CONNOR WINFIELD

THE CONNOR-WINFIELD CORP.
2111 COMPREHENSIVE DRIVE.
AURORA, IL 60505.
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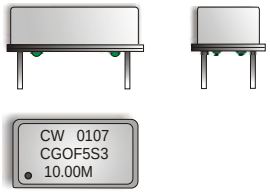
PRODUCT DATA SHEET

CRYSTAL CONTROLLED OSCILLATORS

14 PIN DIP 5.0V STRATUM 3 HCMOS OCXO



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)		10.00		MHz	
Frequency Calibration		-0.5		0.5	ppm	1
Frequency Stability		-0.1	-	0.1	ppm	2
Frequency Aging Daily		-	-	20	ppb/day	
Frequency Aging Lifetime (20 Years)		-	-	3.0	ppm	
Total Frequency Tolerance		-4.6	-	4.6	ppm	3
Operating Temperature Range		-20	-	70	°C	
Supply Voltage	(Vcc)	4.75	5.00	5.25	Vdc	
Supply Current	(Icc)	-	-	300	mA	
Supply Current Steady State @25°C	(Icc)	-	65	-	mA	
Jitter (BW=10Hz to 20MHz)		-	-	3	ps rms	
Allan Variance (1 second)		-	5.00E-10	-		
SSB Phase Noise at 10Hz offset		-	-90	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-145	-	dBc/Hz	
Start Up Time: Oscillator		-	-	10	mS	
Warm Up Time		-	-	5	Minutes	4
TDEV @ 1.0 Sec.		-	-	1	nS	
TDEV @ 4.0 Sec.		-	-	2	nS	

HCMOS OUTPUT CHARACTERISTICS — TABLE 3.0

PARAMETER			MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD			-	-	15	pf	
Voltage	(High)	(Voh)	4.5	-	-	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 4.0

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

Notes:

1) Initial calibration @ 25°C at time of shipment.
2) Frequency vs. temperature stability
3) Inclusive of calibration, operating temperature range, supply voltage change, load change, shock and vibration and aging over 20 years.
4) 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

CGOF5S3

DESCRIPTION

The Connor-Winfield CGOF5S3 is a hermetically sealed 14 Pin DIP, 5.0V Oven Controlled Crystal Oscillator (OCXO) HCMOS / TTL Compatible. The CGOF5S3 is designed for higher stability Stratum 3 applications requiring low jitter and tight calibration.

FEATURES

5.0V OPERATION

LOW JITTER <3pS RMS

TEMPERATURE STABILITY ±0.1ppm

OVERALL FREQUENCY TOLERANCE : ±4.6ppm over Twenty Years.

OVERALL AGING: ±3.0ppm over Twenty Years

ORDERING INFORMATION

CGOF5S3 - 10.00MHz

CGOF5S3 — OCXO SERIES

10.00MHz — CENTER FREQUENCY

Specifications subject to change without notice.

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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.

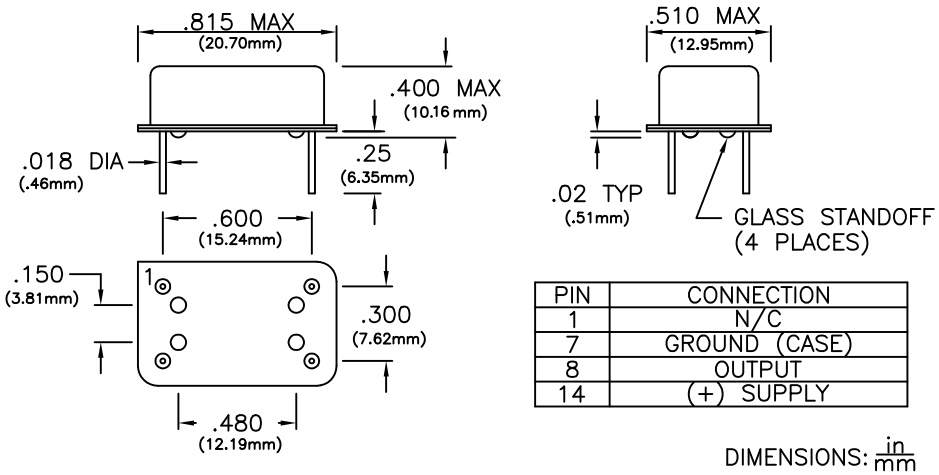
SOLDERING

Pin Solderability: Per MIL-STD-883, Method 200. 38 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	N/C
7	GROUND (CASE)
8	OUTPUT
14	(+) SUPPLY

DIMENSIONS: in / mm

TEST DIAGRAM