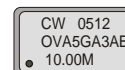
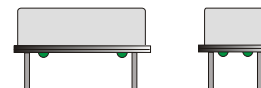


CRYSTAL CONTROLLED OSCILLATORS

14 PIN DIP 5.0V 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	-	7.0	Vdc	

OPERATING SPECIFICATIONS

TABLE 2.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Center Frequency	(Fo)	9.00	-	20.00	MHz	
Frequency Calibration		-1.0	-	1.0	ppm	1
Frequency vs. Change in Temperature		-0.25	-	0.25	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		-	-	20	ppb/day	
Frequency Aging per year		-0.7	-	0.7	ppm	
Total Frequency Tolerance		-4.6	-	4.6	ppm	5
Operating Temperature Range		-20	-	70	°C	
Supply Voltage	(Vcc)	4.75	5.00	5.25	Vdc	
Supply Current	(Icc)	-	-	350	mA	
Supply Current Steady State @25°C	(Icc)	-	180	-	mA	
Allan Variance (1 second)		-	5.00E-10	-		
Jitter (10Hz to 10 MHz)		-	-	1	ps RMS	
SSB Phase Noise at 1Hz offset		-	-60	-	dBc/Hz	
SSB Phase Noise at 10Hz offset		-	-90	-	dBc/Hz	
SSB Phase Noise at 100Hz offset		-	-120	-	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-140	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-150	-	dBc/Hz	
Warm Up Time		-	-	5	Minutes	6
TDEV @ 1.0 Sec.		-	-	1	nS	
TDEV @ 4.0 Sec.		-	-	2	nS	

INPUT CHARACTERISTICS

TABLE 3.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Control Voltage Range	(Vc)	0.5	2.5	4.5	Vdc	
Frequency at Vc=0.5 Vdc		-	-7	-5	ppm	7
Frequency at Vc=4.5 Vdc		5	7	-	ppm	7
Slope of Frequency Adjust		2.5	-	-	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)	4.75	-	-	Vdc	8
(Low)	(Vol)	-	-	0.4	Vdc	8
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

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

OVA5GA3AB

DESCRIPTION

The Connor Winfield OVA5GA3AB is a hermetically sealed 14 Pin DIP, 5.0V Oven Controlled Voltage Controlled Crystal Oscillator (OCVCXO) with a HCMOS / TTL compatible output. The OVA5GA3AB is designed for higher stability applications requiring low jitter and tight calibration.

FEATURES

5.0V OPERATION

HCMOS OUTPUT

LOW JITTER <1PS RMS

FREQUENCY STABILITY:
+/-0.25PPM

TEMPERATURE RANGE:
-20 TO 70°C

OVERALL FREQUENCY TOLERANCE:
+/-4.6 PPM OVER TWENTY YEARS.

14 PIN DIL PACKAGE

ORDERING INFORMATION

OVA5GA3AB - 10.00MHz

OCXO
SERIES

CENTER
FREQUENCY

Specifications subject to change without notice.

CRYSTAL CONTROLLED OSCILLATORS

Notes:

- 1) Initial calibration @ 25°C, Vc = 2.50V at time of shipment.
- 2) Frequency vs. temperature stability, -20 to 70°C, referenced to 25°C.
- 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) Referenced to Fo @ 25°C, Positive Transfer Characteristic.
- 8) Supply voltage at 5.00 Vdc.

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 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.

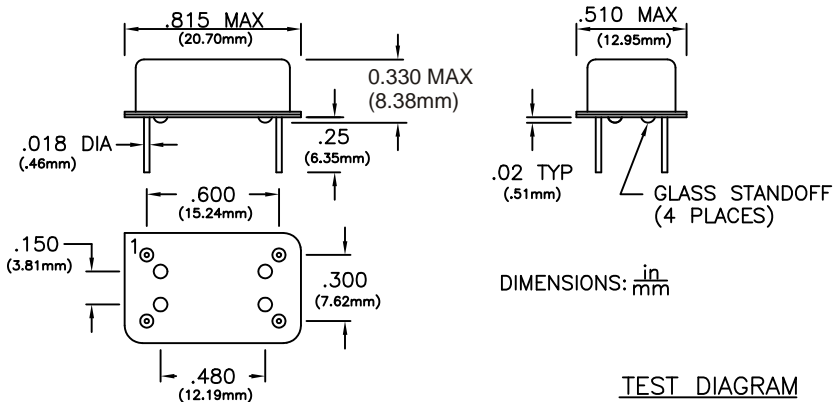
MECHANICAL CHARACTERISTICS

Vibration: Per MIL-STD-202, Method 204, Condition A. 10G's peak, 10Hz to 500Hz, 15 minute cycles 12 times each perpendicular axis.

Shock: Per MIL-STD-202, Method 213, Condition D. 500G's, 1ms, half sine, 3 shocks per direction.

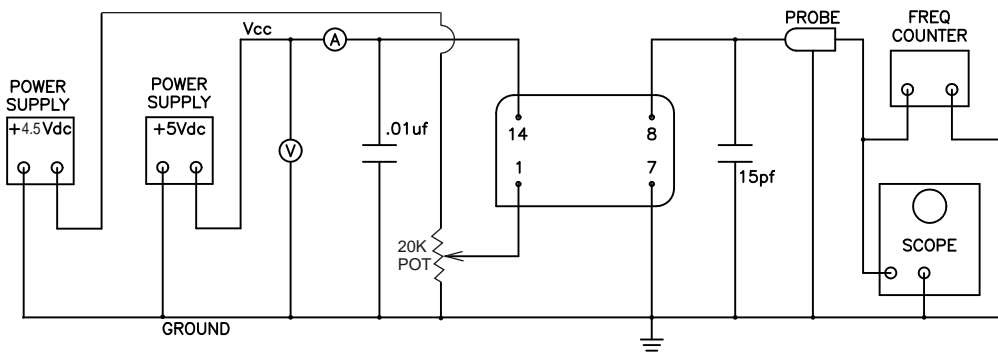
Moisture Resistance: Per MIL-STD-202, Method 106. 95% RH @ 65°C, 10 cycles 10°C to 65°C.

PACKAGE OUTLINE



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

TEST DIAGRAM



Specifications subject to change without notice.