



2.5 mm x 3.2 mm Ceramic Package SMD TCXO

I547/I747 Series

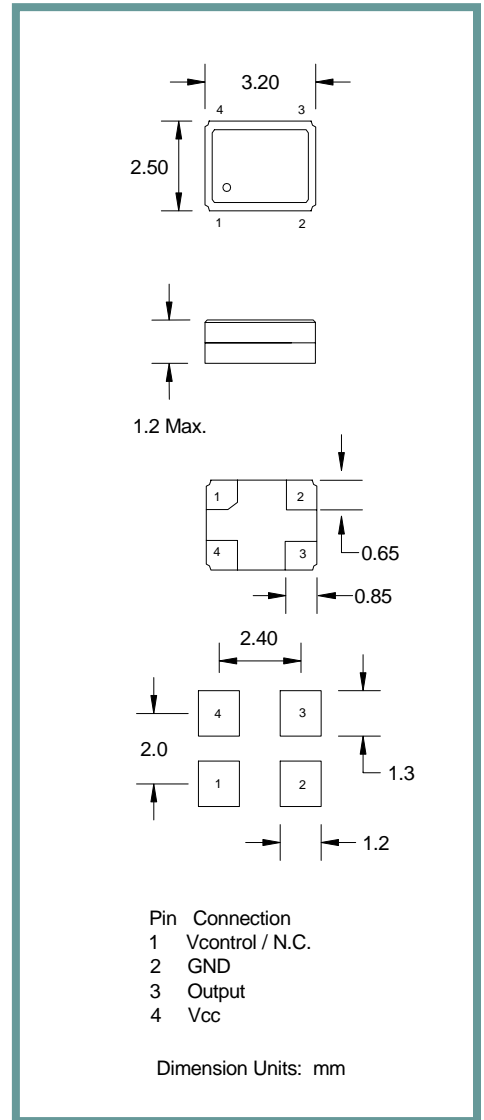
Product Features:

- Low Jitter, Non-PLL Based Output
- Clipped Sinewave
- Analog Compensation
- Available ± 0.5 ppm Stability

Applications:

- GPS
- Sonet /SDH
- 802.11 / Wifi
- T1/E1, T3/E3

| | |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| Frequency | 16.396Mhz, 16.3676Mhz, 16.367667Mhz, 19.200Mhz, 24.5535Mhz, 26.000Mhz |
| Frequency Tolerance @ 25° C | ± 1.5 ppm |
| Frequency Stability Vs Temperature Vs Supply Voltage (± 5%) Vs Load(10%) | See Frequency Stability Table ± 0.1 ppm Max. ± 0.2 ppm Max. |
| Output Level Clipped Sinewave | 0.8 V p-p Min. |
| Output Load Clipped Sinewave | 10K Ohms / 10 pF |
| Duty Cycle (HCMOS) | 50% ±10% |
| Frequency Slope (2C steps from -20° C to +70° C) Start Time (90% of Vp-p) | ± 0.1 ppm /° C 3.0 mS Max. |
| Aging | ± 1 ppm / Year Max. |
| Supply Voltage | See Supply Voltage Table , tolerance ± 5% |
| Current | 1.5 mA Max |
| Voltage Control (I747) | 1.5 VDC ± 1.0 VDC, ± 5.0 ppm Min. |
| Operating | See Operating Temperature Table |
| Storage | -40° C to +85° C |
| Phase Noise | -87 dBc/Hz @ 10 Hz -112 dBc/Hz @ 100 Hz -135 dBc/Hz @ 1KHz -145 dBc/Hz @ 10 Khz |



| Part Number Guide | | Sample Part Number: I547-1Q3-20.000 Mhz | | |
|----------------------------------------------------------------|-----------------------|-----------------------------------------|----------------|--------------|
| Package | Operating Temperature | Frequency Stability vs Temperature | Supply Voltage | Frequency |
| I547 (Clipped Sinewave TCXO) I747 (Clipped Sinewave TCVCXO) | 7 = 0° C to +50° C | **Y = ±0.5 ppm | 3 = 3.3 V | - 20.000 MHz |
| | 1 = 0° C to +70° C | **N = ±1.0 ppm | 7 = 3.0 V | |
| | 3 = -20° C to +70° C | **O = ±1.5 ppm | 2 = 2.7 V | |
| | 2 = -40° C to +85° C | **P = ±2.0 ppm | | |
| | | Q = ±2.5 ppm | | |
| | | R = ±3.0 ppm | | |
| | | J = ±5.0 ppm | | |

