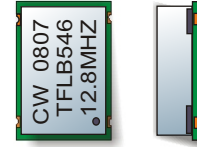


CRYSTAL CONTROLLED OSCILLATORS

3.3V SURFACE MOUNT LVCMOS TCXO



TFLB546

ABSOLUTE MAXIMUM RATINGS

TABLE 1.0

| PARAMETER | UNITS | MINIMUM | NOMINAL | MAXIMUM | UNITS | NOTE |
|---------------------|-------|---------|---------|---------|-------|------|
| Storage Temperature | | -40 | - | 85 | °C | |
| Supply Voltage | (Vcc) | -0.5 | - | 7 | Vdc | |
| Control Voltage | (Vc) | -0.5 | - | 7 | Vdc | |

OPERATING SPECIFICATIONS

TABLE 2.0

| PARAMETER | | MINIMUM | NOMINAL | MAXIMUM | UNITS | NOTE |
|----------------------------------|-------|---------|---------|---------|--------|------|
| Frequency Range | (Fo) | 1.60 | - | 50.00 | MHz | |
| Frequency Tolerance | | -4.6 | - | 4.6 | ppm | 1 |
| Operating Temperature Range | | 0 | - | 70 | °C | |
| Supply Voltage | (Vcc) | 3.135 | 3.3 | 3.465 | Vdc | |
| Supply Current | (Icc) | - | 8 | 20 | mA | |
| Jitter (BW=10Hz to 20MHz) | | - | - | 5 | ps rms | |
| Jitter (BW=12kHz to 20MHz) | | - | - | 1 | ps rms | |
| SSB Phase Noise at 10Hz offset | | - | -70 | - | dBc/Hz | |
| SSB Phase Noise at 100Hz offset | | - | -100 | - | dBc/Hz | |
| SSB Phase Noise at 1KHz offset | | - | -125 | - | dBc/Hz | |
| SSB Phase Noise at 10KHz offset | | - | -135 | - | dBc/Hz | |
| SSB Phase Noise at 100KHz offset | | - | -145 | - | dBc/Hz | |

LVCMOS OUTPUT CHARACTERISTICS

TABLE 4.0

| PARAMETER | | MINIMUM | NOMINAL | MAXIMUM | UNITS | NOTE |
|-----------------------------|-------|---------|---------|---------|-------|------|
| LOAD | | - | - | 15 | pF | |
| Voltage (High) | (Voh) | 2.2 | 2.4 | - | Vdc | |
| (Low) | (Vol) | - | 0.3 | 0.4 | Vdc | |
| Current (High) | (Ioh) | -4 | - | - | mA | |
| (Low) | (Iol) | - | - | 4 | mA | |
| Duty Cycle at 50% of Vcc | | 40 | 50 | 60 | % | |
| Rise / Fall Time 10% to 90% | | - | 3 | 5 | nS | |

PACKAGE CHARACTERISTICS

TABLE 5.0

| | |
|---------|--------------------------------------------------------------------------------|
| Package | Non-hermetic package consisting of an FR4 substrate with grounded metal cover. |
|---------|--------------------------------------------------------------------------------|

PROCESS RECOMMENDATIONS

TABLE 6.0

| | |
|-------------------|-------------------------------------------------------|
| Soldering Process | RoHS 5/6 compliant, see the solder profile on page 2. |
| Wash | Ultrasonic cleaning is not recommended. |

Note:

- Inclusive of calibration, frequency vs. temperature stability, supply voltage change, load change, shock and vibration, 15 years aging.

DESCRIPTION

The Connor-Winfield TFLB546 is a Surface Mount Temperature Compensated Crystal Oscillator (TCXO). Operating at 3.3Vdc, the TFLB546 will maintain ± 4.6 ppm frequency tolerance over 15 years. The TFLB546 is offered in a surface mount package for automated assembly.

FEATURES

TCXO

3.3V OPERATION

OVERALL FREQUENCY TOLERANCE:
 ± 4.6 ppm OVER 15 YEARS.

