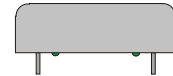
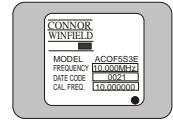


CRYSTAL CONTROLLED OSCILLATORS

STRATUM 3E HCMOS OCXO



ACOF5S3E

DESCRIPTION

The Connor-Winfield ACOF5S3E is a 5V Oven Controlled Crystal Oscillator (OCXO) with an HCMOS output. The ACOF5S3E is designed for Stratum 3E applications requiring low jitter and tight frequency stability.

FEATURES

DESIGNED TO MEET STRATUM 3E REQUIREMENTS

FIXED FREQUENCY

TEMPERATURE STABILITY ± 10 ppb

5.0V OPERATION

HCMOS OUTPUT

ORDERING INFORMATION

ACOF5S3E - 10.00MHz

OCXO
SERIES

CENTER
FREQUENCY

ABSOLUTE MAXIMUM RATINGS

TABLE 1.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Storage Temperature		-40	-	85	°C	
Supply Voltage	(Vcc)	-0.5	-	7	Vdc	

OPERATING SPECIFICATIONS

TABLE 2.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Center Frequency	(Fo)		10.000 12.800		MHz	1
Frequency Calibration		-2		2	ppm	2
Frequency Stability		-10	-	10	ppb	3
Aging: Daily		-1	-	1	ppb/day	4
Aging: First Year		-30	-	30	ppb	
Aging: Short Term (1Sec.)		-	5.00E-11	-	RMS	5
Operating Temperature Range		0	-	70	°C	
Supply Voltage	(Vcc)	4.75	5.00	5.25	Vdc	
Voltage Stability (+/-1%)		-0.5	-	0.5	ppb	6
Load Stability (+/-20%)		-0.5	-	0.5	ppb	7
Power Consumption: Turn On		-	-	2.75	W	8
Power Consumption: Steady-State		-	-	1.50	W	8
Start-Up Time		-	-	500	mS	9
Warm Up		-100	-	100	ppb	10
2G Tip-over		-	5	-	ppb/G	
TDEV at 300 seconds		-	-	5	nS	11
TDEV at 40 seconds		-	-	1	nS	11

HCMOS OUTPUT CHARACTERISTICS

TABLE 3.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		12	15	18	pF	12
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		-	-	-80	dBc	
SSB Phase Noise at 1Hz offset		-	-	-90	dBc/Hz	
SSB Phase Noise at 10Hz offset		-	-	-115	dBc/Hz	
SSB Phase Noise at 100Hz offset		-	-	-130	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-	-135	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-	-140	dBc/Hz	

RESTABILIZATION TIME

TABLE 4.0

Off Time	Restabilization Time	NOTE
< 1 Hour	< 2 Hours	13
< 6 Hours	< 12 Hours	13
< 24 Hours	< 48 Hours	13
1 to 16 Days	48 Hours + ¼ Off Time	13
> 16 Days	< 6 Days	13

PACKAGE CHARACTERISTICS

TABLE 5.0

Package	Metal package; solder sealed, grounded case, solder flnned pins.
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ENVIRONMENTAL CHARACTERISTICS

TABLE 6.0

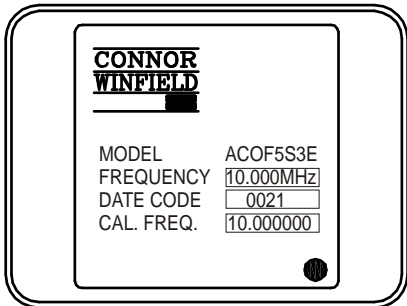
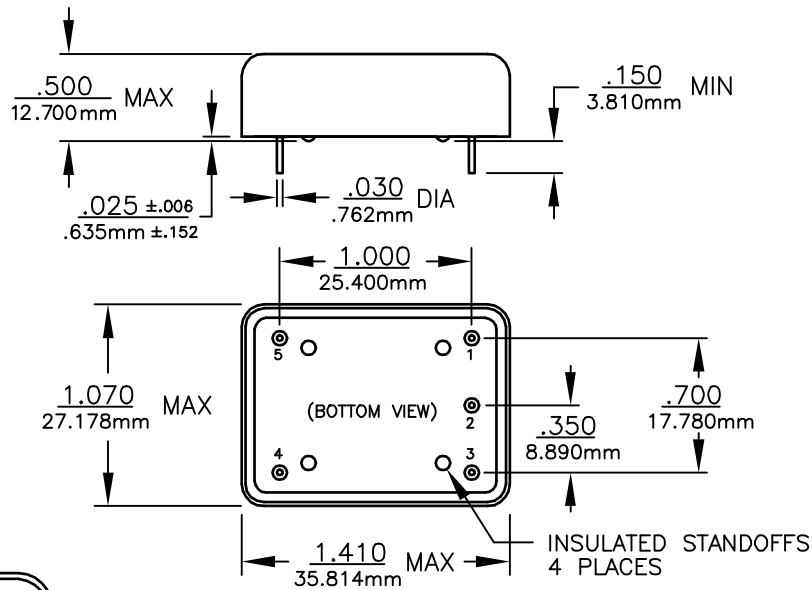
Shock	100G's, 6mS, halfsine per MIL-STD-202F, Method 213B, Test Condition C
Vibration	0.06" D.A. or 10G peak 10 to 500 Hz, per MIL-STD-202F, Method 204D, Test condition A

Notes:

- Labels will include the calibration frequency at the time of ship.
- Initial calibration @ 25 °C
- Frequency vs. temperature stability
- After ten days of continuous operation.
- Allen Variance: 1 second, 100 average.
- Frequency vs. change in supply voltage.
- Frequency vs. change in load.
- Vcc = 5.0Vdc.
- From Vcc=90% of final value. No more than 16 transitions at start-up before oscillator has started.
- Measured @ 0 °C, within 5 minutes, referenced one hour after turn-on.
- At time of delivery.
- HCMOS load.
- For a given off time, the time required to meet daily aging, short-term stability and TDEV requirements.

Specifications subject to change without notice.

CRYSTAL CONTROLLED OSCILLATORS



PIN	CONNECTION
1	NO CONNECT
2	NO CONNECT
3	SUPPLY VOLTAGE
4	RF OUTPUT
5	CIRCUIT AND PACKAGE GROUND

