



2.5 mm x 3.2 mm Ceramic Package SMD TCXO



I547/I747 Series

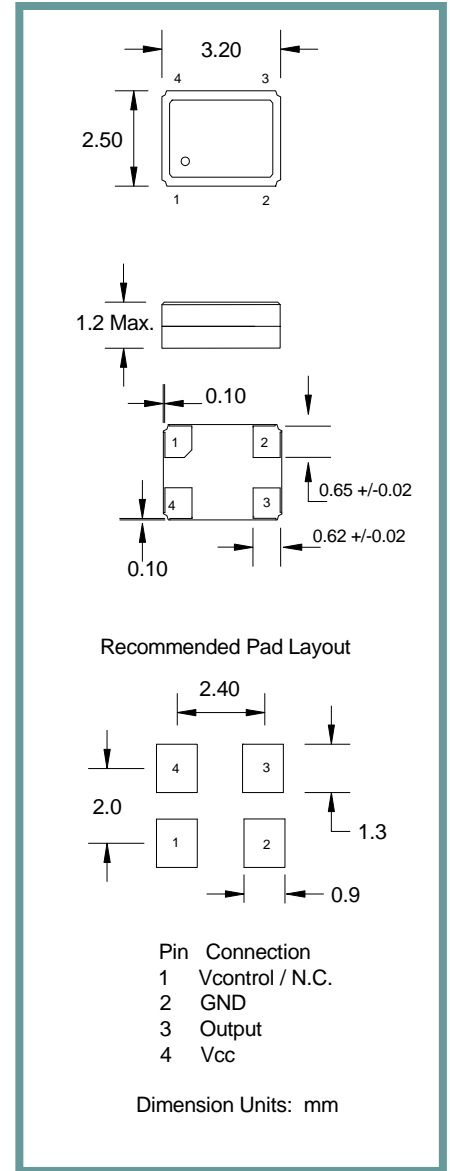
**Product Features:**

- 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

<b>Frequency</b>	10Mhz to 52 Mhz
<b>GPS Frequencies</b>	16.396Mhz, 16.3676Mhz, 16.367667Mhz, 19.200Mhz, 24.5535Mhz, 26.000Mhz
<b>Frequency Tolerance @ 25° C</b>	± 1.5 ppm
<b>Frequency Stability Vs Temperature Vs Supply Voltage (± 5%) Vs Load(10%)</b>	See Frequency Stability Table ± 0.1 ppm Max. ±0.2 ppm Max.
<b>Output Level Clipped Sinewave</b>	0.8 V p-p Min.
<b>Output Load Clipped Sinewave</b>	10K Ohms / 10 pF
<b>Duty Cycle (HCMOS)</b>	50% ±10%
<b>Frequency Slope (2C steps from -20° C to +70° C)</b>	± 0.1 ppm /° C
<b>Start Time (90% of Vp-p)</b>	3.0 mS Max.
<b>Aging</b>	± 1 ppm / Year Max.
<b>Supply Voltage</b>	See Supply Voltage Table , tolerance ± 5%
<b>Current</b>	1.5 mA Max
<b>Voltage Control (I747)</b>	1.5 VDC ± 1.0 VDC, ± 5.0 ppm Min.
<b>Operating</b>	See Operating Temperature Table
<b>Storage</b>	-40° C to +85° C
<b>Phase Noise</b>	-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	
	5 = -30° C to +85° C	**P = ±2.0 ppm	1 = 1.8 V	
	2 = -40° C to +85° C	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.



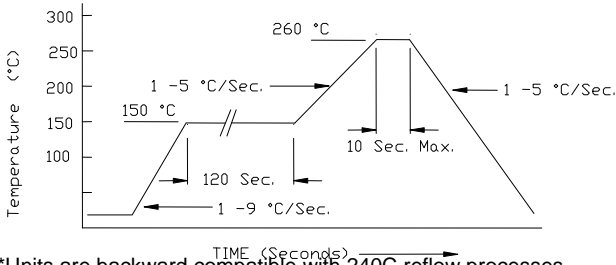
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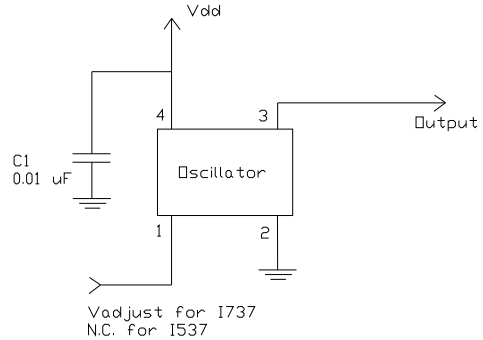
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**Pb Free Solder Reflow Profile:**

**Typical Application:**



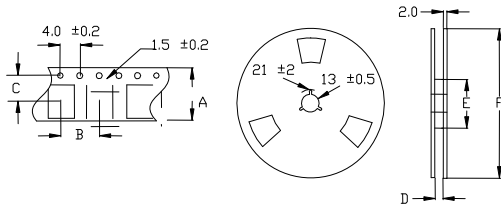
\*Units are backward compatible with 240C reflow processes



**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 <sup>-8</sup> atm cc/s
Solvent Resistance	MIL-STD-202, Method 215

**Marking**

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