

# Ultra Low Profile OCXO

# NV47AG Series

### Description:

The NV47AG Super Single Ovenized Crystal Oscillator Series provides a stable frequency reference at the lowest available standard height in the market for base stations, test equipment, synthesizers, and digital switching applications.



### Features:

- Less than .5 inch height
- Stability as low as +/- 5.0 ppb
- Available in frequencies from 5 to 13 MHz
- CMOS and Sine Wave output
- 5 or 12 volt supply
- RoHS-6 / Lead-free compliant available
- Phase Noise Options

### Frequency Range, Operating Temperature, and Frequency Stability:

Frequency Range	Operating Temperature	Product Code	Frequency Stability	Product Code
5 to 13 MHz	-20 to +70 °C	A	+/- 5.0 ppb	A
	-40 to +85 °C	B	+/- 10.0 ppb	B

- +/- 5ppb is not available with -40 to +85° C operating temperature range

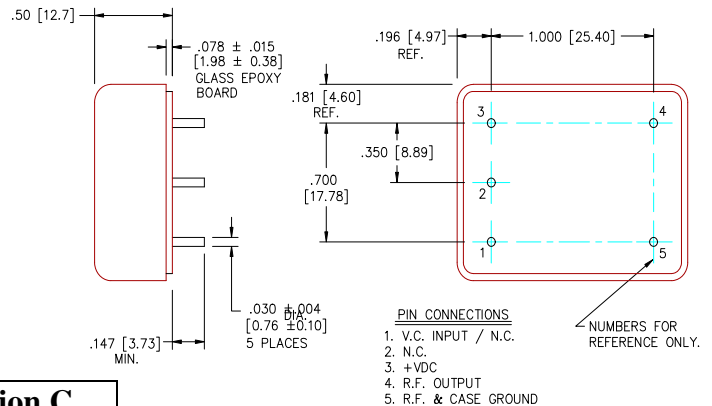
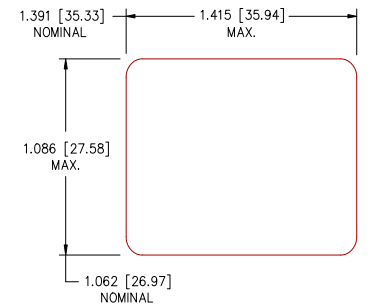
### Aging: (typical at 10 MHz after 30 days continuous operation)

Frequency	Timeframe	Aging
10 MHz	1 Year	Less than +/- 50 ppb

### Phase Noise:

Frequency Offset	Option A Square Wave	Option B Sine Wave	Option C Sine Wave
1 Hz	-85 dBc/Hz	-90 dBc/Hz	-95 dBc/Hz
10 Hz	-115 dBc/Hz	-120 dBc/Hz	-125 dBc/Hz
100 Hz	-145 dBc/Hz	-150 dBc/Hz	-155 dBc/Hz
1 KHz	-150 dBc/Hz	-155 dBc/Hz	-160 dBc/Hz
10 KHz	-155 dBc/Hz	-160 dBc/Hz	-165 dBc/Hz
100 KHz	-155 dBc/Hz	-160 dBc/Hz	-165 dBc/Hz

Options B and C not available with square wave out.



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### Supply Voltage & Power Consumption:

Supply Voltage	5V +/-5%	12V +/-5%
Power Consumption	4.0W turn on power 1.5 steady state power	4.0W turn on power 1.5 steady state power
Product Code	<b>A</b>	<b>B</b>

### Output Waveform:

HCMOS		Sine Wave	
Waveform Description	Output Level	Waveform Description	Output Level
HCMOS Output Levels (15pF load)	“0”<0.5V;”1”>4.5V	Output Power	8 dBm typ.
Rise/Fall Time	<10nS (10% to 90%)	Harmonics	-30 dBc
Duty Cycle	45% to 55% @ 50% Logic 1	Spurious	-75 dBc
<b>Option A</b>		<b>Option B</b>	

### Pulling Range:

Turning Range (0V to 4V on Vcontrol)	None	+/- 0.5 ppm min.	+/- 1 ppm min
Product Code	<b>Option A</b>	<b>Option B</b>	<b>Option C</b>

### Environmental:

Storage Temperature	-55 to +125° C
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### Ordering Options:

Operating Temp	Frequency Stability	Phase Noise	Supply Voltage	Output Waveform	Pulling Range	Operating Frequency
<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>10M0</b>
<b>B</b>	<b>B</b>	<b>B</b>	<b>B</b>	<b>B</b>	<b>B</b>	<b>10M0</b>
		<b>C</b>			<b>C</b>	<b>10M0</b>
						<b>10M0</b>


  
**NVG47AG A B B A B B 10M0**

### Product Selection Code (refer to the above example):

This part is RoHS compliant, -20 to +50C, +/- 10 ppb frequency stability, 5 volt supply, +/- 0.5 ppm pull range, operating frequency of 10MHz, sine waveform, and ‘B’ phase noise spec.