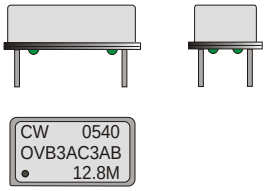
CONNOR WINFIELD
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PRODUCT DATA SHEET

CRYSTAL CONTROLLED OSCILLATORS

14 PIN DIP 3.3V HCMOS OCVCXO



ABSOLUTE MAXIMUM RATINGS

TABLE 1.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Storage Temperature		-40	-	85	°C	
Supply Voltage	(Vcc)	-0.5	-	4.5	Vdc	
Control Voltage	(Vcc)	-0.5	-	4.5	Vdc	

OPERATING SPECIFICATIONS

TABLE 2.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Center Frequency	(Fo)	9.00	-	20.00	MHz	
Frequency Calibration		-0.30	-	0.30	ppm	1
Frequency vs. Change in Temperature		-0.21	-	0.21	ppm	2
Frequency vs. Change in Supply Voltage		-0.05	-	0.05	ppm	3
Frequency vs. Change in Load		-0.02	-	0.02	ppm	4
Frequency Aging Daily		-	-	8	ppb/day	
Frequency Aging per year		-0.5	-	0.5	ppm	
Total Frequency Tolerance		-1.5	-	1.5	ppm	5
Operating Temperature Range		-20	-	70	°C	
Supply Voltage	(Vcc)	3.13	3.30	3.47	Vdc	
Supply Current	(Icc)	-	-	500	mA	
Supply Current Steady State @25°C	(Icc)	-	125	-	mA	
Allan Variance (1 second)		-	5.00E-10	-		
Jitter (10Hz to 10 MHz)		-	-	1	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		-	-125	-	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-140	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-150	-	dBc/Hz	
Start Up Time: Oscillator		-	-	10	mS	
Warm Up Time		-	-	5	Minutes	6
Retrace		-0.3	-	0.3	ppm	7
TDEV @ 1.0 Sec.		-	-	1	nS	
TDEV @ 4.0 Sec.		-	-	2	nS	

INTPUT CHARACTERISTICS

TABLE 3.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Control Voltage Range	(Vc)	0.3	1.5	3.0	Vdc	
Frequency at Vc=0.5 Vdc		-	-4.5	-3	ppm	8
Frequency at Vc=4.5 Vdc		3	4.5	-	ppm	8
Slope of Frequency Adjust		2.2	-	-	ppm/V	
Input Impedance		100k	-	-	Ohm	

HCMOS OUTPUT CHARACTERISTICS

TABLE 4.0

PARAMETER			MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD			12	15	18	pf	
Voltage	(High)	(Voh)	2.60	-	-	Vdc	9
	(Low)	(Vol)	-	-	0.4	Vdc	9
Current	(High)	(Ioh)	-4		-	mA	
	(Low)	(Ioh)	-	-	4	mA	
Duty Cycle at 50% of Vcc			45	50	55	%	
Rise / Fall Time 10% to 90%			-	-	6	nS	

PACKAGE CHARACTERISTICS

TABLE 5.0

Package	14 pin DIP, hermetically sealed, grounded case, welded package

OVB3AC3AB

DESCRIPTION

The Connor-Winfield OVB3AC3AB is a hermetically sealed 14 Pin DIP, 3.3V Oven Controlled Voltage Controlled Crystal Oscillator (OCVCXO) with an HCMOS / TTL compatible output. The OVB3AC3AB is designed for higher stability applications requiring low jitter and tight calibration.

FEATURES

3.3V OPERATION

LOW JITTER <1pS RMS

FREQUENCY STABILITY: ±0.21ppm

TEMPERATURE RANGE: -20 to 70°C

OVERALL FREQUENCY TOLERANCE : ±1.5ppm over Twenty Years.

ORDERING INFORMATION

OVB3AC3AB - 12.8MHz

OCXO SERIES

CENTER FREQUENCY

Specifications subject to change without notice.

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Notes:

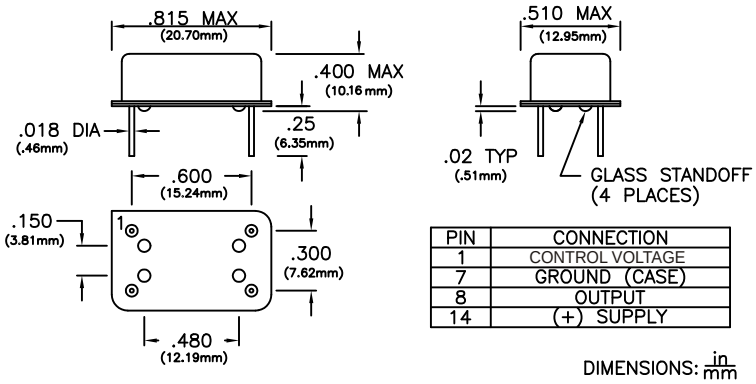
1) Initial calibration @ 25°C, Vc = 1.50V at time of shipment.
2) Frequency vs. temperature stability, -20 to 70°C absolute.
3) Frequency stability per 5% change in supply voltage.
4) Frequency stability per 5% change in load
5) Inclusive of calibration, operating temperature range, supply voltage change, load change, shock and vibration and aging over 20 years.
6) Measured @ 25°C, within 5 minutes, the unit will be within +/-0.5ppm of nominal.
7) 24 hours off then 60 minutes on at a constant temperature and voltage.
8) Referenced to Fo @ 25°C, Positive Transfer Characteristic.
9) Supply voltage at 3.3 Vdc.

ENVIRONMENTAL CHARACTERISTICS
Temperature Cycle: Per MIL-STD-883, Method 1010, Condition B. -55°C to 125°C, 20 cycles,10 minute dwell, 1minute 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 200. 8 hour steam age prior to 254°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, 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.

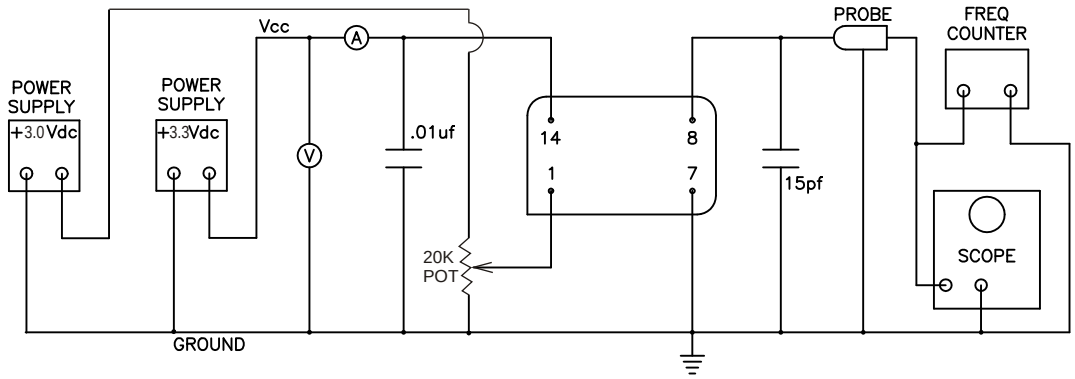
PACKAGE OUTLINE



PIN	CONNECTION
1	CONTROL VOLTAGE
7	GROUND (CASE)
8	OUTPUT
14	(+) SUPPLY

DIMENSIONS: in / mm

TEST DIAGRAM



Specifications subject to change without notice.

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