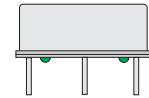


CRYSTAL CONTROLLED OSCILLATORS

5.0V Sinewave OCVCXO



Absolute Maximum Ratings

Table 1.0

Parameter	Units	Minimum	Nominal	Maximum	Units	Note
Storage Temperature		-55	-	125	°C	
Supply Voltage	(Vcc)	-0.5	-	7	Vdc	

Operating Specifications

Table 2.0

Parameter		Minimum	Nominal	Maximum	Units	Note
Center Frequency	(Fo)	3.2	-	40	MHz	
Frequency Calibration (Vc = 2.5Vdc)		-0.1		0.1	ppm	1
Frequency Stability		-50	-	50	ppb	2
Aging: Daily		-2	-	2	ppb/day	
Aging: First Year		-100	-	100	ppb	
Operating Temperature Range		-40	-	85	°C	
Supply Voltage	(Vcc)	4.75	5.00	5.25	Vdc	
Load Stability (+/-5%)		-5.0	-	5.0	ppb	3
Voltage Stability (+/-5%)		-5.0	-	5.0	ppb	4
Power Consumption: Turn On		-	-	4.0	W	5
Power Consumption: Steady-State		-	-	2.2	W	5, 6
Warm Up		-100	-	100	ppb	7
2G Tip-over		-	-	5	ppb/G	

Input Characteristics

Table 3.0

Parameter		Minimum	Nominal	Maximum	Units	Note
Control Voltage (Pin 3)	(Vc)	0.0	2.5	5.0	Vdc	
Deviation @ 25°C referenced to Fo		±0.5	-	-	ppm	8
Input Impedance (Pin 3)		50K	-	-	Ohm	
Deviation Linearity		-10	-	10	%	

Sinewave Output Characteristics

Table 4.0

Parameter		Minimum	Nominal	Maximum	Units	Note
LOAD		45	50	55	Ohms	
Output Power		3.0	-	-	dBm	
Harmonics		-	-	-30	dBc	
Spurious Output				-80	dBc	
Jitter (BW=10Hz to Fo/2)		-	-	2	ps rms	
SSB Phase Noise at 1Hz offset		-	-	-65	dBc/Hz	
SSB Phase Noise at 10Hz offset		-	-	-95	dBc/Hz	
SSB Phase Noise at 100Hz offset		-	-	-120	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-	-145	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-	-155	dBc/Hz	
SSB Phase Noise at 100KHz offset		-	-	-155	dBc/Hz	

Package Characteristics

Table 5.0

Package	Metal package: resistive welded, grounded case.
Soldering Process	RoHS compliant, lead free. See solder profile on page 2.

Notes:

- 1) Initial calibration referenced to Fo @ 25 C, Vc = 2.5Vdc, at time of shipment.
- 2) Frequency vs. temperature stability, referenced to 25 C
- 3) Frequency stability vs. 5% change in load, referenced to 50 ohms.
- 4) Frequency vs. 5% change in supply voltage, referenced to 5.00 Vdc, Vc = 2.5Vdc.
- 5) Vcc = 5.0Vdc.
- 6) Measured @ 25 C.
- 7) Measured @ -40 C, within 5 minutes, referenced one hour after turn-on.
- 8) Positive slope.

OVC5EQ2BB

DESCRIPTION

The Connor-Winfield OVC5EQ2BB is a 5.0V Oven Controlled Crystal Oscillator (OCVCXO) with a Sinewave output. The OVC5EQ2BB is designed for applications requiring low jitter and tight frequency stability.

FEATURES

- OCVCXO
- FREQUENCY STABILITY: ±50ppb
- TEMPERATURE RANGE: -40 to 85°C
- 5.0V OPERATION
- SINEWAVE OUTPUT
- HERMETICALLY SEALED PACKAGE
- RoHS COMPLIANT / LEAD FREE

ORDERING INFORMATION

OVC5EQ2BB - 040.0M

OCXO
SERIES

CENTER
FREQUENCY

Specifications subject to change without notice.



