CONNOR WINFIELD

THE CONNOR-WINFIELD CORP.
2111 COMPREHENSIVE DRIVE.
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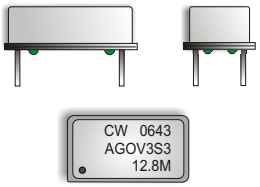
PRODUCT DATA SHEET

RoHS-5/6 COMPLIANT

CRYSTAL CONTROLLED OSCILLATORS

14 PIN DIP 3.3V LVMOS STRATUM 3 OCVCXO



AGOV3S3

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	(Vc)	-0.5	-	4.5	Vdc	

OPERATING SPECIFICATIONS

TABLE 2.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Center Frequency	(Fo)	1.544	-	20.0	MHz	
Frequency Calibration, Vc=1.48 Vdc		-1.5		1.5	ppm	1
Frequency Stability		-0.25	-	0.25	ppm	2
Aging (Daily)		-30	-	30	ppb	3
Aging (20 Years)		-2.5	-	2.5	ppm	
Total Frequency Tolerance		-4.6	-	4.6	ppm	4
Operating Temperature Range		0	-	70	°C	
Supply Voltage	(Vcc)	3.135	3.3	3.465	Vdc	
Supply Current	(Icc)	-	-	450	mA	
Phase Jitter (BW=12KHz to 20MHz)		-	-	1	ps rms	
Phase Jitter (BW=10Hz to 20MHz)		-	-	3	ps rms	
Period Jitter		-	-	5	ps rms	
SSB Phase Noise at 10Hz offset		-	-90	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-135	-	dBc/Hz	
Start Up Time: Oscillator		-	-	10	mS	
Warm Up Time		-	-	5	Minutes	5
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)	0.3	1.48	3.0	Vdc	
Frequency at Vc=0.3 Vdc		-22.5	-	-13.5	ppm	6
Frequency at Vc=3.0 Vdc		13.5	-	22.5	ppm	6
Slope of Frequency Adjust		5	-	-	ppm/V	
Input Impedance		100k	-	-	Ohm	

LVMOS OUTPUT CHARACTERISTICS

TABLE 4.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		-	-	15	pf	
Voltage (High)	(Voh)	2.6	-	-	Vdc	
(Low)	(Vol)	-	-	0.4	Vdc	
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

Notes:

1) Initial calibration @ 25 C, Vc=1.48 Vdc.
2) Frequency vs. temperature stability
3) At the time of shipment after48 hours of operation.
4) Inclusive of calibration, operating temperature range, supply voltage change, load change, shock and vibration, 20 years aging, Vc=1.48 Vdc.
5) Measured @ 25 C, within 5 minutes, the unit will be within +/-0.1ppm of its reference frequency, measured after 30 minutes of continuous operation at a stable 25 C
6) Referenced to Fo @ 25 C, positive transfer characteristic.

DESCRIPTION

The Connor-Winfield AGOV3S3 is a hermetically sealed 14 Pin DIP 3.3V Oven Controlled Voltage controlled Crystal Oscillator (OCVCXO) with an LVMOS output. The AGOV3S3 is designed for Stratum 3 applications requiring low jitter and tight frequency stability.

FEATURES

3.3V OPERATION

VOLTAGE CONTROLLED FREQUENCY ADJUST

LOW JITTER <1pS RMS

FREQUENCY STABILITY ±0.25ppm

OVERALL FREQUENCY TOLERANCE: ±4.6ppm OVER TWENTY YEARS

TEMPERATURE RANGE: 0 to 70°C

HERMETICALLY SEALED 14 PIN PACKAGE

RoHS 5/6 COMPLIANT

ORDERING INFORMATION

AGOV3S3 - 12.800MHz

OCXO SERIES

CENTER FREQUENCY

Specifications subject to change without notice.

