CONNOR WINFIELD

THE CONNOR-WINFIELD CORP.
2111 COMPREHENSIVE DRIVE.
AURORA, IL 60505.
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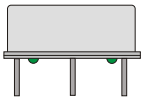
PRODUCT DATA SHEET

CRYSTAL CONTROLLED OSCILLATORS

STRATUM 3E 5V HCMOS OCXO



AIOF5S3E

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	-	25.6	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: Short Term (1Sec.)		-	5.00E-11	-	RMS	3
Operating Temperature Range		-40	-	85	°C	
Supply Voltage	(Vcc)	4.75	5.00	5.25	Vdc	
Voltage Stability (+/-1%)		-2.0	-	2.0	ppb	4
Power Consumption: Turn On		-	-	3.25	W	5
Power Consumption: Steady-State		-	-	1.25	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		-	-	15	pF	8
Voltage (High)	(Voh)	4.2	-	-	Vdc	
(Low)	(Vol)	-	-	0.4	Vdc	
Duty Cycle at 50% of Vcc		40	50	60	%	
Rise / Fall Time 10% to 90%		-	-	5	nS	
Spurious Output				-80	dBc	
Jitter (BW=10Hz to 20MHz)		-	-	3	ps rms	
SSB Phase Noise at 1Hz offset		-	-	-80	dBc/Hz	
SSB Phase Noise at 10Hz offset		-	-	-110	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.

Notes:
1) Initial calibration @ 25°C
2) Frequency vs. temperature stability, referenced to 25°C
3) Allen Variance: 1 second, 100 average.
4) Frequency vs. change in supply voltage
5) Vcc = 5.0Vdc.
6) Measured @ 25°C.
7) Measured @ -40°C, within 10 minutes, referenced one hour after turn-on.
8) Two HCMOS loads

DESCRIPTION

The Connor-Winfield AIOF5S3E is a 5V Oven Controlled Crystal Oscillator (OCXO) with HCMOS output. The AIOF5S3E is designed for Industrial Temperature Range 3E applications requiring low jitter and tight frequency stability.

FEATURES

FIXED FREQUENCY

FREQUENCY STABILITY: ±10ppb

TEMPERATURE RANGE: -40 to 85°C

5.0V OPERATION

HCMOS OUTPUT

ORDERING INFORMATION

AIOF5S3E - 12.800MHz

AIOF5S3E: OCXO SERIES
12.800MHz: CENTER FREQUENCY

Specifications subject to change without notice.

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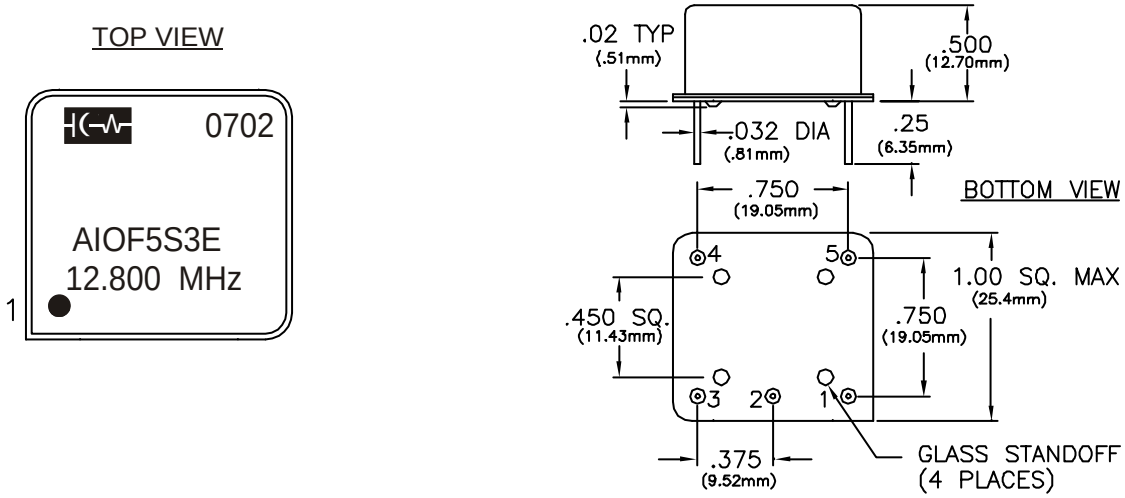
ENVIRONMENTAL CHARACTERISTICS
Temperature Cycle: Per MIL-STD-883, Method 1010, Condition B. -55°C to 125°C, 20 cycles, 10 minute dwell, 1minute transition.
SOLDERING
Pin Solderability: Per MIL-STD-883, Method 200. 8 hour steam age prior to 254°C ±5°C Solder pot dip, 95% Coverage.
MECHANICAL CHARACTERISTICS
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 C. 100G's, 6ms, 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.
Thermal Shock: Per MIL-STD-202, Method 107, Condition A, -55°C to 85°C.



Dimensional Tolerance:
±.005 (.127mm)

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