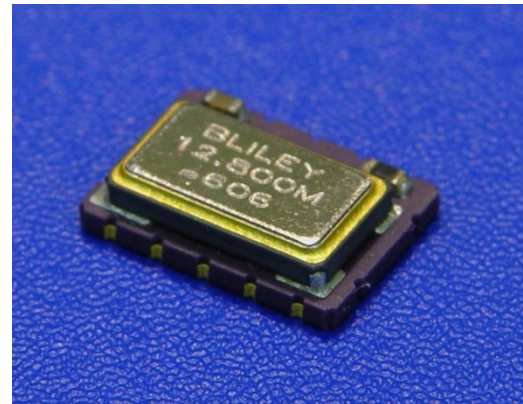


Features:

- Available in frequencies from 5 to 52 MHz with 10 MHz, 12.8 MHz, 16.384MHz, 19.2MHz, 19.44MHz, 20MHz, 25MHz, and 26MHz, all being standard.
- +/-5 ppm frequency pull range available
- CMOS and Clipped Sine Wave options can be specified
- RoHS-6 / Lead-free compliant



Description:

The T85H TCXO is an analog compensated High Precision TCXO with excellent phase noise performance offering Frequency vs. Temperature stability starting at ± 50 parts per billion. The miniature 5 x 7 mm ceramic SMD package is hermetically sealed for optimum reliability.

Electrical Specifications

1. Output Characteristics

| | Parameter | Min. | Typ. | Max. | Unit | Test Conditions |
|-----|------------------------------|------|---------|------|---------------|--------------------|
| 1.1 | Frequency Range | 5 | | 52 | MHz | |
| 1.2 | Initial Accuracy | .5 | | | ppm | @shipment |
| | after reflow | | | 1.5 | ppm | @25°C 1 hour after |
| 1.3 | Output Type | | | | | |
| 1.4 | CMOS (Option A) | | | | | |
| | Load | | 15pF | | | |
| | Logic 0 | | | 0.1 | Vdc | |
| | Logic 1 | 0.9 | | | Vdc | |
| | Rise/Fall Time | | | 10 | nS | 10% to 90% |
| | Duty Cycle | 45 | | 55 | % | @50% Logic 1 |
| 1.5 | Clipped Sine Wave (Option B) | | | | | |
| | Load | | 10K//10 | | Ω //pF | |
| | Output Level | 0.8 | | | Vp-p | |

2. Frequency Stability

| | Parameter | Min. | Typ. | Max. | Unit | Test Conditions |
|-----|---|---------|------|---------|--------|---|
| 2.1 | Frequency vs. Temperature | | | | | Referenced to +25°C See Table 1 For Ordering Options |
| | 0 to 55°C | +/-0.05 | | +/-0.28 | ppm | A = +/- 0.05ppm |
| | -10C to 60°C | +/-0.05 | | +/-0.28 | ppm | B = +/- 0.10ppm |
| | -10C to 70°C | +/-0.10 | | +/-0.28 | ppm | C = +/- 0.14ppm |
| | -40C to 85°C | +/-0.20 | | +/-0.28 | ppm | D = +/- 0.28ppm |
| | (-10to70°C) @+/-0.05ppm Consult factory for availability | | | | | G = +/- 0.20ppm |
| 2.2 | Aging | | | | | |
| | 20 Years** | | | +/-2.5 | ppm | @10MHz after 30 days on |
| 2.3 | Frequency vs. Voltage | | | +/-0.1 | ppm | +/-5% Change 5.0Vdc |
| | | | | +/-0.05 | ppm | +/-5% Change 3.3Vdc |
| 2.4 | Frequency vs. Load | | | +/-0.1 | ppm | +/-10% Change |
| 2.6 | Start time | | | 2 | mSec | |
| 2.7 | Static Phase Noise | | | | | |
| | L(f)@1Hz | | -65 | | dBc/Hz | Tested @ +25°C±1°C Static Environment |
| | L(f)@10Hz | | -95 | | dBc/Hz | |
| | L(f)@100Hz | | -125 | | dBc/Hz | |
| | L(f)@1KHz | | -145 | | dBc/Hz | |
| | L(f)@10KHz | | -150 | | dBc/Hz | |
| | L(f)@100KHz | | -150 | | dBc/Hz | |