NOTE: A 0.01 µF bypass capacitor is recommended between Vcc (pin 4) and GND (pin 2) to minimize power supply noise.
 ** Not available for all temperature ranges.



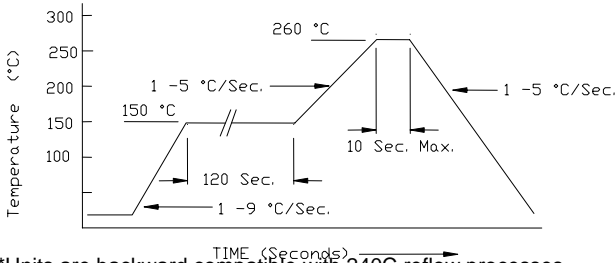
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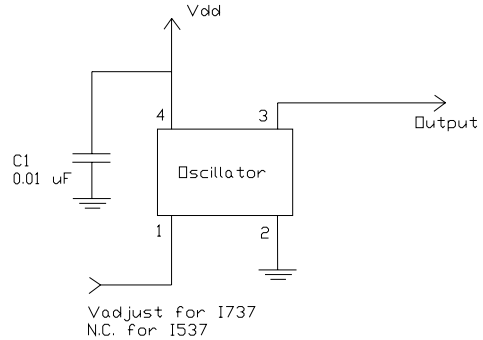
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Pb Free Solder Reflow Profile:

Typical Application:



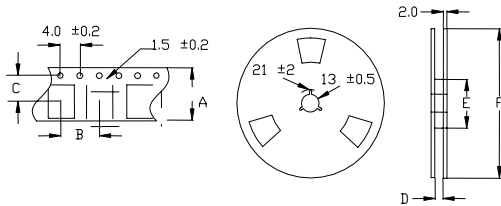
*Units are backward compatible with 240C reflow processes



Package Information:

MSL = N.A. (package does not contain plastic, storage life is unlimited under normal room conditions).
Termination = e4 (Au over Ni over W base metalization).

Tape and Reel Information:



| Quantity per Reel | 1000 |
|-------------------|-----------------------|
| A | 8 +/- .3 |
| B | 4 +/- .2 |
| C | 3.5 +/- .2 |
| D | 9 +/- .1 or 12 +/- .3 |
| E | 60 / 80 |
| F | 180 |

Environmental Specifications

| | |
|------------------------------|------------------------------------------------------------------------|
| Thermal Shock | MIL-STD-883, Method 1011, Condition A |
| Moisture Resistance | MIL-STD-883, Method 1004 |
| Mechanical Shock | MIL-STD-883, Method 2002, Condition B |
| Mechanical Vibration | MIL-STD-883, Method 2007, Condition A |
| Resistance to Soldering Heat | J-STD-020C, Table 5-2 Pb-free devices (except 2 cycles max) |
| Hazardous Substance | Pb-Free / RoHS / Green Compliant |
| Solderability | JESD22-B102-D Method 2 (Preconditioning E) |
| Terminal Strength | MIL-STD-883, Method 2004, Test Condition D |
| Gross Leak | MIL-STD-883, Method 1014, Condition C |
| Fine Leak | MIL-STD-883, Method 1014, Condition A2, R1=2x10 ⁻⁸ atm cc/s |
| Solvent Resistance | MIL-STD-202, Method 215 |

Marking

Line 1: I - Date Code (YWW)
Line 2: Frequency