels                                       | Output Logic High (V <sub>OH</sub> ) | 0.9*V <sub>DD</sub> |      |                     |  |
|   | Output Logic Low (V <sub>OL</sub> )  |                     |      | 0.1*V <sub>DD</sub> |  |
| Rise (T <sub>R</sub> ) and Fall (T <sub>F</sub> ) Time    | ns                                   |                     |      | 5                   |  |
| Symmetry (Duty Cycle)                                     | %                                    | 45                  | 50   | 55                  |  |
| Tri-State Input Voltage                                   | Enable                               | 0.7*V <sub>DD</sub> |      |                     | No Connection.                         |
|   | Disable                              |                     |      | 0.3*V <sub>DD</sub> |  |
| Start-Up Time   | ms                                   |                     |      | 2                   |  |
| VC Input Impedance (VCTCXO)                               | kΩ                                   | 100                 |      |                     |  |
| Phase Noise (Typical)                                     | 100Hz Offset                         |                     | -120 |                     |  |
|   | 1kHz Offset                          |                     | -140 |                     |  |
|   | 10kHz Offset                         |                     | -148 |                     |  |

### OUTLINE DRAWING

**RECOMMENDED LAND PATTERN**

| PIN | FUNCTION                              |
|-----|---------------------------------------|
| 1   | NC                                    |
| 4   | GND                                   |
| 5   | OUTPUT                                |
| 8   | TRI-STATE                             |
| 9   | V <sub>DD</sub>                       |
| 10  | V <sub>C</sub> (VCTCXO) or GND (TCXO) |

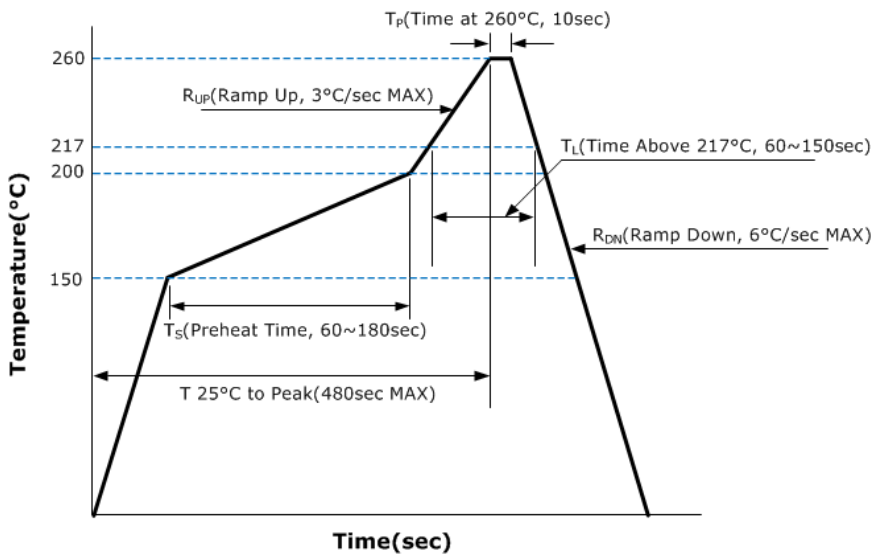
NOTE: Dimensions in millimeters (mm).



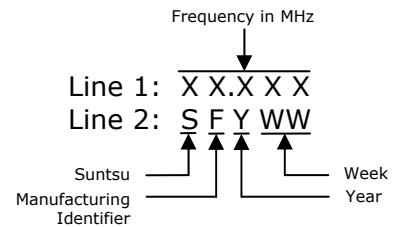
### ENVIRONMENTAL & MECHANICAL SPECIFICATIONS

|                              |                                       |
|------------------------------|---------------------------------------|
| 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

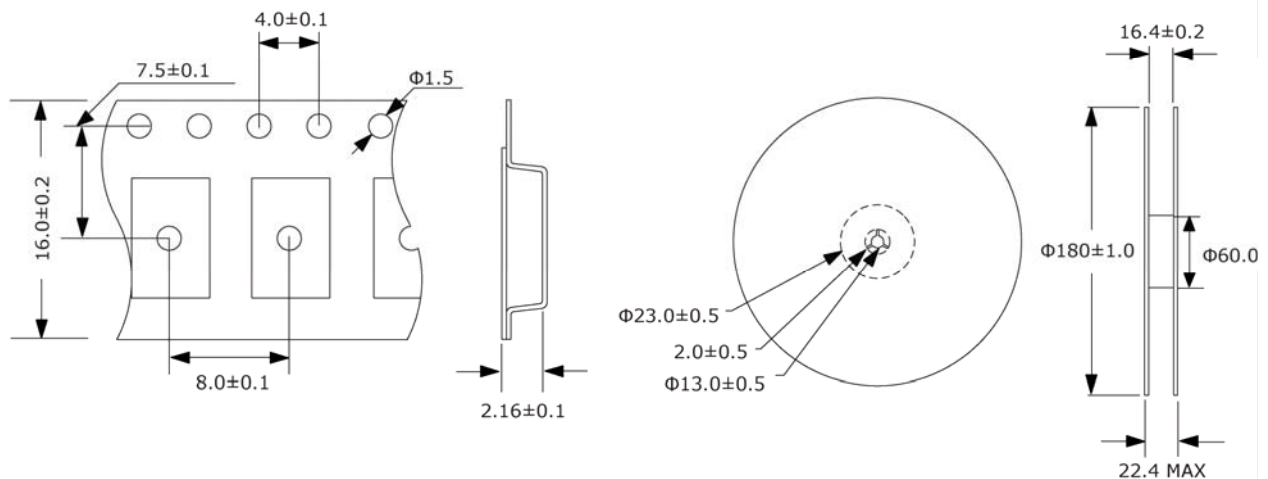


### MARKING



### TAPE AND REEL DIMENSIONS

1,000pcs/reel



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