



# I747 Series



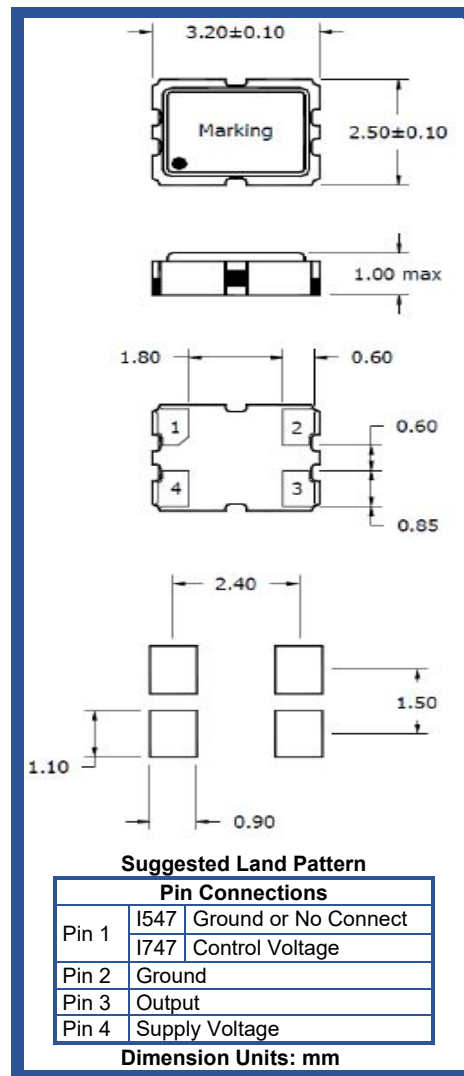
## Product Features:

Clipped Sinewave  
 Analog Compensation  
 Available  $\pm 0.5$ ppm Stability  
 RoHS Compliant / Pb-free

## Applications:

GPS  
 Smart Meters  
 Wireless Base Stations  
 Sonet / SDH  
 T1/E1, T3/E3

<b>Frequency</b>	10MHz to 52MHz
<b>Frequency Tolerance @ 25° C</b>	$\pm 2.0$ ppm after second reflow
<b>Frequency Stability</b> Vs Temperature Vs Supply Voltage ( $\pm 5\%$ ) Vs Load (10%)	See Part Numbering Guide $\pm 0.2$ ppm Maximum $\pm 0.2$ ppm Maximum
<b>Output Level</b> Clipped Sinewave	0.8 V p-p Minimum
<b>Output Load</b> Clipped Sinewave	10K Ohms / 10 pF
<b>Start Time (90% of Vp-p)</b>	3.0mSec Maximum
<b>Aging</b>	$\pm 1$ ppm / Year Maximum.
<b>Supply Voltage</b>	See Part Numbering Guide, tolerance $\pm 5\%$
<b>Current</b> $\leq 32$ MHz $> 32$ MHz	1.5mA Maximum 2.0mA Maximum
<b>Voltage Control</b>	1.5 Vdc $\pm$ 1.0 Vdc, $\pm 5.0$ ppm Minimum (Only for I747)
<b>Operating Temperature Range</b>	See Part Numbering Guide
<b>Storage Temperature Range</b>	-40°C to +85°C
<b>Phase Noise (typical)</b>	-87 dBc/Hz @ 10 Hz -112 dBc/Hz @ 100 Hz -135 dBc/Hz @ 1KHz -145 dBc/Hz @ 10 KHz

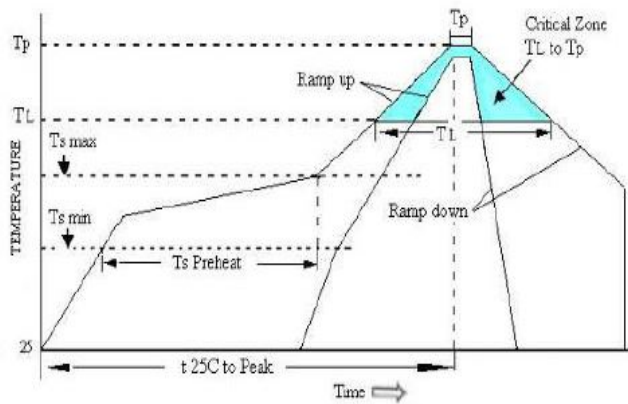


Part Number Guide		Sample Part Number: I547-1Q3-20.000 MHz		
Package	Operating Temperature	Frequency Stability vs Temperature	Supply Voltage	Frequency
I547 (Clipped Sinewave TCXO) I747 (Clipped Sinewave TCVCXO)	7 = 0°C to +50°C	*,**Y = $\pm 0.5$ ppm	3 = 3.3V	-20.000 MHz
	1 = 0°C to +70°C	*N = $\pm 1.0$ ppm	7 = 3.0V	
	3 = -20°C to +70°C	*O = $\pm 1.5$ ppm	8 = 2.8V	
	5 = -30°C to +85°C	*P = $\pm 2.0$ ppm	2 = 2.7V	
	2 = -40°C to +85°C	Q = $\pm 2.5$ ppm	1 = 1.8V	
		R = $\pm 3.0$ ppm		
	J = $\pm 5.0$ ppm			

\*\* Not available for all frequencies or temperature ranges.  
 \*\* Referenced to the midpoint between minimum and maximum frequency value over operating Temperature Range.

NOTE: It is recommended that a 0.01 $\mu$ F bypass capacitor be connected between Vdd (Pin 4) and Ground (Pin 2) to minimize power supply noise.  
 It is recommended that an external 0.01 $\mu$ F AC-coupling capacitor be connected to output (Pin 3) of the device.  
 For the TXCO (I547), it is recommended that Pin 1 should not be left floating but be connected to Ground.

**Pb Free Solder Reflow Profile:**



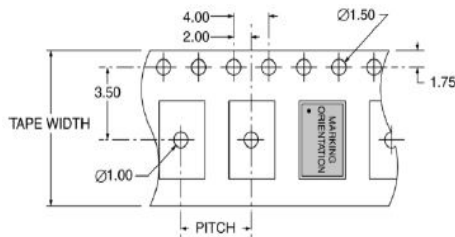
Ts max to TL (Ramp-up Rate)	3°C / second max
Preheat	
Temperature min (Ts min)	150°C
Temperature typ (Ts typ)	175°C
Temperature max (Ts max)	200°C
Time (Ts)	60 to 180 seconds
Ramp-up Rate (TL to Tp)	3°C / second max
Time Maintained Above Temperature (TL)	217°C
Time (TL)	60 to 150 seconds
Peak Temperature (Tp)	260°C max for 10 seconds
Time within 5°C to Peak Temperature (Tp)	20 to 40 seconds
Ramp-down Rate	6°C / second max
Time 25°C to Peak Temperature	8 minutes max

\*Units are backward compatible with 240C reflow processes

**Package Information:**

MSL = 1 (package does not contain plastic, storage life is unlimited under normal room conditions).  
Termination = e4 (Au over Ni over W base metallization).



**Tape and Reel Information:**



PITCH	4.00
TAPE WIDTH	8.00
REEL DIA	180
QTY PER REEL	3,000

## Looking for pricing, stock, or lifecycle information?

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-  [View I547-2P3-40.000 MHZ on WIN SOURCE](#)
-  [ILSI America LLC Information](#)

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