

# Euro-Style Low Noise NV47AE / NVG47AE, Low Profile High Stability OCXO

### Description:

The N47AE Ovenized Crystal Oscillator Series is designed for VMA slot applications and provides a low noise, ultra-stable frequency reference for base stations, test equipment, synthesizers, and digital switching applications.



### Features:

- Frequencies from 5 to 13 MHz
- HCMOS and Sine Wave Output
- 5 or 12 Volt Supply
- Multiple phase noise options
- RoHS-6 / Lead-free Compliant
- Storage Temperature Range of -55°C to 125°C

**Voltage Control Range:**      N47AE                  NV47AE

Turning Range (0V to 4V on Vcontrol)	None	+/- 0.5 ppm min.
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### Operating Temperature and Frequency Stability:

Temperature Range Code	Operating Temperature	Stability Code ± 5 ppb	Stability Code ± 10 ppb	Stability Code ± 20 ppb	Stability Code ± 30 ppb
A	0 to +50°C	A	B	C	D
B	-20 to +70°C	A	B	C	D
C	-40 to +85°C	N/A	B	C	D

### Phase Noise:

Frequency Offset	Option A HCMOS Output	Option B Sine Wave Output only	Option C Sine Wave Output only
1 Hz	-80 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 "C" not available +5VDC Supply Voltage.

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

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

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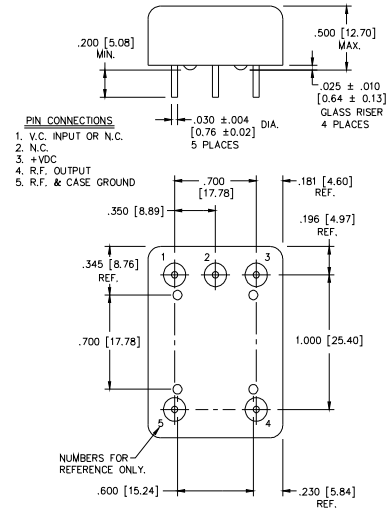
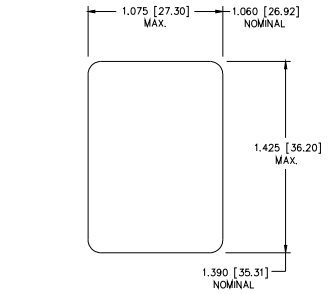
### Supply Voltage & Power Consumption:

<b>Supply Voltage</b>	<b>5V +/-5%</b>	<b>12V +/-5%</b>
<b>Power Consumption</b>	3.5W Startup Power 1.5 W Steady State	3.5W Startup Power 1.5 W Steady State
<b>Product Code</b>	<b>A</b>	<b>B</b>

### Output Waveform:

<b>Sine Wave Type A</b>	<b>HCMOS Type B*</b>
8 dBm typ. Output Level	Level "0": 0 to 0.4 V Level "1": 4.5 to 5 V
-30 dBc Harmonics	< 7 nsec Rise/Fall Time
-75 dBc Spurious Response	50 +/- 5% Duty Cycle

\*HCMOS Only Available with +5 VDC Supply



### Ordering Options:

Model <b>OCXO</b>	Temp. Range	Frequency Stability	Phase Noise	Supply Voltage	Output Waveform	Operating Frequency*
For Leaded Part <b>N47AE</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>5M0</b>
	<b>B</b>	<b>B</b>	<b>B</b>	<b>B</b>	<b>B</b>	<b>To</b>
	<b>C</b>	<b>C</b>	<b>C</b>			<b>13M0</b>
For ROHS Part <b>NG47AE</b>		<b>D</b>				

Model <b>OCVCXO</b>	Temp. Range	Frequency Stability	Phase Noise	Supply Voltage	Output Waveform	Operating Frequency*
For Leaded Part <b>NV47AE</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>5M0</b>
	<b>B</b>	<b>B</b>	<b>B</b>	<b>B</b>	<b>B</b>	<b>To</b>
	<b>C</b>	<b>C</b>	<b>C</b>			<b>13M0</b>
For ROHS Part <b>NVG47AE</b>		<b>D</b>				

\*Trailing Zeros Will Be Omitted In Final Part Number