

# High Stability OCXO & OCVCXO

# N47B Series NV47B Series

## Description:

The N47B/NV47B Ovenized Crystal Oscillator Series provides an ultra-stable frequency reference in conjunction with excellent phase noise for markets including base stations, test equipment, synthesizers, and digital switching applications.



## Features:

- Stability as Low as +/- 1.0 ppb
- Frequencies from 5 to 13 MHz
- HCMOS and Sine Wave Output
- 5 or 12 Volt Supply
- RoHS-6 / Lead-free Compliant
- Storage Temperature Range of -55°C to 125°C

### Voltage Control Range: N47B NV47B

Turning Range (0V to 4V on Vcontrol)	None	+/- 0.5 ppm min.
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### Supply Voltage & Power Consumption:

Supply Voltage	5V +/-5%	12V +/-5%
Power Consumption	4.0W Startup Power 1.5 W Steady State	4.0W Startup Power 1.5 W Steady State
Product Code	A	B

### Operating Temperature, and Frequency Stability:

Temperature Range Code	Operating Temperature	Stability Code +/- 1.0 ppb	Stability Code +/- 2.0 ppb	Stability Code +/- 3.0 ppb	Stability Code +/- 5.0 ppb
A	0 to +50°C	A	B	C	D
B	-20 to +70°C	N/A	B	C	D
C	-40 to +85°C	N/A	N/A	C	D

### Output Waveform:

Sine Wave Type A	HCMOS Type 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 In 5 Volt Supply Types

### Output Frequency:

Frequency Range
5 MHz To 13 MHz

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### Phase Noise:

Frequency Offset	10 MHz Sine Wave	10 MHz HCMOS
1 Hz	-90 dBc/Hz	-90 dBc/Hz
10 Hz	-120 dBc/Hz	-120 dBc/Hz
100 Hz	-150 dBc/Hz	-140 dBc/Hz
1 KHz	-155 dBc/Hz	-145 dBc/Hz
10 KHz	-160 dBc/Hz	-155 dBc/Hz
100 KHz	-160 dBc/Hz	-155 dBc/Hz

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

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

### Ordering Options:

Model OCXO	Supply Voltage	Temp. Range	Frequency Stability	Output Waveform	Operating Frequency*
<b>N47B</b> For Leaded Part	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>5M0000</b>
	<b>B</b>	<b>B</b>	<b>B</b>	<b>B</b>	<b>To</b>
<b>NG47B</b> For ROHS Part		<b>C</b>	<b>C</b>		<b>13M000</b>
			<b>D</b>		

Model OCVCXO	Supply Voltage	Temp. Range	Frequency Stability	Output Waveform	Operating Frequency*
<b>NV47B</b> For Leaded Part	<b>A</b>	<b>A</b>	<b>A</b>	<b>A</b>	<b>5M0000</b>
	<b>B</b>	<b>B</b>	<b>B</b>	<b>B</b>	<b>To</b>
<b>NVG47B</b> For ROHS Part		<b>C</b>	<b>C</b>		<b>13M000</b>
			<b>D</b>		

\*Trailing Zeros Will Be Omitted In Final Part Number

