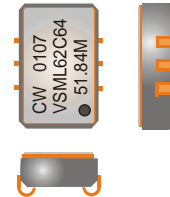


CRYSTAL CONTROLLED OSCILLATORS

6 PIN SURFACE MOUNT 3.3V VCXO



VSML62C64

DESCRIPTION

The Connor-Winfield VSML62C64 is a surface mount 3.3V Voltage Controlled Crystal Oscillator (VCXO) with HCMOS/TTL Compatible output. Based on a fundamental design the VSML62C64 is designed for phased lock loop applications requiring low jitter and tight stability.

FEATURES

- 3.3V OPERATION
- LOW JITTER <1ps RMS
- TOTAL FREQUENCY TOLERANCE: ±50ppm
- TEMPERATURE RANGE: -40 to 85°C
- HCMOS/TTL COMPATIBLE OUTPUT
- TRI-STATE ENABLE/DISABLE FUNCTION
- J LEAD SURFACE MOUNT PACKAGE
- TAPE AND REEL PACKAGING

ORDERING INFORMATION

VSML62C64 - 51.84 MHz

VCXO
SERIES

CENTER
FREQUENCY

Specifications subject to change without notice.

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ABSOLUTE MAXIMUM RATINGS

TABLE 1.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Storage Temperature		-55	-	125	°C	
Supply Voltage	(Vcc)	-0.5	-	7	Vdc	
Control Voltage	(Vc)	-0.5	-	7	Vdc	

OPERATING SPECIFICATIONS

TABLE 2.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Range	(Fo)	2.0	-	55.0	MHz	
Total Frequency Tolerance (Vc=1.65V)		-50	-	50	ppm	1
Operating Temperature Range		-40	-	85	°C	
Supply Voltage	(Vcc)	3.15	3.30	3.45	Vdc	
Supply Current	(Icc)	-	-	30	mA	
Jitter (BW=10Hz to 20MHz)		-	-	5	ps rms	
Jitter (BW=12kHz to 20MHz)		-	-	1	ps rms	
SSB Phase Noise at 10Hz offset		-	-65	-	dBc/Hz	
SSB Phase Noise at 100Hz offset		-	-80	-	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-100	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-130	-	dBc/Hz	
SSB Phase Noise at 100KHz offset		-	-140	-	dBc/Hz	

INPUT CHARACTERISTICS

TABLE 3.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Control Voltage Range	(Vc)	0.3	1.65	3.0	Vdc	
Frequency Pullability @ 25°C.		+/-100	-	+/-150	ppm	
Absolute Pull Range (APR)		+/-50	-	-	ppm	2
Monotonic Linearity		-10	-	10	%	
Input Impedance		-	50K	-	Ohm	
Modulation Bandwidth (3dB)		10	-	-	KHz	
Enable Voltage (High)	(Vih)	2.0	-	-	Vdc	3
Disable Voltage (Low)	(Vil)	-	-	0.8	Vdc	3

HCMOS OUTPUT CHARACTERISTICS

TABLE 4.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		-	-	30	pF	
Voltage (High)	(Voh)	Vcc-0.5V	-	-	Vdc	
(Low)	(Vol)	-	-	0.4	Vdc	
Current (High)	(Ioh)	-16	-	-	mA	
(Low)	(Iol)	-	-	16	mA	
Duty Cycle at 50% of Vcc		45	50	55	%	
Rise / Fall Time 10% to 90%		-	-	3	nS	

