

# I533 Series



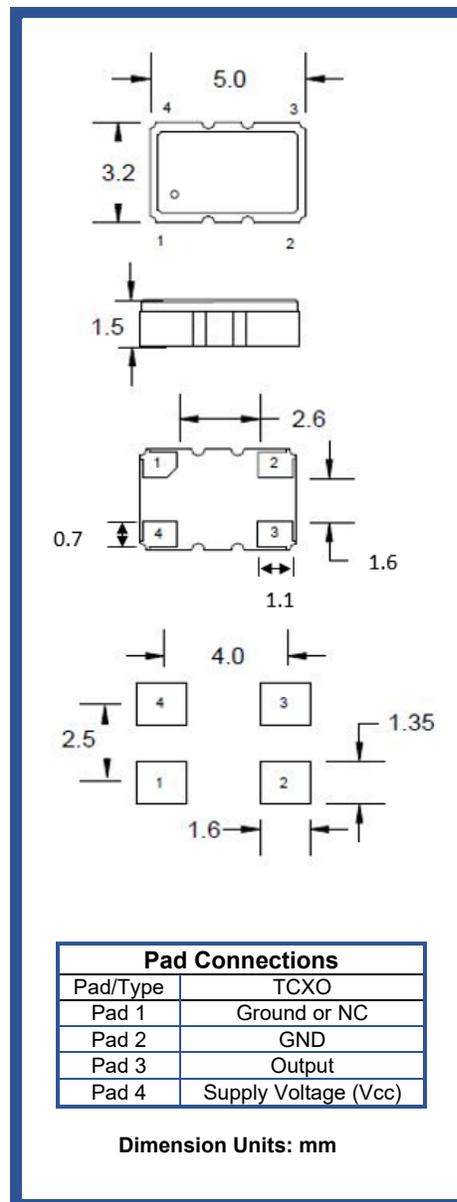
## Product Features:

TCXO  
 Low Jitter, Non-PLL Based Output  
 Clipped Sinewave Output  
 Compatible with Leadfree Processing  
 Digital Compensation

## Applications:

Wireless Communication  
 Test Instruments  
 GPS  
 Base stations  
 Telecommunications

<b>Frequency</b>	8.000 MHz to 40.000 MHz
<b>Output Level</b> Clipped Sinewave	0.8 Vp-p Min.
<b>Output Load</b>	10K Ohms // 10 pF
<b>Frequency Stability</b> Vs Temperature Vs Voltage ( $\pm 5\%$ ) Vs Load ( $\pm 5\%$ )	See Frequency Stability Table $\pm 0.3$ ppm Max. $\pm 0.2$ ppm Max.
<b>Frequency Tolerance</b> (@ 25° C)	$\pm 1.0$ ppm Max.
<b>Aging</b> (@ 25° C)	$\pm 1$ ppm / Year Max.
<b>Supply Voltage</b>	See Supply Voltage Table, Tolerance $\pm 5\%$
<b>Current</b>	2.0 mA Max
<b>Operating</b>	See Operating Temperature Table
<b>Storage</b>	-40° C to +85° C
<b>Phase Noise</b> (Typ. @ 20Mhz)	-86 dBc/Hz @ 10 Hz -115 dBc/Hz @ 100 Hz -138 dBc/Hz @ 1kHz -146 dBc/Hz @ 10kHz



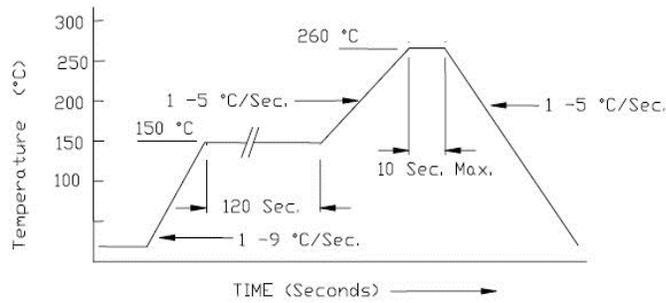
Part Number Guide		Sample Part Number: I533-1Q3- 20.000 MHz		
Package	Operating Temperature	Frequency Stability vs Temperature	Supply Voltage	Frequency
I533 (Clipped Sinewave TCXO)	7 = 0°C to +50°C	**N = $\pm 1.0$ ppm	2 = 2.7 V	-20.000 MHz
	1 = 0°C to +70°C	**O = $\pm 1.5$ ppm	3 = 3.3 V	
	3 = -20°C to +70°C	P = $\pm 2.0$ ppm	6 = 2.5 V	
	5 = -30°C to +85°C	Q = $\pm 2.5$ ppm	7 = 3.0 V	
	2 = -40°C to +85°C	R = $\pm 3.0$ ppm	8 = 2.8 V	
		J = $\pm 5.0$ ppm		

### NOTES:

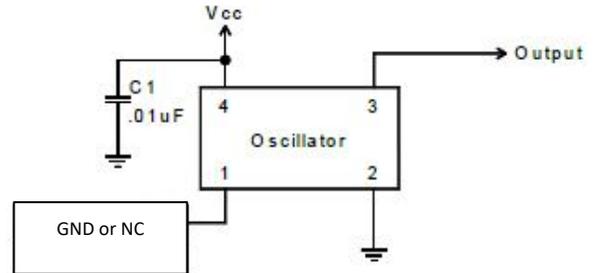
A 0.01  $\mu$ F bypass capacitor is recommended between Vcc (pin 4) and GND (pin 2) to minimize power supply noise.

\*\* Not available for all operating temperature ranges and output frequencies.

## Pb Free Solder Reflow Profile:



## Typical Application:

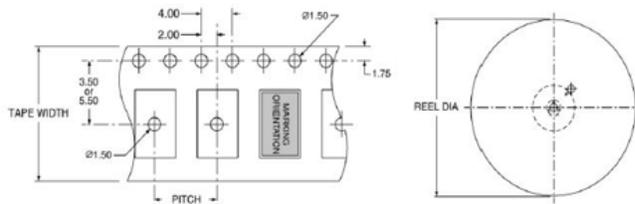


\*Units are backward compatible with 240C reflow processes

## 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 metallization).

## Tape and Reel Information:



Pitch	4.00
Tape Width	8.00
Reel DIA	180
QTY Per Reel	1000

## 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