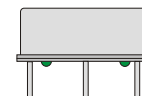


# CRYSTAL CONTROLLED OSCILLATORS

## STRATUM 3E 5V HCMOS OCXO


**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.
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**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.

## OFC5EF3AB

**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

**ORDERING INFORMATION**

OFC5EF3AB - 32.000MHz

OCXO  
SERIES

CENTER  
FREQUENCY

# 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.

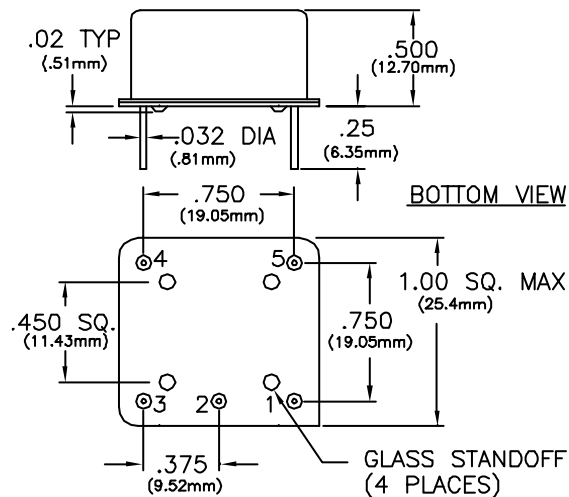
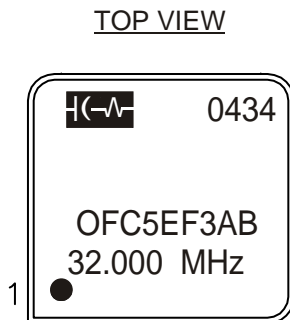
**Resistance to Solder Heat:** Per MIL-STD-202, Method 210, Condition C. Wave: Topside board-mount product, 260°C ±5°C for 20 Seconds.

## MECHANICAL CHARACTERISTICS

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

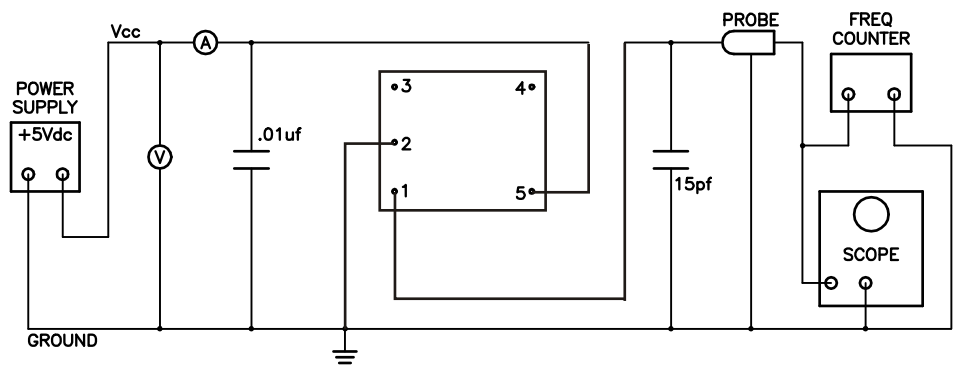
**Shock:** Per MIL-STD-202, Method 213, Condition D. 500G's, 1ms, half sine, 3 shocks per direction.

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



Dimensional Tolerance:  
±.005 (.127mm)

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



Specifications subject to change without notice.