



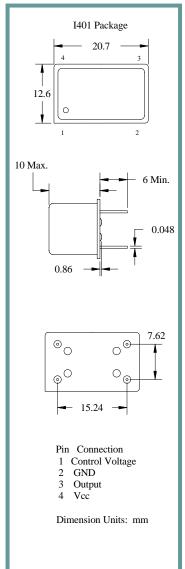
## **I401** Series

#### **Product Features:**

Available in Both Sinewave and HCMOS/TTL Compatible outputs **RoHS Compliant** 

**Applications:** Telecommunications **Data Communications** Instrumentation **Test and Measurement** 

Frequency	1.000 MHz to 50.000 MHz				
Output Level					
HC-MOS	'0' = 0.1 Vcc Max., '1' = 4.5 VDC Min.				
TTL	'0' = 0.4 VDC Max., '1' = 2.4 VDC Min.				
Sine	+4dBm, ±3dBm				
Dotte Occile	500/ 400/ 50/ O T-I-I-				
Duty Cycle	50% ±10% or ±5% See Table				
Rise / Fall Time	10 nS Max.				
Output Load					
HC-MOS	See Output Table				
TTL	15 pF				
Sine	50 ohms				
Frequency Stability	See Frequency Stability Table				
Supply Voltage	See Supply Voltage Table				
Command (Manus IIIs)	400 A @ 5 VDC 470 A @ 40 VDC Mari				
Current (Warm Up) Current @ 25 ° C	400 mA @ 5 VDC, 170 mA @ 12 VDC Max. 120 mA @ 5 VDC, 60 mA @ 12 VDC Typ.				
Current @ 25 ° C	120 MA @ 5 VDC, 60 MA @ 12 VDC Typ.				
Control Voltage	Voltage 2.5 VDC ±2.0 VDC, ±8 ppm Min.				
Clana	Positive				
Slope	r usiliye				
Operating	See Operating Temperature Table in Part Number Guide				
Storage	-55° C to +125° C				
	,				



Part NumberGuide		Sample Part Number: I401-5151YV-20.000 MHz					
Package	Input Voltage	Operating Temperature	Symmetry (Duty Cycle)	Output	Frequency Stability (in ppm)	Voltage Control	Frequency
1401 -	5 = 5.0 V	7 = 0° C to +50° C	5 = 45 / 55 Max.	1 = 10 TTL / 15pF HC-MOS	N = ±1.0	V = Controlled	
	9 = 12 V	1 = 0° C to +70° C	6 = 40 /60 Max.	3 = 15pF HC-MOS	Y = ±0.5	F = Fixed	
		6 = -10° C to +75° C		6 = 30pF	1 = ±0.25		-20.000 MHz
		3 = -20° C to +85° C		4 = AC-MOS	2 = ±0.1		
				A = Sine	$3 = \pm 0.05^*$		

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

\* Frequency, supply, and load related parameters.

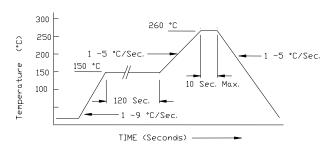




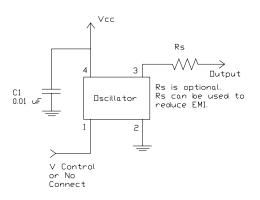
**1401** Series

#### Pb Free Solder Reflow Profile:

## **Typical Application:**



<sup>\*</sup>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 = 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: XXXXXX (Part Number detail = I401-XXXXXX-Freq.)

Line 2: Frequency