CONNOR WINFIELD

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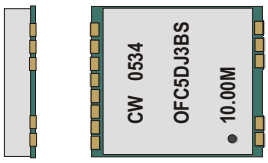
PRODUCT DATA SHEET

RoHS-5/6 COMPLIANT

CRYSTAL CONTROLLED OSCILLATORS

SURFACE MOUNT 5.0V OCXO with SINEWAVE OUTPUT



OFC5DJ3BS

ABSOLUTE MAXIMUM RATINGS

TABLE 1.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Storage Temperature		-40	-	85	°C	
Supply Voltage	(Vcc)	-0.5	-	7	Vdc	

OPERATING SPECIFICATIONS

TABLE 2.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Center Frequency	(Fo)	10	-	20	MHz	1
Standard Frequencies Available:		10 MHZ, 13 MHz, 15 MHZ, or 20 MHz				
Frequency Calibration		-0.2		0.2	ppm	2
Frequency vs. Temperature Stability		-20	-	20	ppb	3
Frequency vs. Voltage Stability (+/-5%)		-2	-	2	ppb	
Frequency vs. Load Stability (+/-5%)		-2	-	2	ppb	
Aging: Daily		-1	-	1	ppb/day	4
Aging: First Year		-50	-	50	ppb	
Aging: Long Term (20 Years)		-250	-	250	ppb	
Total Frequency Tolerance (20 years)		-500	-	500	ppb	5
Allen Variance: 1 second, 100 average.		-	1.00E-10	-	RMS	
Operating Temperature Range		-20	-	70	°C	
Supply Voltage	(Vcc)	4.75	5.00	5.25	Vdc	
Power Consumption: Turn On		-	-	3.75	W	6
Power Consumption: Steady-State		-	-	1. 5	W	6
Start-Up Time				500	mS	7
Warm Up		-100	-	100	ppb	8

SINEWAVE OUTPUT CHARACTERISTICS

TABLE 3.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		45	50	55	Ohms	
Output Power		0	3	-	dBm	
Spurious Output				-80	dBc	
SSB Phase Noise at 1Hz offset		-	-85	-	dBc/Hz	
SSB Phase Noise at 10Hz offset		-	-110	-	dBc/Hz	
SSB Phase Noise at 100Hz offset		-	-135	-	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-150	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-155	-	dBc/Hz	

RESTABILIZATION TIME

TABLE 4.0

Off Time	Restabilization Time	NOTE
< 1 Hour	< 2 Hours	9
< 6 Hours	< 12 Hours	9
< 24 Hours	< 48 Hours	9
1 to 16 Days	48 Hours + ¼ Off Time	9
> 16 Days	< 6 Days	9

PACKAGE CHARACTERISTICS

TABLE 5.0

Package	Non-hermetic package consisting of an FR4 substrate with grounded metal cover.

ENVIRONMNETAL CHARACTERISTICS

TABLE 6.0

Shock	100G's, 6mS, halfsine per MIL-STD-202F, Method 213B, Test Condition C
Vibration	0.06" D.A. or 10G peak 10 to 500 Hz, per MIL-STD-202F, Method 204D, Test condition A

PROCESS RECOMMENDATIONS

TABLE 7.0

Solder Reflow	The component solder used internal to this device has a melting point of 221 C. The peak temperature inside the device should be less than or equal to 220 C for a maximum of 10 seconds
Wash	Ultrasonic cleaning is not recommended.

DESCRIPTION

The Connor-Winfield OFC5DJ3BS is a 5V Surface Mount Oven Controlled Crystal Oscillator (OCXO) with a Sinewave output. The OFC5J3BS is designed for Wireless applications requiring low Phase Noise and tight frequency stability.

FEATURES

FIXED FREQUENCY OCXO

FREQUENCY STABILITY: ±20ppb

TEMERATURE RANGE: -20 to 70°C

5.0V OPERATION

SINEWAVE OUTPUT

LOW PHASE NOISE

SURFACE MOUNT PACKAGE

TAPE AND REEL PACKAGING

ORDERING INFORMATION

OFC5DJ3BS - 10.00MHz

OCXO SERIES

CENTER FREQUENCY

Specifications subject to change without notice.

