CONNOR WINFIELD

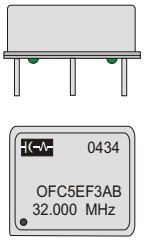
THE CONNOR-WINFIELD CORP.
2111 COMPREHENSIVE DRIVE.
AURORA, IL 60505.
FAX (630) 851-5040.
PHONE (630) 851-4722.
WWW.CONWIN.COM

RoHS COMPLIANT

PRODUCT DATA SHEET

CRYSTAL CONTROLLED OSCILLATORS

STRATUM 3E 5V HCMOS OCXO



OFC5EF3AB

ABSOLUTE MAXIMUM RATINGS

TABLE 1.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Storage Temperature		-55	-	100	°C	
Supply Voltage	(Vcc)	-0.5	-	7	Vdc	

OPERATING SPECIFICATIONS

TABLE 2.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Center Frequency	(Fo)	3.2	-	38.88	MHz	
Frequency Calibration		-0.6		0.6	ppm	1
Frequency Stability		-10	-	10	ppb	2
Aging: Daily		-2	-	2	ppb/day	
Aging: First Year		-100	-	100	ppb	
Aging: Short Term (1Sec.)		-	5.00E-11	-	RMS	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		-	-	3.0	W	5
Power Consumption: Steady-State		-	-	1.5	W	6
Warm Up		-100	-	100	ppb	7
2G Tip-over		-	-	5	ppb/G	

HCMOS OUTPUT CHARACTERISTICS

TABLE 3.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		12	15	18	pF	
Voltage (High)	(Voh)	4.2	-	-	Vdc	
(Low)	(Vol)	-	-	0.4	Vdc	
Duty Cycle at 50% of Vcc		45	50	55	%	
Rise / Fall Time 10% to 90%		-	-	5	nS	
Spurious Output				-100	dBc	
Jitter (BW=10Hz to 20MHz)		-	-	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		-	-	-120	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-	-140	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-	-140	dBc/Hz	
SSB Phase Noise at 100KHz offset		-	-	-140	dBc/Hz	

PACKAGE CHARACTERISTICS

TABLE 4.0

Package	Metal package: resistive welded, grounded case, solder tinned pins.

DESCRIPTION

The Connor-Winfield OFC5EF3AB is a 5V Oven Controlled Crystal Oscillator (OCXO) with HCMOS output. The OFC5EF3AB is designed for 3E applications requiring low jitter and tight frequency stability.

FEATURES

FIXED FREQUENCY

FREQUENCY STABILITY: ±10ppb

TEMPERATURE RANGE: -20 to 70°C

5.0V OPERATION

HCMOS OUTPUT

HERMETICALLY SEALED PACKAGE

RoHS COMPLIANT / LEAD FREE

ORDERING INFORMATION

OFC5EF3AB - 032.0M

OCXO SERIES

CENTER FREQUENCY

Notes:

1) Initial calibration @ 25°C, at time of shipment.
2) Frequency vs. temperature stability, referenced to 25°C
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 10 minutes, referenced one hour after turn-on.

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 112, Condition D. No bubbles in flourinert (FC-43) at 125°C ±5°C for 20 seconds.

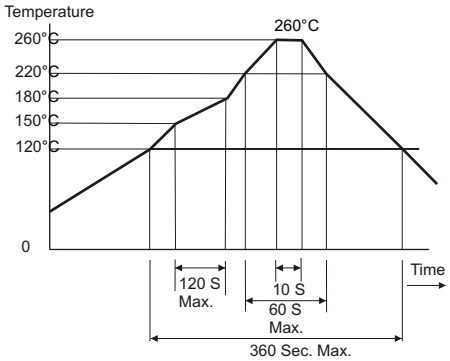
SOLDERING
Pin Solderability: Per MIL-STD-883, Method 2003. 8 hour steam age prior to 245°C ±5°C Solder pot dip, 95% Coverage.
Resistance to Solder Heat: Per MIL-STD-202, Method 210, Condition C. Wave: Topside board-mount product, 260°C ±5°C for 20 Seconds.

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.

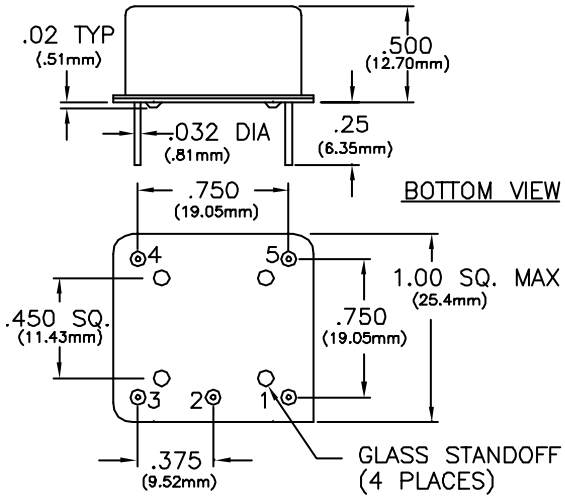
TOP VIEW



Solder Profile



Package Outline

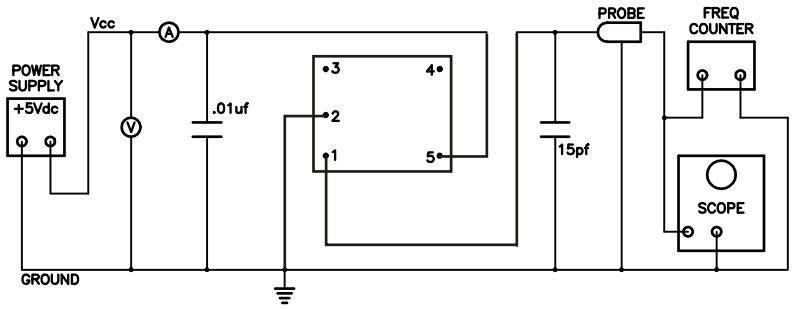


Dimensional Tolerance:
±.005 (.127mm)

Pin Connections

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

Test Circuit



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