

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: 1×10^{-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:	A = 15 Vdc ±5%, B = 12 Vdc ±5% <12W at turn on, <4W @+25°C (steady state)																		
Output:	A = HCMOS J = +7 dBm to +11 dBm / 50 ohm																		
Harmonics/Sub-Harmonics:	-40 dBc maximum (Sinewave output)																		
Temperature Stability:	B-501 = ±5 x 10 ⁻¹¹ over 0°C to +50°C B-100 = ±1 x 10 ⁻¹⁰ C-100 = ±1 x 10 ⁻¹⁰ over 0°C to +70°C C-200 = ±2 x 10 ⁻¹⁰ D-100 = ±1 x 10 ⁻¹⁰ over -20°C to +70°C D-300 = ±3 x 10 ⁻¹⁰ Other stability options are available- contact factory																		
Aging (after 30 days on):	A = 1 x 10 ⁻¹⁰ /day average, 1.5 x 10 ⁻⁸ /year, 1 x 10 ⁻⁷ over 15 years B = 3 x 10 ⁻¹¹ /day average, 5 x 10 ⁻⁹ /year, 5 x 10 ⁻⁸ over 15 years.																		
Short Term (Allan Deviation):	2x 10 ⁻¹² for tau = 1 second, 2 x 10 ⁻¹² for tau = 10 seconds																		
Phase Noise (Typical): With Sinewave output. Contact factory for improved noise options	<table><tr><td>Offset</td><td>5 MHz</td><td>10 MHz</td></tr><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>-143dBc/Hz</td></tr><tr><td>100 kHz</td><td>-150 dBc/Hz</td><td>-143 dBc/Hz</td></tr></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	-143dBc/Hz	100 kHz	-150 dBc/Hz	-143 dBc/Hz
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Frequency vs. Supply:	3 x 10 ⁻¹¹ per percent																		
Frequency vs. Load:	1 x 10 ⁻¹ per percent																		
Electrical Frequency Adjustment:	±2 x 10 ⁻⁷ minimum, ±4 x 10 ⁻⁷ maximum, for 0 to +10V control. Center frequency set at 5V ±0.5V. Positive transfer function. <±20% Linearity.																		
How to Order:	Contact factory for unique part number																		