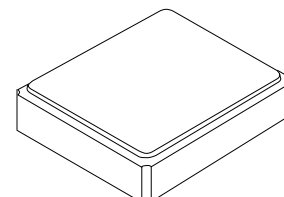


Preliminary




XTC7006-1

**26.00000 MHz
TCXO**



4-Terminal SMD Case

- **Temperature Compensated Crystal Oscillator**
- **Miniature 3.2 x 2.5 mm SMD Package**
- **Initial Tolerance ± 2 ppm**
- **Low Phase Noise**
- **Complies with Directive 2002/95/EC (RoHS)** 

Electrical Characteristics

| Characteristic | Sym | Notes | Minimum | Typical | Maximum | Units |
|--|-----------|-------|---|----------|-----------|--------------------|
| Nominal Frequency | F_0 | | | 26.00000 | | MHz |
| Storage Temperature Range in Tape and Reel | | | -40 | | +85 | $^{\circ}\text{C}$ |
| Operating Temperature Range | | | -30 | | +85 | $^{\circ}\text{C}$ |
| Power Supply Voltage | V_{DD} | | 2.85 | 3.0 | 3.15 | V |
| Output Voltage with 10 pF 10 K Ω Load | V_{OUT} | | 0.8 | | | V_{P-P} |
| Output Waveform | | | Clipped Sinewave | | | |
| Power Supply Current | I_{DD} | | | | 2.0 | mA |
| Frequency Tolerance after Reflow | | | ± 2 ppm maximum @ 25 ± 3 $^{\circ}\text{C}$ | | | |
| Frequency Stability versus: | | | | | | |
| Temperature, -30 to 85 $^{\circ}\text{C}$ | | | | | ± 2.0 | ppm |
| Load Variation, 10 pF 10 K Ω $\pm 10\%$ | | | | | ± 0.2 | ppm |
| Supply Voltage, 3.00 V $\pm 5\%$ | | | | | ± 0.2 | ppm |
| Frequency Slope (one measurement at least every 2 $^{\circ}\text{C}$) | | | ± 0.3 ppm/ $^{\circ}\text{C}$ maximum, -30 to 80 $^{\circ}\text{C}$ | | | |
| Start Up Time, 90% of Final RF level in V_{P-P} | | | | | 2.0 | ms |
| Harmonics | | | | | -7.0 | dBc |
| Static Temperature Hysteresis | | | | | ± 0.6 | ppm |
| Aging at 25 $^{\circ}\text{C}$ | | | | | ± 1.0 | ppm/yr |
| Phase Noise @ 1 kHz carrier offset | | | | | -130 | dBc/Hz |
| Standard Shipping Quantity on 180 mm (7") Reel | | | | 1000 | | units |
| Lid Symbolization (in addition to Lot and/or Date Codes) | | | Line1: 70061 Line2: YWWS | | | |

Pin Connections

| Connection | Terminals |
|-------------|-----------|
| Ground | 1 |
| Ground | 2 |
| TCXO Output | 3 |
| V_{DD} | 4 |

