



2.5 mm x 3.2 mm Ceramic Package SMD TCXO



I547/I747 Series

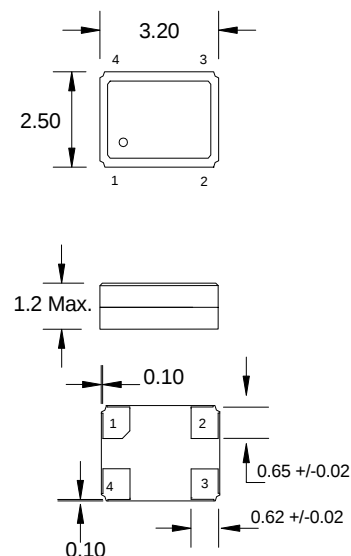
Product Features:

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

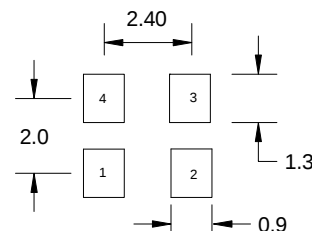
Applications:

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

Frequency	10Mhz to 52 Mhz
GPS Frequencies	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 ($\pm 5\%$) 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% $\pm 10\%$
Frequency Slope (2C steps from -20° C to +70° C)	± 0.1 ppm /° C
Start Time (90% of Vp-p)	3.0 mS Max.
Aging	± 1 ppm / Year Max.
Supply Voltage	See Supply Voltage Table , tolerance $\pm 5\%$
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



Recommended Pad Layout



Pin Connection
1 Vcontrol / N.C.
2 GND
3 Output
4 Vcc

Dimension Units: mm

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		

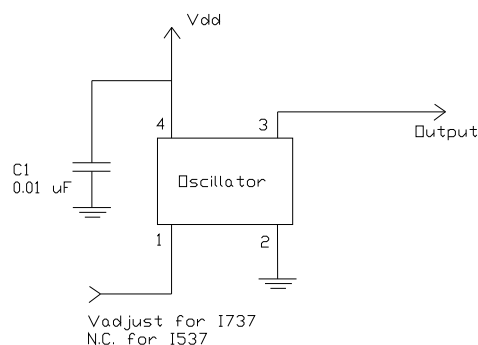
NOTE: A 0.01 μ F bypass capacitor is recommended between Vcc (pin 4) and GND (pin 2) to minimize power supply noise.

** Not available for all temperature ranges.



Pb Free Solder Reflow Profile:

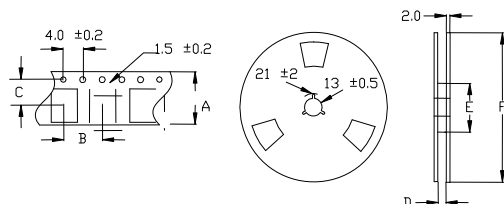
Typical Application:



Package Information:

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 2: Frequency