



# OSCILLATORS

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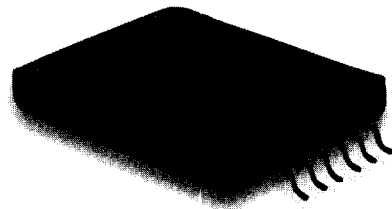
## TCXO -- Model XO3022

### Features:

- Small size (1.25" x 1.00" x 0.20")
- Very low profile
  - Surface mounted
  - Low power
    - High stability
    - Ruggedized design
    - VCXO version available

### Applications:

Portable communication systems,  
GPS receivers, and where small  
size and low power are needed.



## Specifications -- XO3022 Series

	Standard	Options
<b>Frequencies</b>	20.0, 25.5, 43.796, 46.72, 48.0, 75.0 MHz	10 to 75 MHz
<b>Aging Per Year</b>	Dependent on frequency, as low as 0.5 ppm/yr	
<b>SSB Phase Noise (dBc):</b>	Frequency dependent as low as -80 dBc at > 10 Hz offset -150 dBc at > 10 kHz offset	
<b>Power Supply:</b> Oscillator voltage Oscillator current	5 V $\pm$ 0.25 V 3 mA	5 V to 15 V
<b>Frequency Adjustment:</b> Method Range	Ext. 10K pot $\pm$ 5 ppm for aging	Ext. voltage or VCXO to $\pm$ 30 ppm/V
<b>Output Signal:</b> Type Level Load	Sinewave 0.5 V pk-pk 1 Kohms	-3 dBm to +3 dBm into 50 ohms
<b>Environmental:</b> Vibration Shock	0.4 g <sup>2</sup> /Hz, 100-2000 Hz 50 g 11 mS ½ sine	Consult factory

### Optional Temperature Ranges and Frequency Stabilities

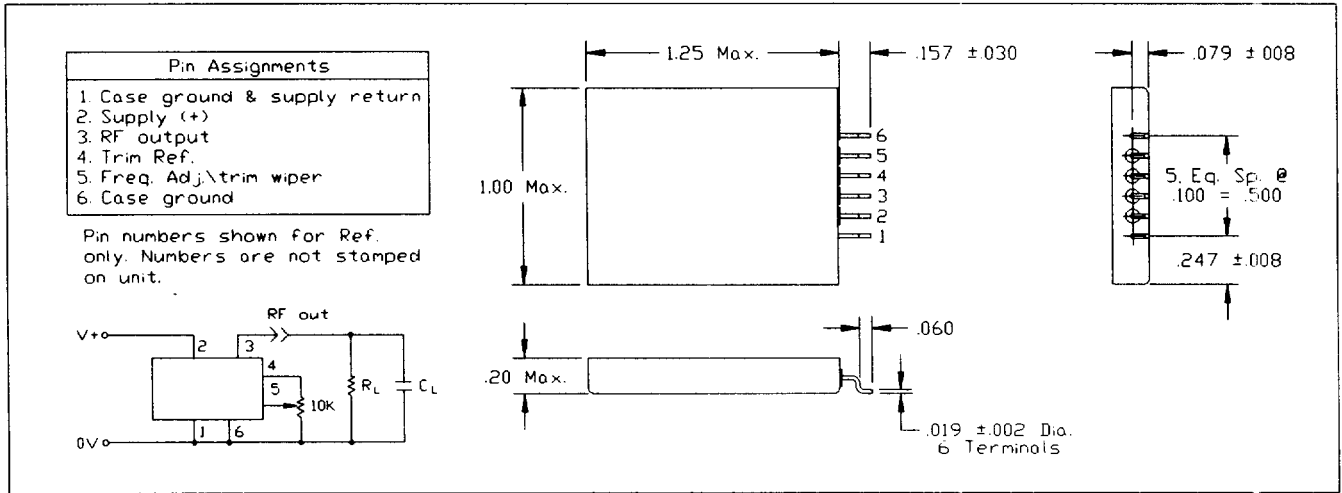
Temperature Range (°C)	Frequency/Temperature Stability (ppm)						
	$\pm$ 5	$\pm$ 3	$\pm$ 2	$\pm$ 1	$\pm$ 0.75	$\pm$ 0.50	$\pm$ 0.25
+15 to +30	X	X	X	X	X	X	X
0 to +50	X	X	X	X	X	X	X
0 to +70	X	X	X	X	X	X	
-20 to +70	X	X	X	X	X		
-40 to +75	X	X	X	X			
-55 to +85	X	X	X	X			

This TCXO can be produced to these specifications, with extended temperature range and tighter stability being cost drivers.

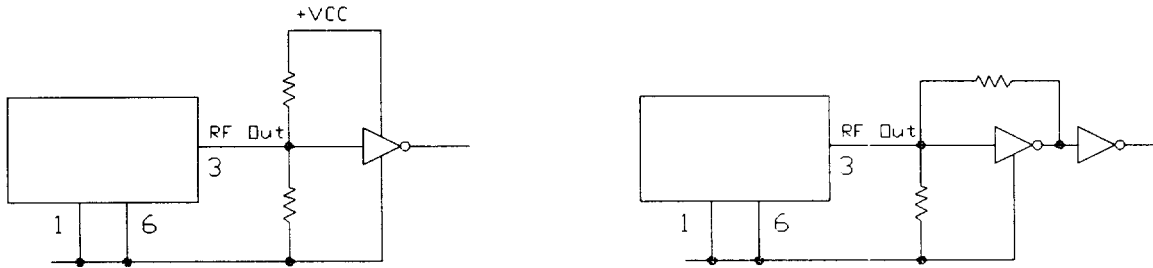
## XO3022-009 -- Standard Version in Stock

<b>Frequency</b>	<b>20 MHz</b>
<b>Temperature Range</b>	<b>-30 to +70°C</b>
<b>Temperature Stability</b>	<b>± 0.75 ppm</b>
<b>Aging Per Year</b>	<b>± 1 ppm max.</b>
<b>SSB Phase Noise (dBc) at:</b>	
<b>10 Hz</b>	<b>-85</b>
<b>100 Hz</b>	<b>-115</b>
<b>1000 Hz</b>	<b>-135</b>
<b>10000 Hz</b>	<b>-145</b>
<b>Power Supply:</b>	
<b>Oscillator voltage</b>	<b>5 V ± 0.25 V</b>
<b>Oscillator current</b>	<b>2 mA</b>
<b>Frequency Adjustment:</b>	
<b>Method</b>	<b>Ext. 10K Pot</b>
<b>Range</b>	<b>± 5 ppm</b>
<b>Output Signal:</b>	
<b>Type</b>	<b>Sinewave</b>
<b>Level</b>	<b>2.0 V pk-pk</b>
<b>Load</b>	<b>1 Kohms//10pF</b>
<b>Environmental:</b>	
<b>Vibration</b>	<b>0.4 g<sup>2</sup>/Hz., 100-2000 Hz</b>
<b>Shock</b>	<b>50 g 11 ms ½ sine</b>

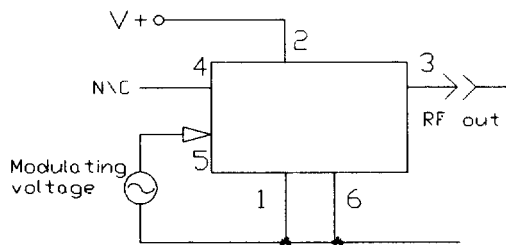
## Outline Drawing -- XO3022 Series



### Alternate Connections



### Output Biased to Drive a Gate



### VCXO Connections

Specifications subject to change without notice.