Leaded Oscillator, TCXO, TCVCXO
Metal Package, Full Size DIP

I121 / I122 / I321 / I322 Series

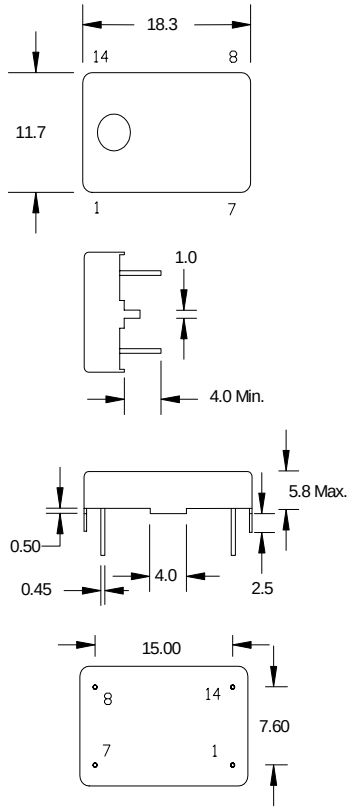
Product Features:

Available in Both Clipped Sinewave and HCMOS Output Levels
Compatible with Leadfree Processing

Applications:

Base Station
IP
WiMax / Wlan
General Purpose

Frequency I121/I321 I122/I322	 9.600 Mhz to 40 Mhz 1.000 Mhz to 40 Mhz
Output Level Clipped Sinewave HCMOS	 1.0 V p-p Min. '0'=0.1 VCC Max., '1'=0.9Vcc Min.
Output Load Clipped Sinewave HCMOS	 20K Ohms / 10 pF 15pF
Duty Cycle (HCMOS)	50% ±10%
Rise / Fall Time (HCMOS)	10 nS Max.
Frequency Stability	See Frequency Stability Table
Frequency Tolerance @ 25° C	Included in Stability Tolerance
Aging	± 1 ppm / Year Max.
Supply Voltage	See Supply Voltage Table , tolerance ± 5%
Current	3.0 mA Max. (Clipped Sinewave) 20.0 mA Max. (HCMOS)
Voltage Control (I321/ I322)	 1.65 VDC ± 1.5 VDC, ± 5.0 ppm Min. for Vcc = 3.3 VDC 2.5 VDC ± 2.0 VDC, ± 5.0 ppm Min. for Vcc = 5.0 VDC
Slope	Positive
Operating	See Operating Temperature Table
Storage	-40° C to +85° C



Pin	Connection
1	Vcontrol / N.C.
7	GND
8	Output
14	Vcc

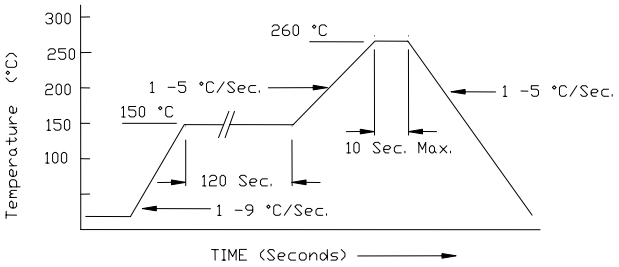
Dimension Units: mm

Part Number Guide **Sample Part Number: I121-1Q3-20.000 Mhz**

Package	Operating Temperature	FrequencyStability vs Temperature	Supply Voltage	Frequency
I121 (Clipped Sinewave TCXO) I122 (HCMOS TCXO) I321 (Clipped Sinewave TCVCXO) I322 (HCMOS TCVCXO)	7 = 0° C to +50° C	**O = ±1.5 ppm	3 = 3.3 V	- 20.000 MHz
	1 = 0° C to +70° C	**P = ±2.0 ppm	5 = 5.0 V	
	3 = -20° C to +70° C	Q = ±2.5 ppm		
	2 = -40° C to +85° C	R = ±3.0 ppm		
		J = ±5.0 ppm		

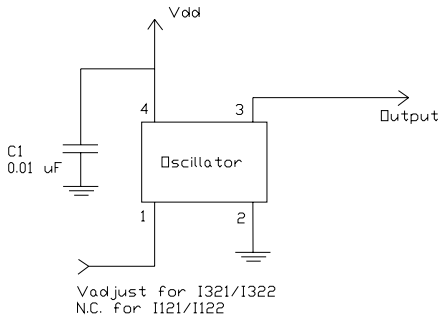
NOTE: A 0.01 µF bypass capacitor is recommended between Vcc (pin 4) and GND (pin 2) to minimize power supply noise.
** Not available for all temperature ranges.

Pb Free Solder Reflow Profile:



*Units are backward compatible with 240C reflow processes

Typical Application:



Package Information:

MSL = 2a
Termination = e1 (Sn / Cu / Ag over Ni over Kovar base metal).

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: ILSI and Date Code
Line 2: IXXX-XXX (Part Number detail = I**XXX**-**XXX**-Freq.)
Line 3: Frequency