

# SU-XA6XXX-X Series Sinewave Output XO

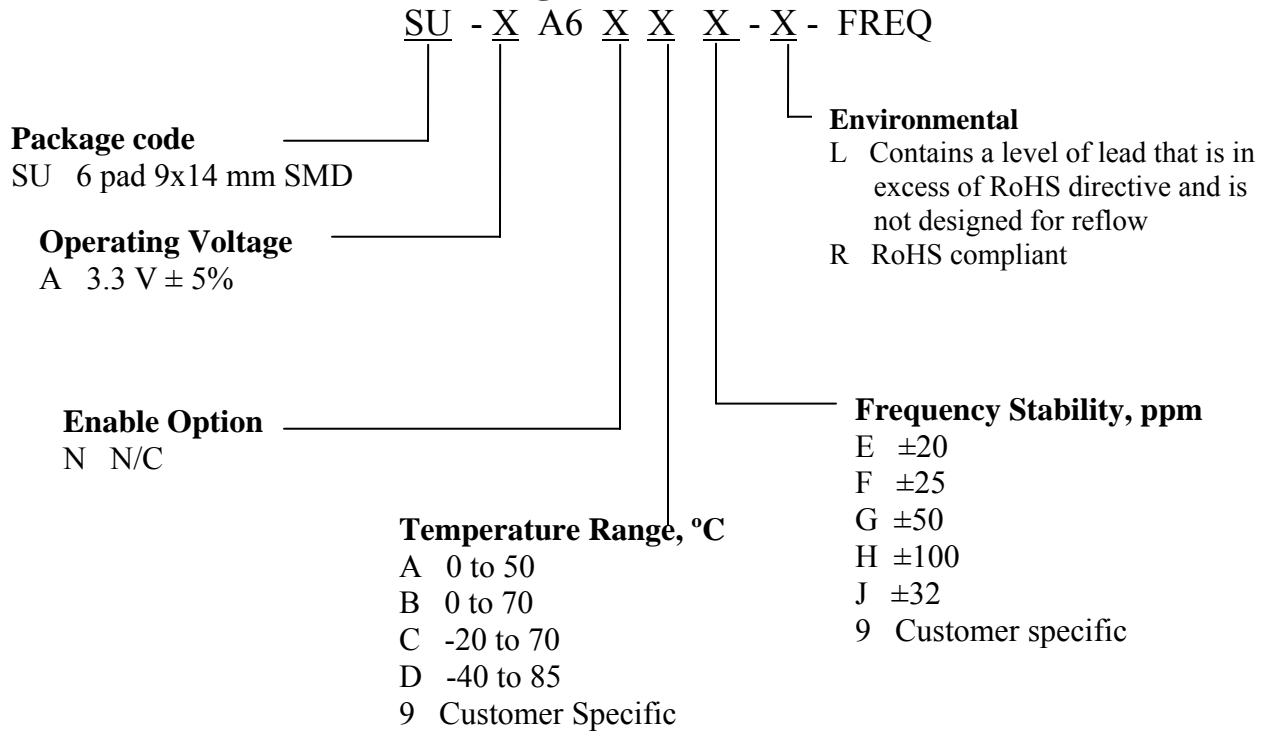
## Description

The **SU-XA6XXX Series** of crystal oscillators (XO) provides a general purpose sinewave output. It's packaged in a miniature, FR-4 based 9x14 mm SMD package

## Applications and Features

- General purpose applications requiring a sinewave output
- High Reliability – NEL HALT/HASS qualified for crystal oscillator start-up conditions
- Low Phase Noise and Jitter
- Frequency Range to 10 MHz
- SONENT ± 20 ppm overall stability available
- High Shock Resistance, to 1000g
- COTS/Dual use