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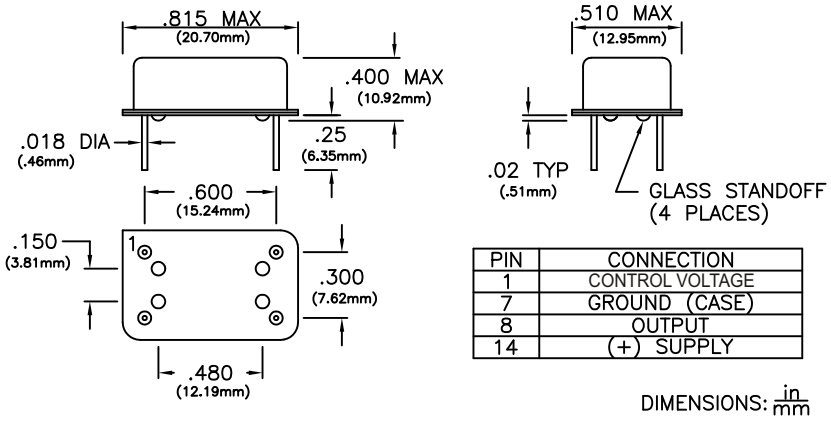
CRYSTAL CONTROLLED OSCILLATORS

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, halfsine, 3 shocks per direction.
Moisture Resistance: Per MIL-STD-202, Method 106. 95% RH @ 65°C, 10 cycles 10°C to 65°C.

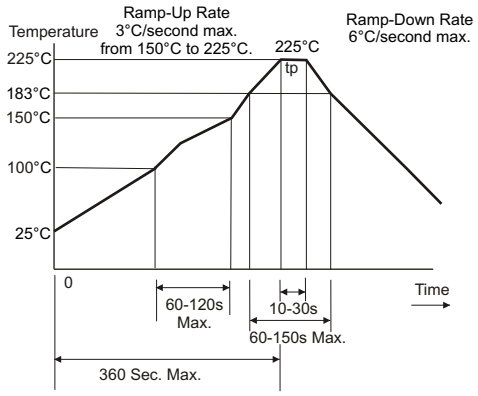
PACKAGE OUTLINE



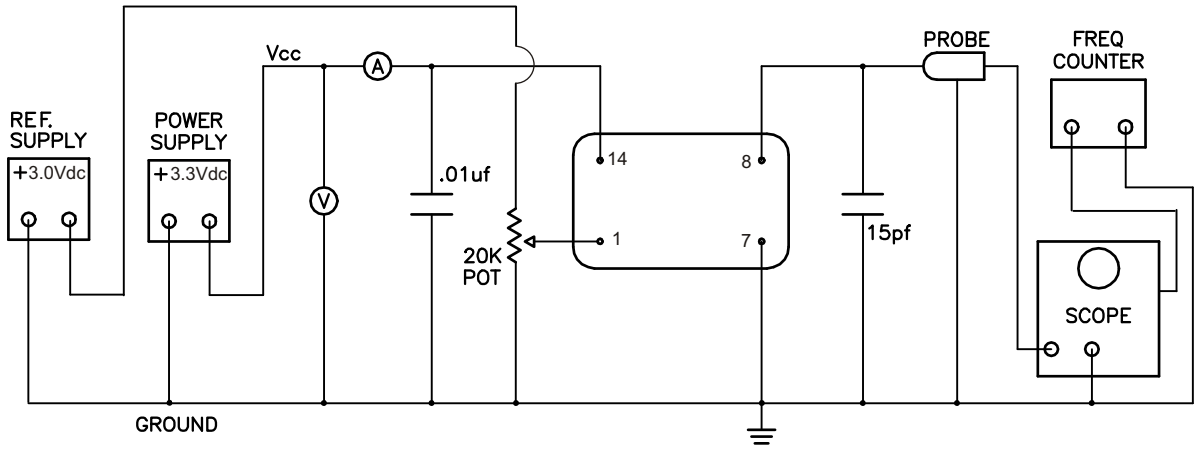
PIN	CONNECTION
1	CONTROL VOLTAGE
7	GROUND (CASE)
8	OUTPUT
14	(+) SUPPLY

DIMENSIONS: in / mm

SOLDER PROFILE



TEST DIAGRAM



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