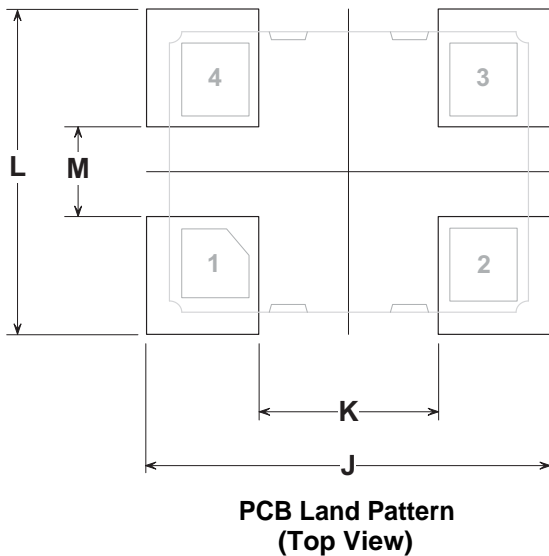
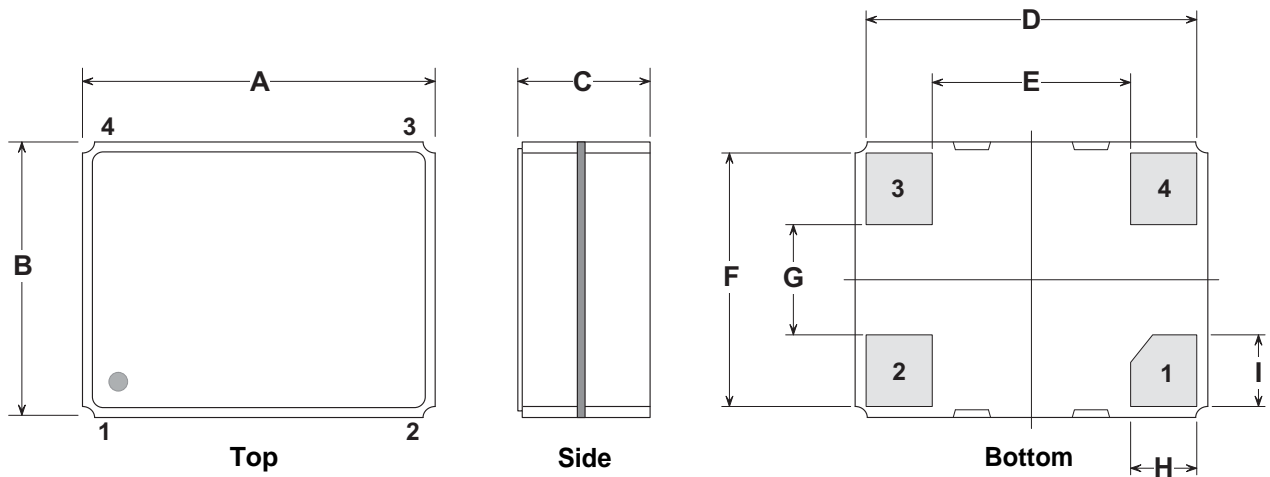
 **CAUTION: Electrostatic Sensitive Device. Observe precautions for handling.**

Notes:

1. The design, manufacturing process, and specifications of this device are subject to change without notice.

4-Terminal Surface-Mount Seam Weld Case

3.2 x 2.5 mm Nominal Footprint



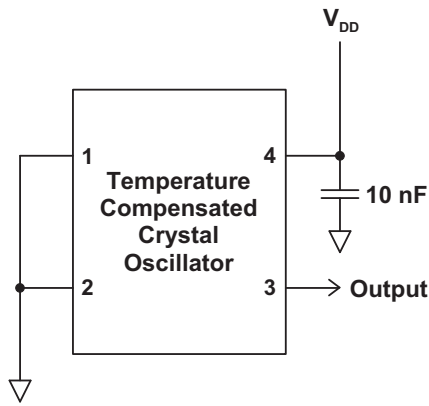
PCB Land Pattern
(Top View)

Case and PCB Land Dimensions

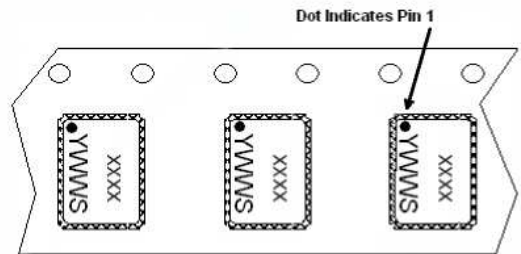
| Dimension | mm | | | Inches | | |
|-----------|------|------|------|--------|-------|-------|
| | Min | Nom | Max | Min | Nom | Max |
| A | 3.00 | 3.20 | 3.40 | 0.118 | 0.126 | 0.134 |
| B | 2.30 | 2.50 | 2.70 | 0.091 | 0.098 | 0.106 |
| C | - | - | 1.20 | - | - | 0.047 |
| D | - | 3.08 | - | - | 0.121 | - |
| E | - | 1.80 | - | - | 0.071 | - |
| F | - | 2.38 | - | - | 0.094 | - |
| G | - | 1.00 | - | - | 0.039 | - |
| H | - | 0.60 | - | - | 0.024 | - |
| I | - | 0.65 | - | - | 0.026 | - |
| J | - | 3.60 | - | - | 0.142 | - |
| K | - | 1.60 | - | - | 0.063 | - |
| L | - | 2.90 | - | - | 0.114 | - |
| M | - | 0.80 | - | - | 0.031 | - |

Case Materials

| Materials | |
|--------------------|--|
| Solder Pad Plating | 0.3 to 1.0 μm Gold over 1.27 to 8.89 μm Nickel |
| Lid Plating | 2.0 to 3.0 μm Nickel |
| Body | Al_2O_3 Ceramic |
| Pb Free | |