PACKAGE CHARACTERISTICS

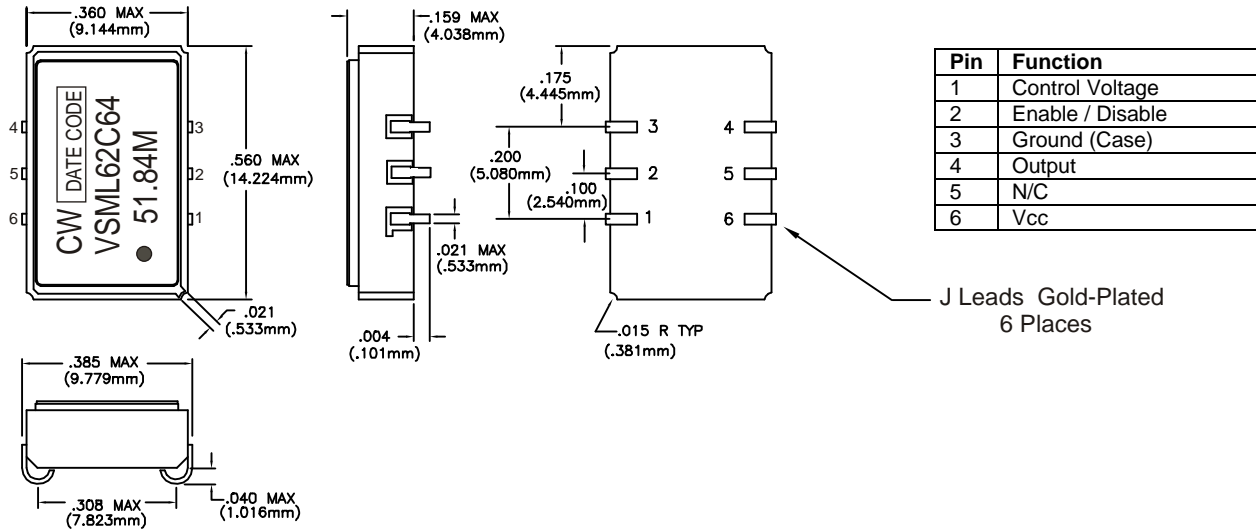
TABLE 5.0

Package	Hermetically sealed, ceramic package with gold plated J-leads.
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Note:

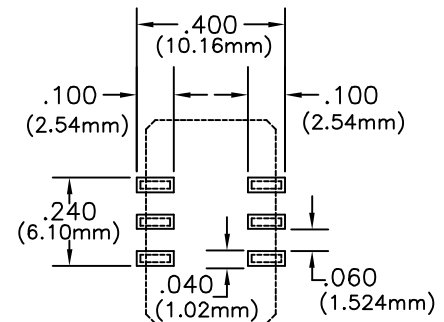
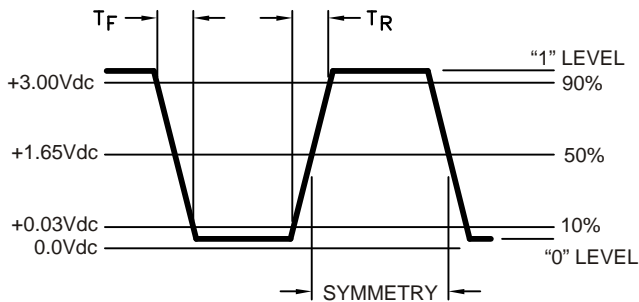
- 1) Inclusive of frequency calibration, frequency vs. temperature stability, supply voltage change, load change, shock and vibration, and aging for 10 years.
- 2) Absolute pull range (APR) is the minimum guaranteed pull range of the VCXO under all conditions over lifetime operation. The APR is referenced to Fo. Positive Slope
- 3) Output is enabled with no connection pad 2.

CRYSTAL CONTROLLED OSCILLATORS

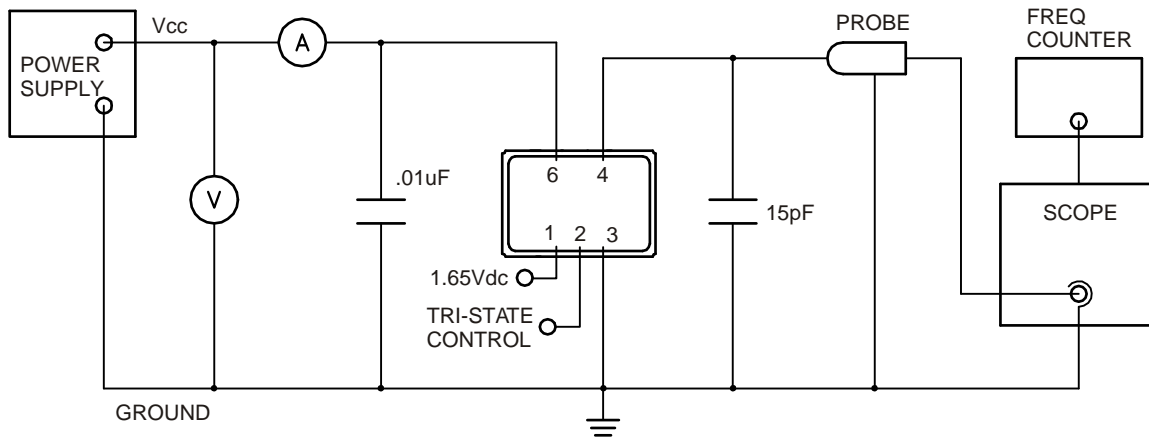


SUGGESTED PAD LAYOUT

OUTPUT WAVEFORM



TEST CIRCUIT



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