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Notes:

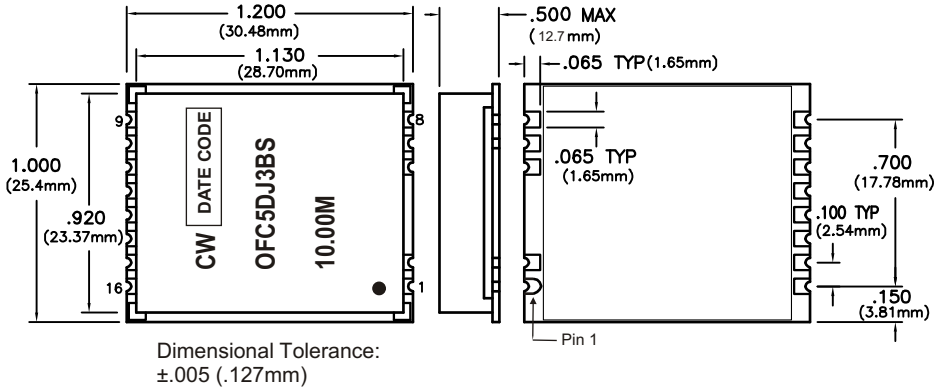
1) Labels will include the calibration frequency at the time of ship.
2) Initial calibration @ 25 C at the time of shipment.
3) Overall frequency stability referenced to measurement at 25 C.
4) After ten days of continuous operation.
5) Inclusive of calibration, frequency stability vs. change in temperature, supply voltage change, load change, hock and vibration, 20 years aging.
6) Vcc = 5.0Vdc.
7) From Vcc=90% of final value. No more than 16 transitions at start-up before oscillator has started.
8) Measured @ 0 C, within 5 minutes, referenced one hour after turn-on.
9) For a given off time, the time required to meet daily aging, short-term stability.

PIN CONNECTIONS

TABLE 8.0

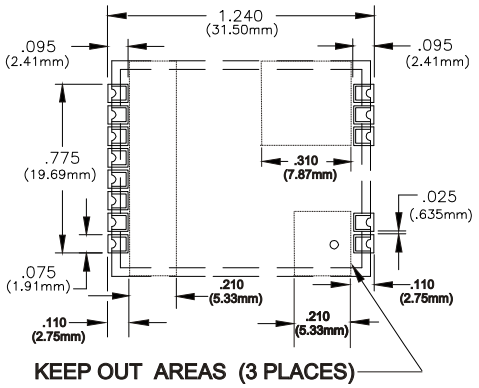
Pin	Function
1	N/C
2	Ground
6	N/C
7	Ground
8	Vcc
9	Vcc
10	Ground
11	Ground
12	N/C
13	Ground
14	Output
15	Ground
16	N/C

PACKAGE LAYOUT

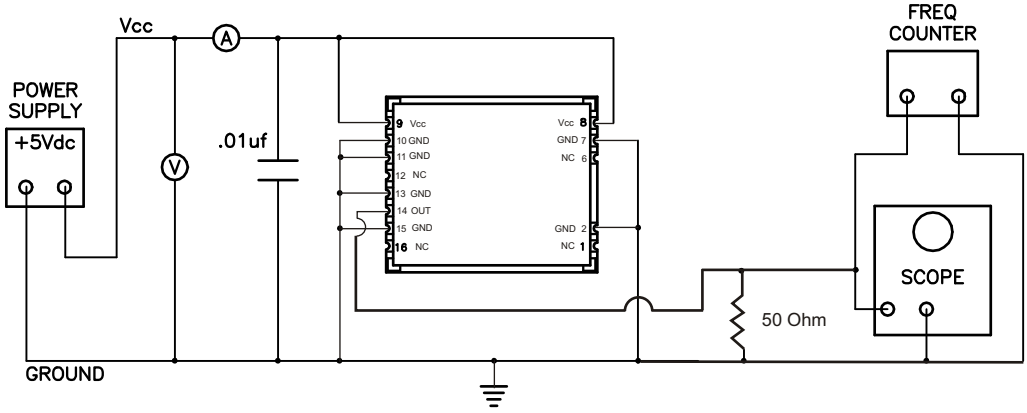


Dimensional Tolerance:
±.005 (.127mm)

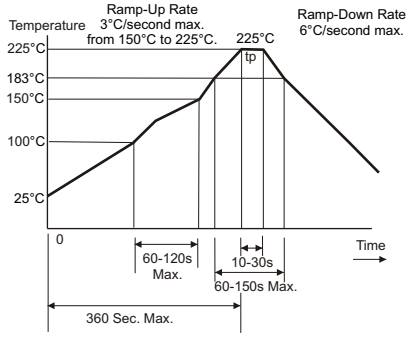
SUGGESTED PAD LAYOUT (TOP VIEW)



TEST CIRCUIT



SOLDER PROFILE



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