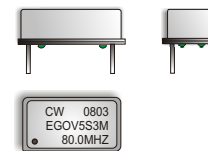


CRYSTAL CONTROLLED OSCILLATORS

14 PIN DIP 5.0V HCMOS STRATUM 3 OCVCXO with OVEN READY MONITOR



EGOVS3M

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	
Control Voltage	(Vc)	-0.5	-	7.0	Vdc	

OPERATING SPECIFICATIONS

TABLE 2.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Center Frequency	(Fo)	40	-	80	MHz	
Frequency Stability		-0.25	-	0.25	ppm	1
Total Frequency Tolerance		-4.6	-	4.6	ppm	2
Operating Temperature Range		0	-	70	°C	
Supply Voltage	(Vcc)	4.75	5.00	5.25	Vdc	
Power Consumption (Vcc = 5.0V)		-	-	2.0	W	
Phase Jitter (BW =12KHz to 20MHz)		-	-	1	pS RMS	
Phase Jitter (BW =10Hz to 20MHz)		-	-	3	pS RMS	
Period Jitter		-	-	3	pS RMS	
SSB Phase Noise at 10Hz offset		-	-75	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-130	-	dBc/Hz	
Start Up Time: Oscillator		-	-	10	mS	
Warm Up Time		-	-	1	Minute	3
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	(Pin 1) (Vc)	0.5	2.5	4.5	Vdc	
Frequency Pullability		+/-18	-	+/-30	ppm	4
Slope of Frequency Adjust		9	-	-	ppm/V	
Input Impedance		100k	-	-	Ohm	
Enable Voltage	(Pin 3) (Vih)	2.0	-	-	Vdc	5
Disable Voltage	(Pin 3) (Vil)	-	-	0.8	Vdc	

HCMOS OUTPUT CHARACTERISTICS

TABLE 4.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		-	-	15	pf	
Voltage	(High) (Voh)	4.0	-	-	Vdc	
	(Low) (Vol)	-	-	0.4	Vdc	
Current	(High) (Ioh)	-4	-	-	mA	
	(Low) (Iol)	-	-	4	mA	
Duty Cycle measured at 1.5V		45	50	55	%	
Rise / Fall Time 10% to 90%		-	-	6	nS	
Oven Ready Monitor voltage when oven is cold, not at operating temperature.	Pin 12	-	-	0.4	Vdc	
Oven Ready Monitor voltage when oven is warm, at operating temperature.	Pin 12	3.0	-	-	Vdc	

PACKAGE CHARACTERISTICS

TABLE 5.0

Package	14 pin DIP, hermetically sealed, grounded case, welded package
Soldering Process	RoHS compliant, lead free. See solder profile on page 2.

DESCRIPTION

The Connor-Winfield EGOV5S3M is a hermetically sealed 14 Pin DIP 5.0V Oven Controlled, Voltage Controlled Crystal Oscillator (OCVCXO) with a Tri-State HCMOS output. The EGOV5S3M features an Oven Ready Monitor and is designed for Stratum 3 applications requiring low jitter and tight frequency stability.

FEATURES

- 5.0V OPERATION
- FREQUENCY ADJUST
- TRI-STATE ENABLE / DISABLE FUNCTION
- LOW JITTER <1pS RMS
- FREQUENCY STABILITY: ±0.25ppm
- FREQUENCY TOLERANCE: ±4.6ppm
- TEMPERATURE RANGE: 0 to 70°C
- OVEN READY MONITOR
- HERMETICALLY SEALED PACKAGE
- RoHS COMPLIANT / LEAD FREE

ORDERING INFORMATION

EGOVS3M - 080.0M

OCXO
SERIES

CENTER
FREQUENCY

Specifications subject to change without notice.

CRYSTAL CONTROLLED OSCILLATORS

Notes:

- 1) Frequency vs. temperature stability, Vc = 2.50V.
- 2) Inclusive of calibration, operating temperature range, supply voltage change, load change, shock and vibration, 10 years aging, Vc = 2.50V.
- 3) After one minute of operation at 25°C, the unit will be within +/-0.5ppm of its final stabilized frequency. The final stabilized frequency is that which is measured after 30 minutes of continuous operation at a stable 25°C ambient temperature.
- 4) Referenced to Fo @ 25°C, Positive Transfer Characteristic
- 5) Oscillator output is enabled with no connection on pin 3.

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.

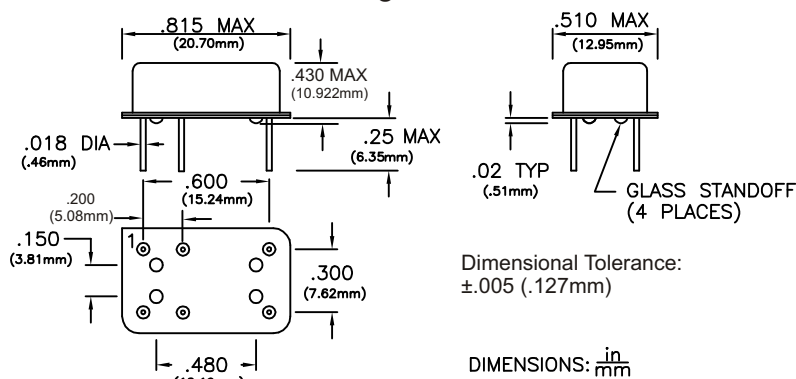
MECHANICAL CHARACTERISTICS

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

Shock: Per MIL-STD-202, Method 213, Condition D. 500G's, 1ms, halfsine, 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

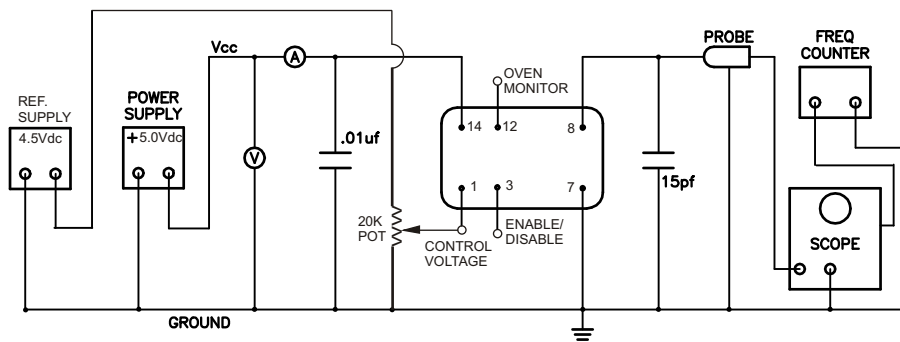


Pin Connections

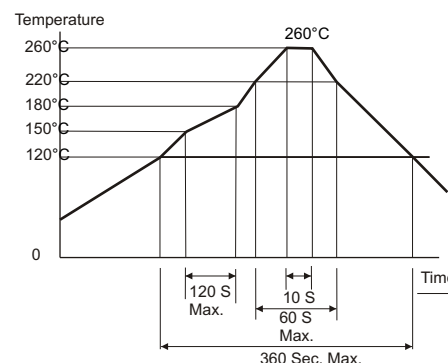
TABLE 6.0

Pin	Connection
1	Control Voltage
3	Enable / Disable
7	Ground (Case)
8	Output
12	Oven Monitor
14	Vcc

Test Circuit



Solder Profile



Specifications subject to change without notice.