TEMPERATURE RANGE: 0 to 70°C

LOW JITTER <1ps RMS

SURFACE MOUNT PACKAGE

TAPE AND REEL PACKAGING

RoHS 5/6 COMPLIANT

ORDERING INFORMATION

TFLB546 - 012.8M

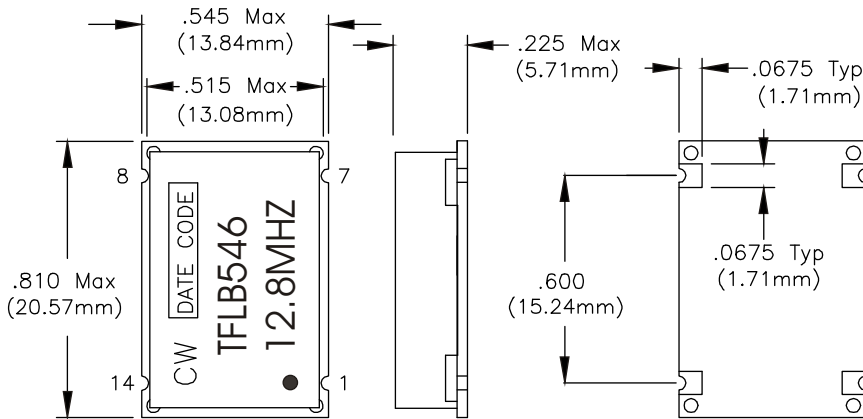
TCXO
SERIES

CENTER
FREQUENCY

Specifications subject to change without notice.

CRYSTAL CONTROLLED OSCILLATORS

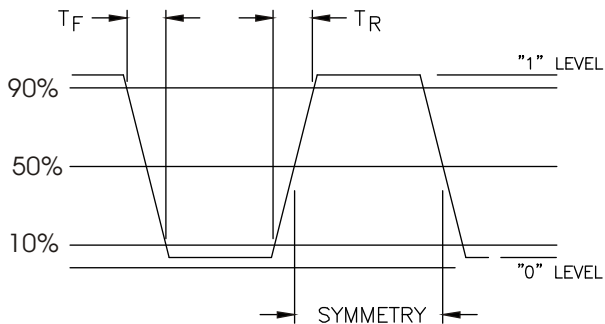
Package Layout



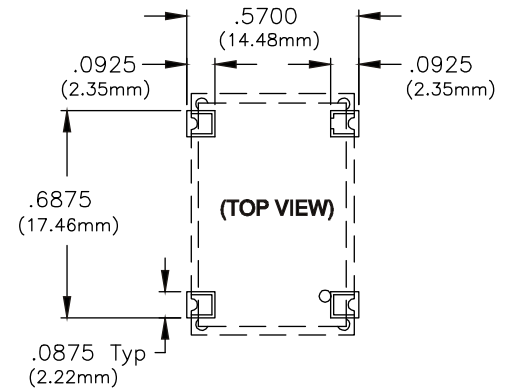
Pad Connections

| PIN | CONNECTION |
|-----|-----------------|
| 1 | N/C |
| 7 | GROUND |
| 8 | OUTPUT |
| 14 | V _{CC} |

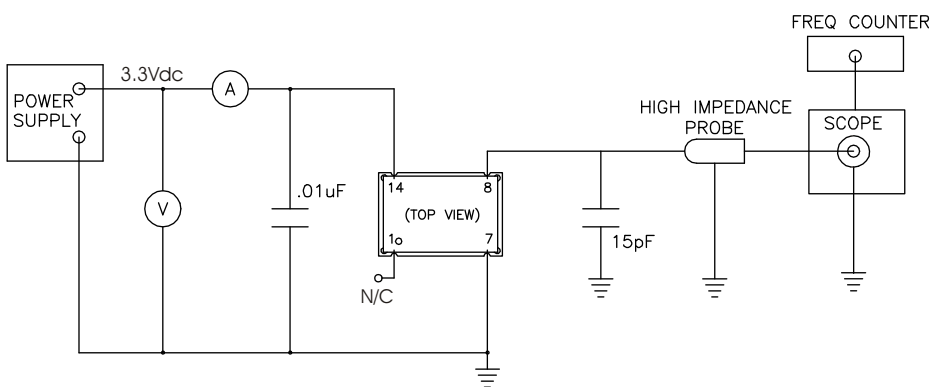
Output Waveform



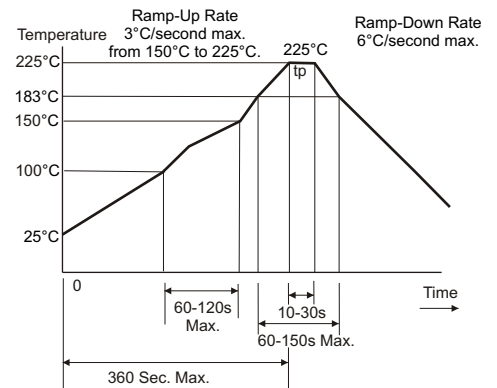
Suggested Pad Layout



Test Circuit



Solder Profile



Specifications subject to change without notice.