CONNOR WINFIELD

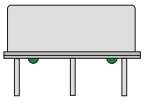
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RoHS COMPLIANT

PRODUCT DATA SHEET

CRYSTAL CONTROLLED OSCILLATORS

5V SINEWAVE OCVCXO





ABSOLUTE MAXIMUM RATINGS — TABLE 1.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Storage Temperature		-55	-	100	°C	
Supply Voltage	(Vcc)	-0.5	-	7.0	Vdc	

OPERATING SPECIFICATIONS — TABLE 2.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Center Frequency	(Fo)		10.23		MHz	
Frequency Calibration (Vc= 2.5 Vdc)		-0.2		0.2	ppm	1
Frequency Stability		-10	-	10	ppb	2
Aging: Daily		-1	-	1	ppb/day	
Aging: First Year		-50	-	50	RMS	
Aging: Short Term (1 second)		-	5.00E-11	-	ppb	3
Operating Temperature Range		-20	-	70	°C	
Supply Voltage	(Vcc)	4.75	5.00	5.25	Vdc	
Voltage Stability (+/-1%)		-1.0	-	1.0	ppb	4
Power Consumption: Turn On		-	-	3.50	W	5
Power Consumption: Steady-State		-	-	1.5	W	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 @ Vc=2.5V		±1.0	-	±3.0	ppm	
Input Impedance (Pin 3)		10K	-	-	Ohm	

SINEWAVE OUTPUT CHARACTERISTICS — TABLE 4.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		45	50	55	ohms	
Output Power		7.0	-	10.0	dBm	
Spurious Output				-100	dBc	
Harmonics		-	-	-30	ðBc	
Jitter (BW=10Hz to Fo/2)		-	-	2	ps rms	
Period Jitter		-	-	2	ps rms	
SSB Phase Noise at 1Hz offset		-	-70	-	dBc/Hz	
SSB Phase Noise at 10Hz offset		-	-100	-	dBc/Hz	
SSB Phase Noise at 100Hz offset		-	-130	-	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-140	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-150	-	dBc/Hz	

PACKAGE CHARACTERISTICS — TABLE 5.0

Package	Metal package: solder sealed, grounded case, solder tinned pins.
Solder Process	See solder profile on page 2.

Notes:

1) Initial calibration @ 25°C, Vc=2.5Vdc at time of shipment.
2) Frequency stability vs. change in temperature stability -20°C to 70°C absolute.
3) Allen Variance: 1 second, 100 average.
4) Frequency vs. change in supply voltage, referenced to 5.00 Vdc.
5) Vcc = 5.0Vdc.
6) Measured @ 25°C.
7) Measured @-20°C, within 5 minutes, referenced one hour after turn-on.

OVC5EE3BA

DESCRIPTION

The Connor-Winfield OVC5EE3BA is a 5V Oven Controlled Voltage Controlled Crystal Oscillator (OCVCXO) with a Sinewave output. The OVC5EE3BA is designed for applications requiring low jitter and tight frequency stability.

FEATURES

VOLTAGE CONTROLLED OCXO

5.0V OPERATION

FREQUENCY STABILITY: 10ppb ABSOLUTE

TEMPERATURE RANGE: -20 to 70°C

SINEWAVE OUTPUT

HERMETICALLY SEALED PACKAGE

RoHS COMPLIANT / LEAD FREE

ORDERING INFORMATION

OVC5EE3BA - 10.230 MHz

OCXO SERIES — CENTER FREQUENCY

Specifications subject to change without notice.

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ENVIRONMENTAL CHARACTERISTICS

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

Gross Leak Test: Per MIL-STD-202, Method 2003, 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 254°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 204D, Condition A. 10G's peak, 10Hz to 500Hz, 15 minute cycles 12 times each perpendicular axis.

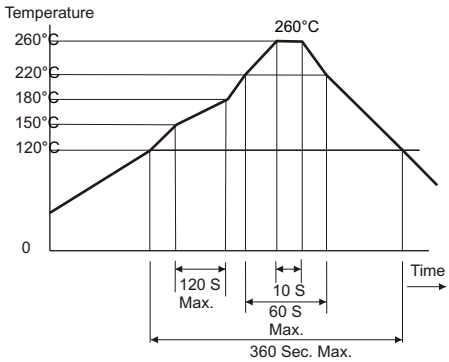
Shock: Per MIL-STD-202, Method 213, Condition D. 500G's, 1ms, half sine, 3 shocks per direction.

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

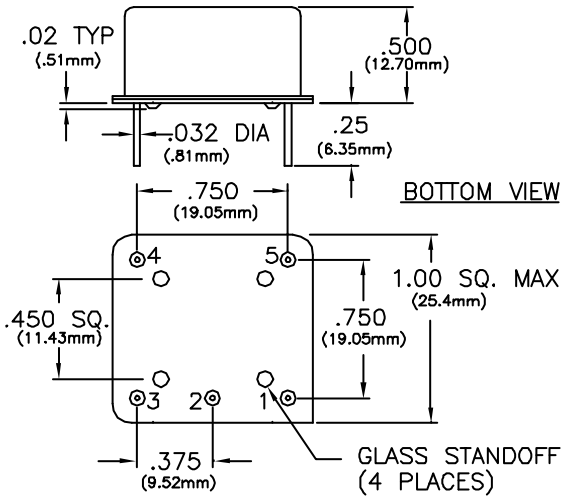
TOP VIEW



Solder Profile



Package Outline



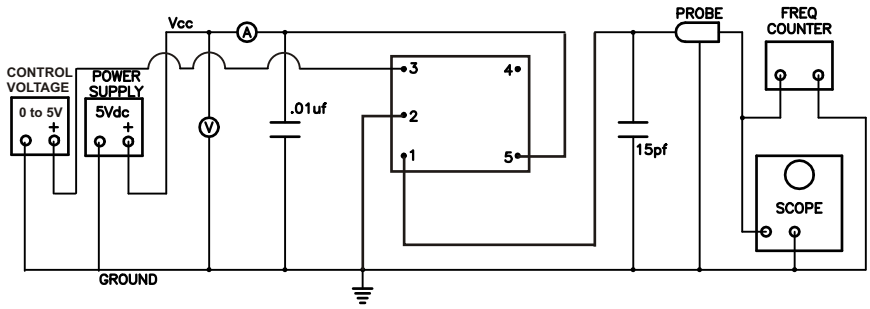
Dimensional Tolerance:
±.005 (.127mm)

Pin Connections

TABLE 6.0

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

Test Circuit



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