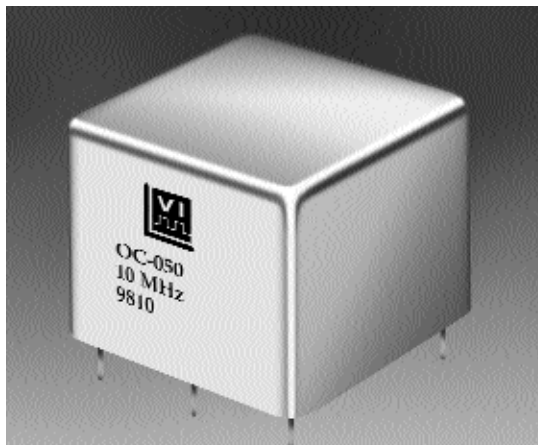


# Oven Controlled Crystal Oscillators (OCXO's)

## OC-050 Double Oven OCXO



### Description:

The model OC-050 Double Oven series is available in frequencies of 5 MHz & 10 MHz standard with other frequencies available upon request. The model OC-050 provides exceptionally low aging rates, superior temperature stabilities and longer life performance than Rubidium oscillators at a fraction of the cost.

### Features:

- 5 MHz & 10 MHz Standard Frequencies
- Temperature Stability:  $\pm 5 \times 10^{-11}$  over 0°C to +50°C
- Aging:  $1 \times 10^{-10}$ /day standard
- Package: 2" x 2" x 1.4"
- Cost Effective Alternative to Rubidium

## Performance Characteristics

Parameter	Characteristics																		
Standard Frequencies:	5 MHz & 10 MHz (contact the factory for other frequencies)																		
Package Size:	50.80 x 50.80 x 35.56 mm (2" x 2" x 1.4")																		
Supply Voltage:	<b>A</b> = 15 Vdc $\pm 5\%$ , <b>B</b> = 12 Vdc $\pm 5\%$ <12W at turn on, <4W @+25°C (steady state)																		
Output:	<b>A</b> = HCMOS <span style="float: right;"><b>J</b> = +7 dBm to +11 dBm / 50 ohm</span>																		
Harmonics/Sub-Harmonics:	-40 dBc maximum ( Sinewave output)																		
Temperature Stability:	<b>B-501</b> = $\pm 5 \times 10^{-11}$ over 0°C to +50°C <b>B-100</b> = $\pm 1 \times 10^{-10}$ <b>C-100</b> = $\pm 1 \times 10^{-10}$ over 0°C to +70°C <b>C-200</b> = $\pm 2 \times 10^{-10}$ <b>D-100</b> = $\pm 1 \times 10^{-10}$ over -20°C to +70°C <b>D-300</b> = $\pm 3 \times 10^{-10}$  <b>Other stability options are available- contact factory</b>																		
Aging (after 30 days on):	<b>A</b> = $1 \times 10^{-10}$ /day average, $1.5 \times 10^{-8}$ /year, $1 \times 10^{-7}$ over 15 years <b>B</b> = $3 \times 10^{-11}$ /day average, $5 \times 10^{-9}$ /year, $5 \times 10^{-8}$ over 15 years.																		
Short Term (Allan Deviation):	$2 \times 10^{-12}$ for tau = 1 second, $2 \times 10^{-12}$ for tau = 10 seconds																		
Phase Noise (Typical): With Sinewave output. Contact factory for improved noise options	<table border="1"> <thead> <tr> <th>Offset</th> <th>5 MHz</th> <th>10 MHz</th> </tr> </thead> <tbody> <tr> <td>10 Hz</td> <td>-132 dBc/Hz</td> <td>-126 dBc/Hz</td> </tr> <tr> <td>100 Hz</td> <td>-149 dBc/Hz</td> <td>-141 dBc/Hz</td> </tr> <tr> <td>1 kHz</td> <td>-150 dBc/Hz</td> <td>-143 dBc/Hz</td> </tr> <tr> <td>10 kHz</td> <td>-150 dBc/Hz</td> <td>-143 dBc/Hz</td> </tr> <tr> <td>100 kHz</td> <td>-150 dBc/Hz</td> <td>-143 dBc/Hz</td> </tr> </tbody> </table>	Offset	5 MHz	10 MHz	10 Hz	-132 dBc/Hz	-126 dBc/Hz	100 Hz	-149 dBc/Hz	-141 dBc/Hz	1 kHz	-150 dBc/Hz	-143 dBc/Hz	10 kHz	-150 dBc/Hz	-143 dBc/Hz	100 kHz	-150 dBc/Hz	-143 dBc/Hz
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Frequency vs. Supply:	$3 \times 10^{-11}$ per percent																		
Frequency vs. Load:	$1 \times 10^{-11}$ per percent																		
Electrical Frequency Adjustment:	$\pm 2 \times 10^{-7}$ minimum, $\pm 4 \times 10^{-7}$ maximum, for 0 to +10V control. Center frequency set at 5V $\pm 0.5$ V. Positive transfer function. $< \pm 20\%$ Linearity.																		
How to Order:	Contact factory for unique part number																		