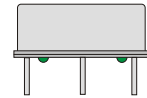


CRYSTAL CONTROLLED OSCILLATORS

5.0V HCMOS STRATUM 3E 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	-	20.0	MHz	
Frequency Calibration		-1.5		1.5	ppm	1
Frequency Stability		-10	-	10	ppb	2
Aging: Daily		-1	-	1	ppb/day	
Aging: First Year		-100	-	100	ppb	
Aging: Ten Years		-400	-	400	ppb	
Aging: Short Term (1Sec.)		-	3.00E-11	-	RMS	3
Operating Temperature Range		0	-	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		-	-	-105	dBc/Hz	
SSB Phase Noise at 100Hz offset		-	-	-130	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-	-145	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-	-150	dBc/Hz	
SSB Phase Noise at 100KHz offset		-	-	-150	dBc/Hz	

PACKAGE CHARACTERISTICS

TABLE 4.0

Package	Metal package: resistive welded, grounded case, solder tinned pins.
Soldering Process	RoHS 5/6 compliant, see solder profile page 2.

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 @ 25°C, within 3 minutes, referenced one hour after turn-on.

OFC5EF1AB

DESCRIPTION

The Connor-Winfield OFC5EF1AB is a 5V Oven Controlled Crystal Oscillator (OCXO) with HCMOS output. The OFC5EF1AB is designed for 3E applications requiring low jitter and tight frequency stability.

FEATURES

- FIXED FREQUENCY
- FREQUENCY STABILITY: ±10ppb
- TEMPERATURE RANGE: 0 to 70°C
- 5.0V OPERATION
- HCMOS OUTPUT
- RoHS 5/6 COMPLIANT

ORDERING INFORMATION

OFC5EF1AB - 20.0M

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.

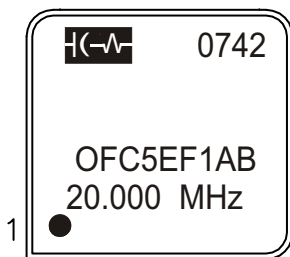
MECHANICAL CHARACTERISTICS

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.

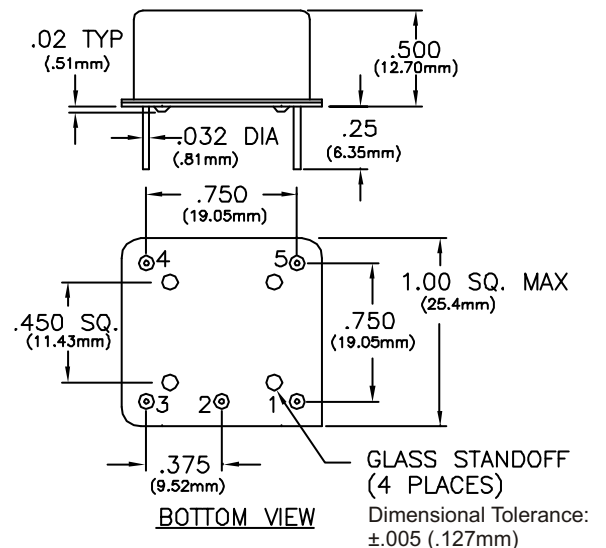
Package Marking



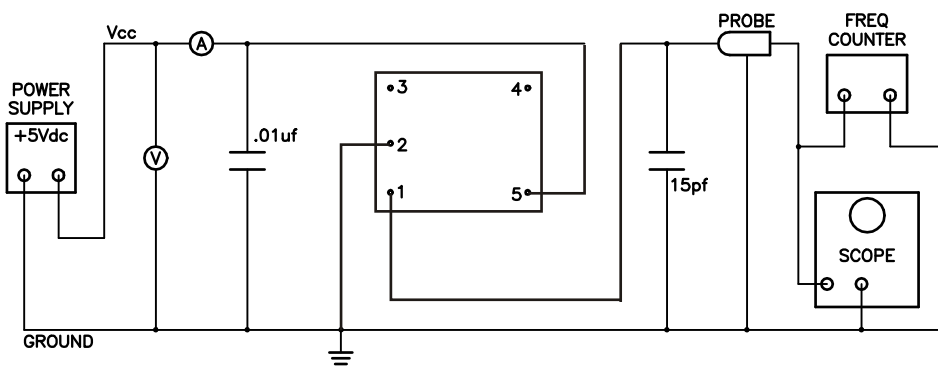
Pin Connections

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

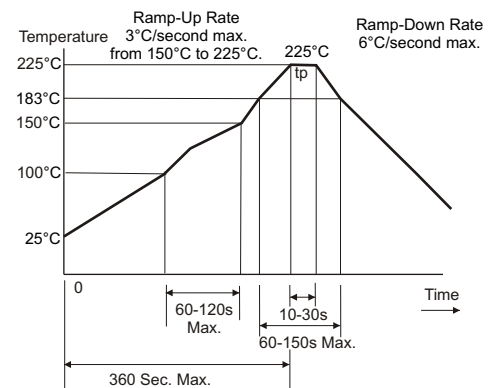
Package Outline



Test Circuit



Solder Profile



Specifications subject to change without notice.