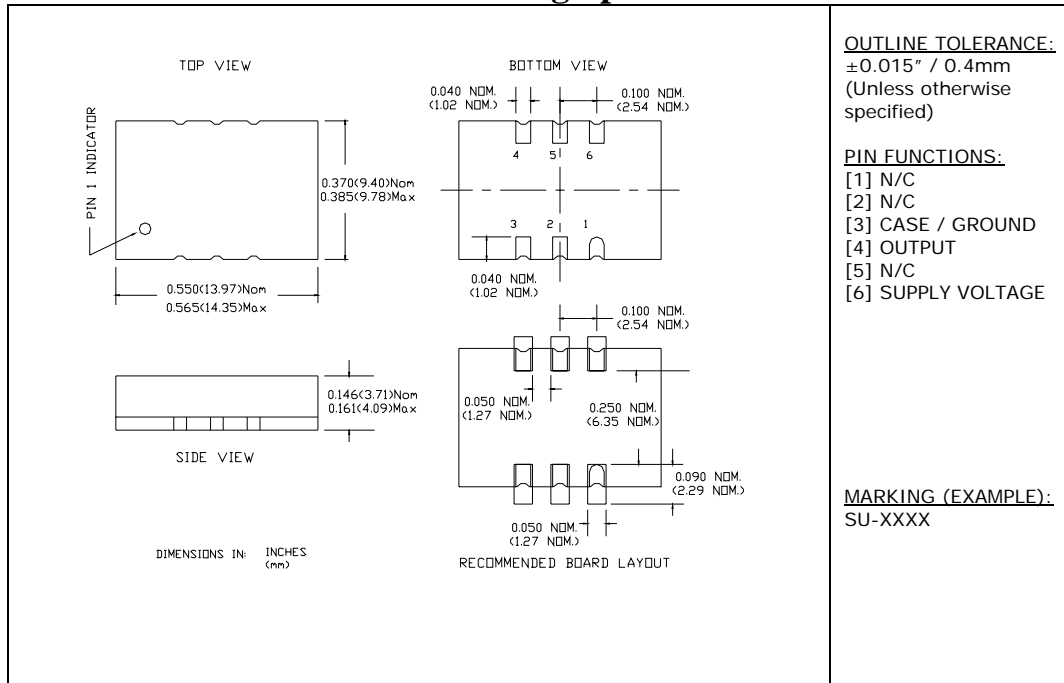
### Creating a Part Number



SU-XA6XXX-X Series

Rev. B

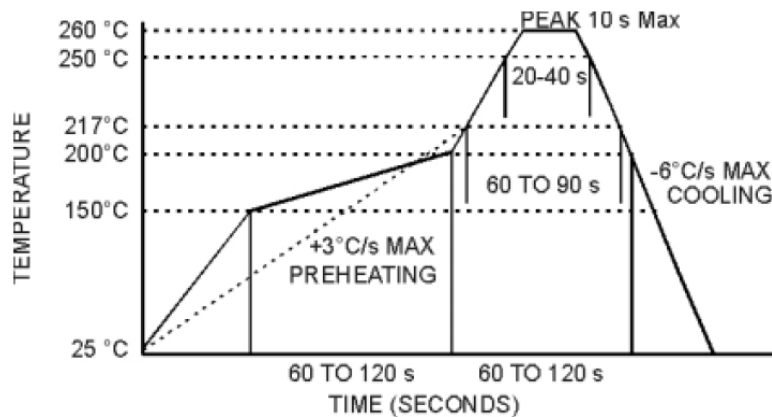
Drawing Specification



Environmental and Mechanical Characteristics

<b>Operating temp. range</b>	see part # table
<b>Mechanical Shock</b>	Per MIL-STD-202, Method 213, Cond. A
<b>Thermal Shock</b>	Per MIL-STD-883, Method 1011, Cond. A
<b>Vibration</b>	Per MIL-STD-883, Method 2007, Cond. A
<b>Hermetic Seal</b>	Leak rate less than $1 \times 10^{-8}$ atm.cc/s of helium, crystal only.
<b>Soldering conditions</b>	See MAX reflow profile below; The device may be reflowed once. Reflowing upside down is not allowed. NO CLEAN assembly is recommended.

MAX Reflow Profile



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**Absolute Maximum Ratings**

Parameter	Symbol	Value	Unit
Operating Temperature Range	To	-40 to +85	°C
Storage Temperature Range	Tst	-50 to +90	°C
Supply Voltage	Vcc	-0.5 to 3.6	V

**Electrical Parameters**

Parameter	Symb	Conditions, Note	MIN	TYP	MAX	Unit
Nominal Frequency	Fo		1.0		10.0	MHz
Supply Voltage	Vcc	Code A (3.3V)	3.135	3.3	3.465	V
Supply Current <sup>(2)</sup>	Icc	Code A (3.3V)		10		mA
Output Type				sinewave		
Load		Internally AC coupled		50		Ohm
Output Power <sup>(3)</sup>	Pout	Vcc=3.3V, 50 Ohm Load	-3	0	3	dBm
Output Impedance				50		Ohms
Return Loss				10		dB
Phase Noise	£(Δf)					dBc/Hz
		@ 10 Hz		-90		
		@100 Hz		-120		
		@1 KHz		-135		
		@10KHz		-145		
		@100KHz		-150		
		@>1MHz		-150		
Frequency Stability	ΔF/F	Overall, including initial calibration, temperature, aging 10 years, shock and vibration			From ±20, see table for part number	ppm

Notes:

1. All parameters, unless noted otherwise are specified for nominal conditions, i.e. ambient temperature is 25 °C, Vcc – nominal.
2. Current is frequency dependent.
3. Other output levels are available up to +12 dBm.