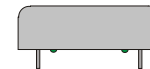
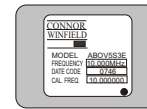


CRYSTAL CONTROLLED OSCILLATORS

STRATUM 3E HCMOS VCOCXO



ABSOLUTE MAXIMUM RATINGS

TABLE 1.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Storage Temperature		-55	-	125	°C	
Supply Voltage	(Vcc)	-0.5	-	7	Vdc	
Input Voltage		-0.5	-	Vcc+0.5	Vdc	

OPERATING SPECIFICATIONS

TABLE 2.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Center Frequency	(Fo)	-	10 or 12.8	-	MHz	1
Frequency Calibration (Vc= 2.5 Vdc)		-0.2	-	0.2	ppm	2
Frequency Stability		-	-	10	ppb	3
Voltage Stability (+/-1%) ref. 5.0 Vdc		-0.5	-	0.5	ppb	
Load Stability (+/-20%) ref. 15 pF		-0.5	-	0.5	ppb	
Aging: Daily		-1	-	1	ppb/day	4
Aging: First Year		-30	-	30	ppb	
Aging: Short Term (1Sec.)		-	5.00E-11	-	RMS	5
Aging: Long Term (20 Years)		-	-	200	ppb	
Operating Temperature Range		-40	-	75	°C	
Supply Voltage	(Vcc)	4.75	5.00	5.25	Vdc	
Power Consumption: Turn On		-	-	3.5	W	6
Power Consumption: Steady-State		-	-	1.8	W	6
Start-Up Time				500	mS	7
Warm Up		-100	-	100	ppb	8
2G Tip-over		-	5	-	ppb/G	
TDEV at 300 seconds		-	-	5	nS	9
TDEV at 40 seconds		-	-	1	nS	9

INPUT CHARACTERISTICS

TABLE 3.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Control Voltage (Pin 1)	Vc	0.5	2.5	4.5	Vdc	
Deviation @ 25°C referenced to Fo		±0.45	-	±1.0	ppm	10
Input Impedance (Pin 1)		50K	-	-	Ohm	

HCMOS OUTPUT CHARACTERISTICS

TABLE 4.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		12	15	18	pF	11
Voltage (High)	(Voh)	Vcc-0.2V	-	-	Vdc	
(Low)	(Vol)	-	-	0.2	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		-	-	-140	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-	-150	dBc/Hz	

RE-STABILIZATION TIME

TABLE 5.0

Off Time	Re-stabilization Time	NOTE
< 1 Hour	< 2 Hours	12
< 6 Hours	< 12 Hours	12
< 24 Hours	< 48 Hours	12
1 to 16 Days	48 Hours + ¼ Off Time	12
> 16 Days	< 6 Days	12

ABOV5S3E

DESCRIPTION

The Connor-Winfield ABOV5S3E is a 5V Voltage Controlled Oven Controlled Crystal Oscillator (VCOCXO) with an HCMOS output. The ABOV5S3E is designed for Stratum 3E applications requiring low jitter and tight frequency stability.

FEATURES

DESIGNED TO MEET STRATUM 3E REQUIREMENTS

VCOCXO

FREQUENCY STABILITY: 10ppb ABSOLUTE

TEMPERATURE RANGE: 0 to 70C

5.0V OPERATION

HCMOS OUTPUT

RoHS 5/6 COMPLIANT

ORDERING INFORMATION

ABOV5S3E - 010.0M

OCXO
SERIES

CENTER
FREQUENCY

Specifications subject to change without notice.

CRYSTAL CONTROLLED OSCILLATORS

PACKAGE CHARACTERISTICS

TABLE 6.0

Package	Metal package: solder sealed, grounded case, solder tinned pins.
Solder Process	RoHS 5/6 compliant, see solder profile below.