Values listed above are typical performance of a 19.2MHz Fo

3. Input Characteristics

| | Parameter | Min. | Typ. | Max. | Unit | Test Conditions |
|-----|------------------------------|----------------------|----------|------|------|----------------------------------|
| 3.1 | Supply Voltage | +3.3+/-5%, +5.0+/-5% | | | Vdc | See Table 1 For Ordering Options |
| 3.2 | Power Dissipation | | | | | |
| | CMOS | | 6 | | mA | |
| | Clipped Sine Wave | | 3.5 | | mA | |
| 3.3 | Electronic Frequency Control | | | | | See Table 1 For Ordering Options |
| | Voltage Range | 0.5 | | 2.5 | | |
| | Center Voltage | | 1.5 | | | |
| | Frequency pull Range | | 5 | | | |
| | Slope | | Positive | | | |
| | Input Impedance | 100K | | | Ω | |

4. Environmental, Reliability and Mechanical Specifications

| | Parameter | Min. | Typ. | Max. | Unit | Test Conditions |
|-----|-------------------------|---|------|------|------|----------------------------------|
| 4.1 | Operational Temperature | -40 | | +85 | °C | See Table 1 For Ordering Options |
| 4.2 | Storage Temperature | -55 | | +95 | °C | |
| 4.3 | RoHS Compliance | | | | | RoHS compliance standard |
| 4.4 | Mechanical Package | Hermetically sealed package (See attached mechanical drawing for dimensions and pin functionality) | | | | |

Figure2. Mechanical Dimensions and Pin Functions

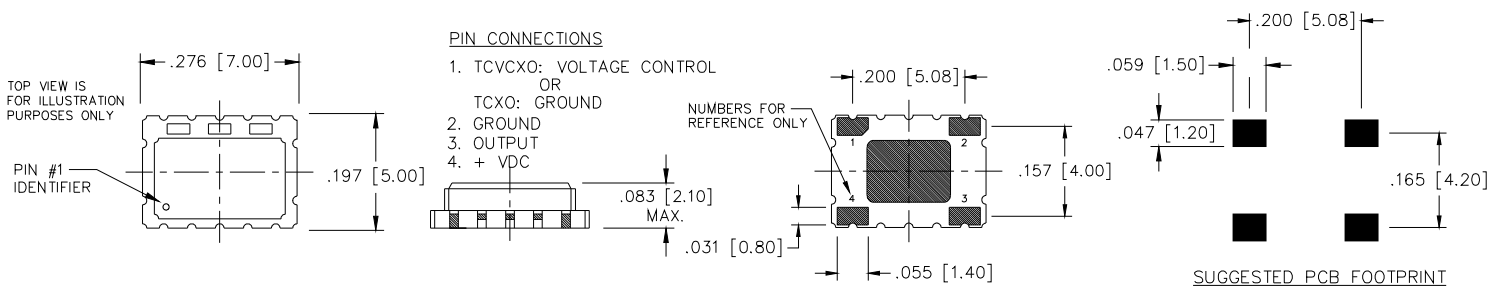


Table1. Ordering Information

| Model Type T85H | Operating Temperature | Frequency Stability | Supply Voltage | Output Waveform | Pulling Range | Operating Frequency (MHz.) |
|--------------------|-------------------------|--------------------------|----------------------|---------------------------------|-----------------------|----------------------------|
| | A (0to55°C) | A (+/-0.05ppm) | C (3.3Vdc) | A (CMOS) | A (None) | 5M0 To 52M0 |
| | B (-10to60°C) | B (+/-0.10ppm) | D (5.0Vdc) | B (Clipped Sine Wave) | B (+/-5ppm) | |
| | C (-10to70°C) | C (+/-0.14ppm) | | | | |
| | D (-40to85°C) | D (+/-0.28ppm) | | | | |
| | | G (+/-0.20ppm) | | | | |
| | | | | | | |

Please build your T85H part numbr

T85H