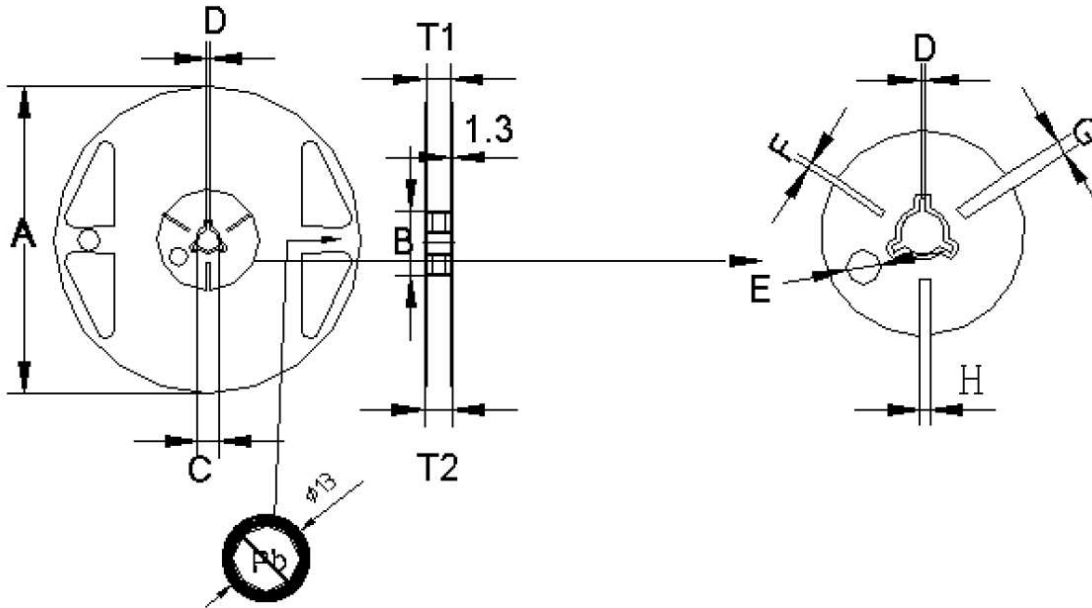


TCXO Application Circuit



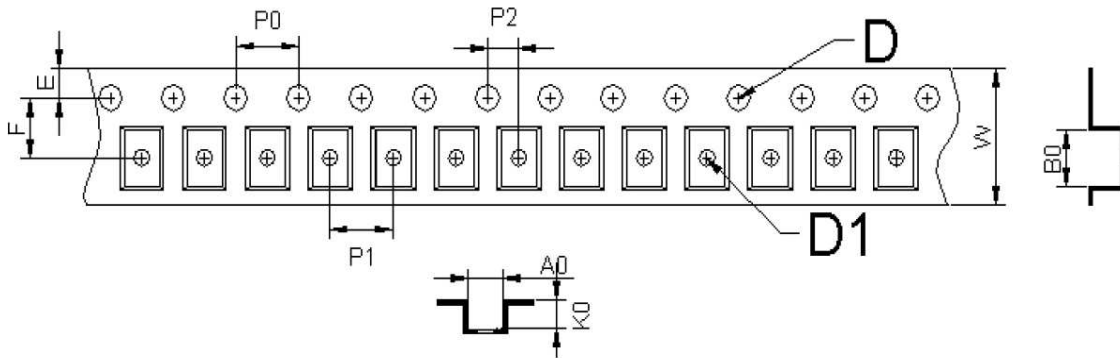
Package Orientation in Carrier Tape

Reel Dimensions



| mm | A | B | C | D | E | F | G | H | T1 | T2 | T3 |
|-----------|------|-----------|------|------|------|------|------|------|------|------|------|
| Dimension | 180 | 60 | 13.0 | 2.0 | 9.1 | 2.9 | 4.9 | 3.9 | 9.0 | 11.4 | 1.2 |
| Tolerance | ±1.0 | +1.0/-0.0 | ±0.2 | ±0.5 | ±0.5 | ±0.5 | ±0.5 | ±0.5 | ±0.3 | ±1.0 | ±0.1 |

Tape Dimensions



| mm | A0 | B0 | W | F | E | P0 | P1 | P2 | D1 | D | K0 | t |
|-----------|-------|-------|-------------|-------|-------|-------|-------|-------|-------------|-------------|-------|-------|
| Dimension | 2.80 | 3.71 | 8.00 | 3.50 | 1.75 | 4.00 | 4.00 | 2.00 | 1.50 | 1.00 | 1.75 | 0.25 |
| Tolerance | ±0.10 | ±0.10 | +0.30/-0.10 | ±0.05 | ±0.10 | ±0.10 | ±0.10 | ±0.05 | +0.10/-0.00 | +0.25/-0.00 | ±0.10 | ±0.02 |