CRYSTAL CONTROLLED OSCILLATORS

ENVIRONMENTAL CHARACTERISTICS

Temperature Cycle: Per MIL-STD-883, Method 1010, Condition B. -55°C to 125°C, 20 cycles, 10 minute dwell, 1 minute transition.

Gross Leak Test: Per MIL-STD-202, Method 112, Condition D. No bubbles in flourinert (FC-43) at 125°C ±5°C for 20 seconds.

SOLDERING

Pin Solderability: Per MIL-STD-883, Method 2003. 8 hour steam age prior to 245°C ±5°C Solder pot dip, 95% Coverage.

Resistance to Solder Heat: Per MIL-STD-202, Method 210, Condition C. Wave: Topside board-mount product, 260°C ±5°C for 20 Seconds.

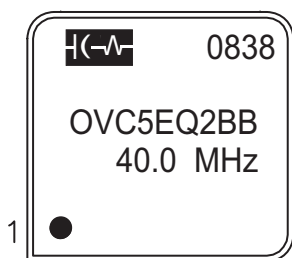
MECHANICAL CHARACTERISTICS

Vibration: Per MIL-STD-202, Method 204, Condition A. 10G's peak, 10Hz to 500Hz, 15minute cycles 12 times each perpendicular axis.

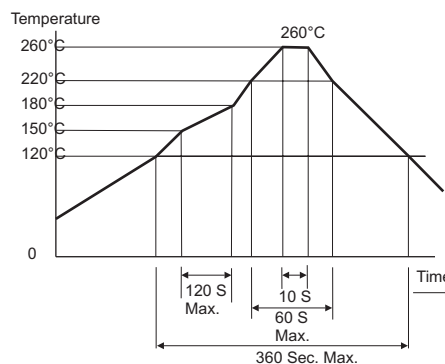
Shock: Per MIL-STD-202, Method 213, Condition D. 500G's, 1ms, halfsine, 3 shocks per direction.

Moisture Resistance: Per MIL-STD-202, Method 106. 95% RH @ 65°C, 10 cycles 10°C to 65°C.

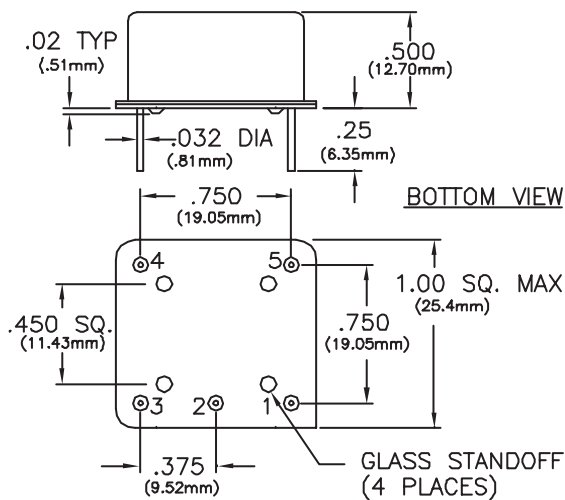
TOP VIEW



Solder Profile



Package Outline

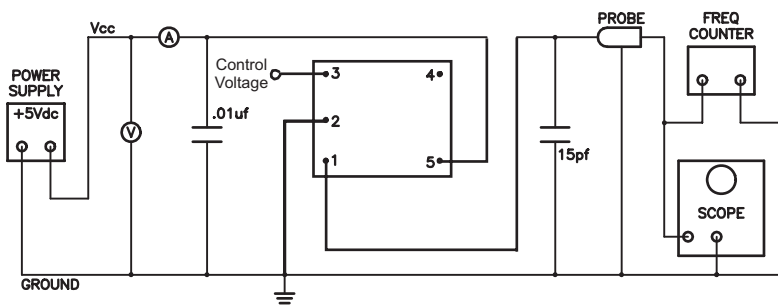


Dimensional Tolerance:
±.005 (.127mm)

Pin Connections

Pin	Connection
1	Output
2	Ground, Case
3	Control Voltage
4	N/C
5	Vcc

Test Circuit



Specifications subject to change without notice.