ENVIRONMENTAL CHARACTERISTICS

TABLE 7.0

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

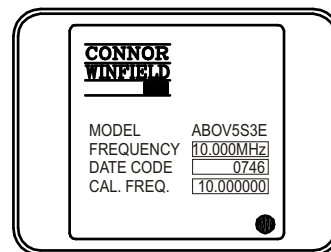
Notes:

- Labels will include the calibration frequency at the time of ship.
- Initial calibration referenced to Fo at time of shipment @ 25°C, Vc=2.5Vdc.
- Frequency vs. temperature stability, absolute change over 0 to 70°C.
- After ten days of continuous operation.
- Allen Variance: 1 second, 100 average.
- 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.
- After re-stabilization time.
- Positive slope.
- HCMOS load.
- For a given off time, the time required to meet daily aging, short-term stability and TDEV requirements.

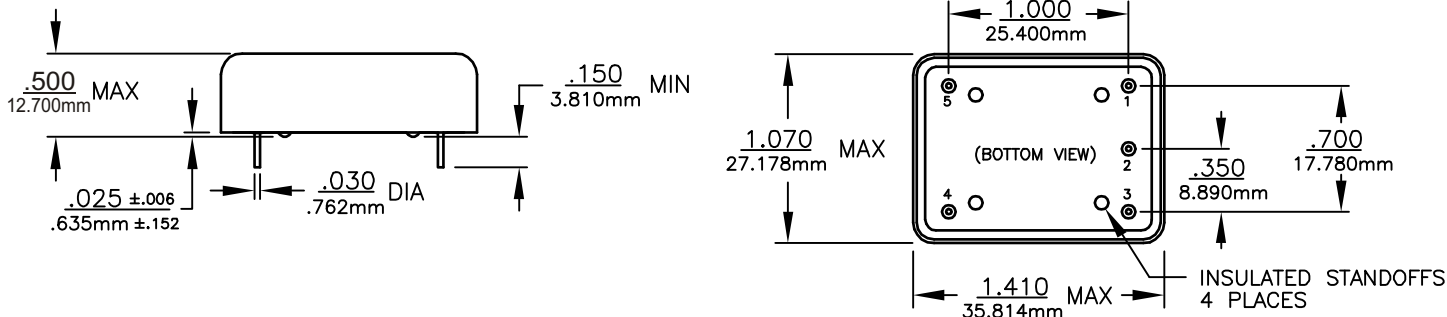
Pin Connections

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

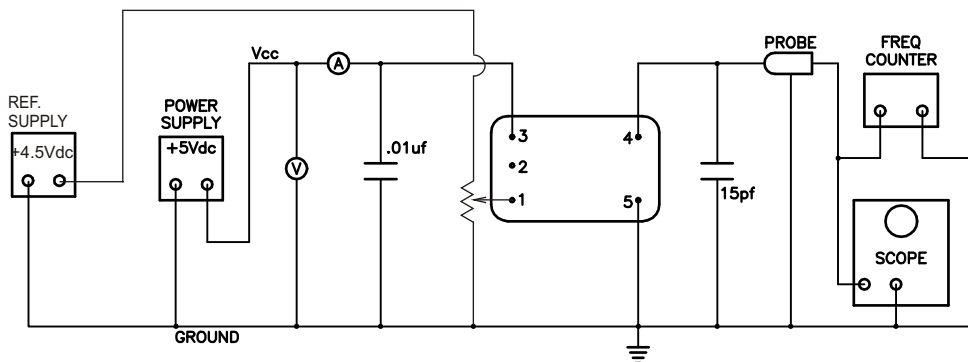
Labeling Diagram



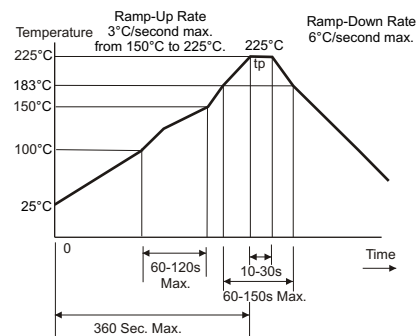
Package Outline



Test Circuit



Solder Profile



Specifications subject to change without notice.