Oven Controlled Crystal Oscillators (OCXO's)

OC-290



Description:

Small SMD OCXO with tight stability. AT and SC-cut versions available.

Features

- 5 MHz, 10 MHz, 13 MHz standard. Other frequencies available from 2 to 80 MHz
- Stability as low as ±5 x 10⁻⁸ over 0°C to 50°C
- Aging: 1 x 10⁻⁹ per day
- Package: 25.4 x 22 x 10.5 mm
- Supply voltage: +3.3 or +5.0 V

Performance Characteristics

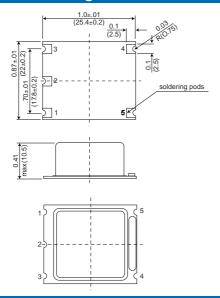
Parameter	Characteristic
Frequency:	10, 12.8, 16.384, 19.44, 20, 24.576, 20.48, 32.768, 38.88, 40 and 77.76 MHz Available from 2 MHz to 80 MHz
Package Size:	25.4 x 22.0 x 10.5 mm (1.0" x 0.9" x 0.42")
Supply Voltage (Vdd):	C = 5 Vdc ±5% D = 3.3 Vdc ±5% (Other supply voltages are available upon request)
Supply Current:	<5W peak at turn-on, <1.25W stabilized @ 25°C (Temp Range B & D) <5W peak at turn-on, <1.5W stabilized @ 25°C (Temp Range F)
Output Type:	HCMOS, LVHCMOS Sinewave +0 dBm / 50 ohm 10 TTL
Standard Stability Options: Note: Not all stabilities are available with all frequency/output combinations. Please consult factory.	B - 508 = ±5x10-8 over 0°C to +50°C B - 758 = ±7.5x10-8 over 0°C to +50°C *B - ST3 = Stratum 3 over 0°C to +50°C D - 758 = ±7.5x10-8 over-20°C to +70°C D - 107 = ±1.0x10-7 over -20°C to +70°C *D -ST3 = Stratum 3 over -20°C to +70°C F -107 = ±1.0x10-7 over -40°C to +85°C *F -ST3 = Stratum 3 over -40°C to +85°C *F -ST3 = Stratum 3 over -40°C to +85°C *F -507 = ±5.0x10-7 over -40°C to +85°C *STRATUM 3 per GR-1244-CORE Table 3-1 Total Stability: <4.6 x 10-6 for all causes and 10 years vs. Holdover: <3.2 x 10-7 for all causes and 24 hours vs. Temperature: <2.8 x 10-7 peak to peak
Stability vs. Supply:	<5 pb for a 1% change in Supply Voltage
Aging:	A: 1 x 10 ⁻⁸ /day, 2x10 ⁻⁶ /year C: 1 x 10 ⁻⁹ /day, 3x10 ⁻⁷ /year B: 3 x 10 ⁻⁹ /day, 1x10 ⁻⁶ /year N: PTR Stratum 3
Electrical Frequency Adjust:	10 x 10 ⁻⁶ typical range (with Aging A or B) 2 x 10 ⁻⁶ typical range (with Aging C) (with F ; no frequency adjustment)
Initial Accuracy @ +25°C:	±1.5 ppm max after reflow

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Pad Layout

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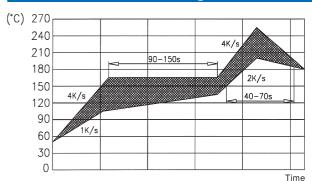
Outline Drawing



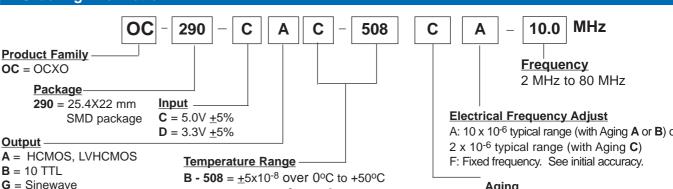
Foot print for PCB Design	
(23.5)	0.14 16 (3.5)
	16 (3.5)
	. 07

Pin Out Information Control voltage VC Reference voltage output VREF Supply voltage VB 4 RF-output Ground, case

Recommended Soldering Profile



Ordering Information



B - 758 = \pm 7.5x10⁻⁸ over 0°C to +50°C

*B - ST3 = Stratum 3 over 0°C to +50°C

D - 758 = $\pm 7.5 \times 10^{-8}$ over-20°C to $\pm 70^{\circ}$ C

D - 107 = $\pm 1.0 \times 10^{-7}$ over -20°C to +70°C

*D -ST3 = Stratum 3 over -20°C to +70°C

 $F - 107 = +1.0 \times 10^{-7} \text{ over } -40 \text{ °C to } +85 \text{ °C}$

*F -ST3 = Stratum 3 over -40°C to +85°C

 $\mathbf{F} - \mathbf{507} = \pm 5.0 \times 10^{-7} \text{ over } -40^{\circ}\text{C to } +85^{\circ}\text{C}$

 $A = 1 \times 10^{-8}/day$, 2 x 10⁻⁶/year

 $\mathbf{B} = 3 \times 10^{-9} / \text{day}, 1 \times 10^{-6} / \text{year}$

 $C = 1 \times 10^{-9} / day, 3 \times 10^{-7} / year$

N = PTR Stratum 3