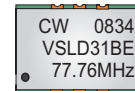


CRYSTAL CONTROLLED OSCILLATORS

SURFACE MOUNT 3.3V LVCMOS VCXO



VSLD31BE

ABSOLUTE MAXIMUM RATINGS

TABLE 1.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Storage Temperature		-55	-	125	°C	
Supply Voltage	(Vcc)	-0.5	-	4.6	Vdc	
Input Voltage		-0.5	-	Vcc+0.5	Vdc	

OPERATING SPECIFICATIONS

TABLE 2.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Center Frequency	(Fo)	2.0	-	80.0	MHz	
Frequency Stability		-25	-	25	ppm	1
Aging (10 years)		-10	-	10	ppm	
Operating Temperature Range		0	-	85	°C	
Supply Voltage	(Vcc)	3.135	3.3	3.465	Vdc	
Supply Current	(Icc)	-	-	50	mA	
Period Jitter RMS		-	3	5	ps RMS	
Integrated Phase Jitter (BW=12kHz to 20MHz)		-	0.3	1.0	ps RMS	
SSB Phase Noise at 10Hz offset		-	-60	-	dBc/Hz	
SSB Phase Noise at 100Hz offset		-	-100	-	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-130	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-135	-	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		±75	-	-	ppm	2
Monotonic Linearity		-10	-	10	%	
Input Impedance		-	50K	-	Ohm	
Modulation Bandwidth (3dB)		15	-	-	KHz	
Enable Voltage (High)	(Vih)	2.0	-	-	Vdc	3
Disable Voltage (Low)	(Vil)	-	-	0.8	Vdc	3

LVCMOS OUTPUT CHARACTERISTICS

TABLE 4.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		-	-	15	pF	
Voltage (High)	(Voh)	Vcc-0.5V	-	-	Vdc	
(Low)	(Vol)	-	-	0.8	Vdc	
Current (High)	(Ioh)	-8	-	-	mA	
(Low)	(Iol)	-	-	8	mA	
Duty Cycle at 50% of Vcc		40	50	60	%	
Rise / Fall Time 10% to 90%		-	-	3	ns	

PACKAGE CHARACTERISTICS

TABLE 5.0

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

TABLE 6.0

Soldering Process	RoHS compliant, lead free. See solder profile on page 2.
Wash	Ultrasonic cleaning is not recommended.

Notes

- 1.0 Referenced to Fo @ 25 C control voltage at 1.65V, frequency stability vs. change in temperature.
- 2.0 Referenced to Fo @ 25°C. Positive Slope.
- 3.0 Output is enabled with no connection on pin 2

DESCRIPTION

The Connor-Winfield VSLD31BE is a surface mount 3.3V Voltage Controlled Crystal Oscillator (VCXO) with an LVCMOS output. Based on a fundamental crystal design the VSLD31BE is designed for phased lock loop applications requiring low jitter and tight frequency stability.

FEATURES

- 3.3V OPERATION
- FREQUENCY STABILITY: ±25ppm
- TEMPERATURE RANGE: 0 to 85°C
- LOW JITTER <1ps RMS
- TRI-STATE ENABLE/DISABLE FUNCTION
- SURFACE MOUNT PACKAGE
- TAPE AND REEL PACKAGING
- RoHS COMPLIANT / LEAD FREE

ORDERING INFORMATION

VSLD31BE - 077.76M

VCXO
SERIES

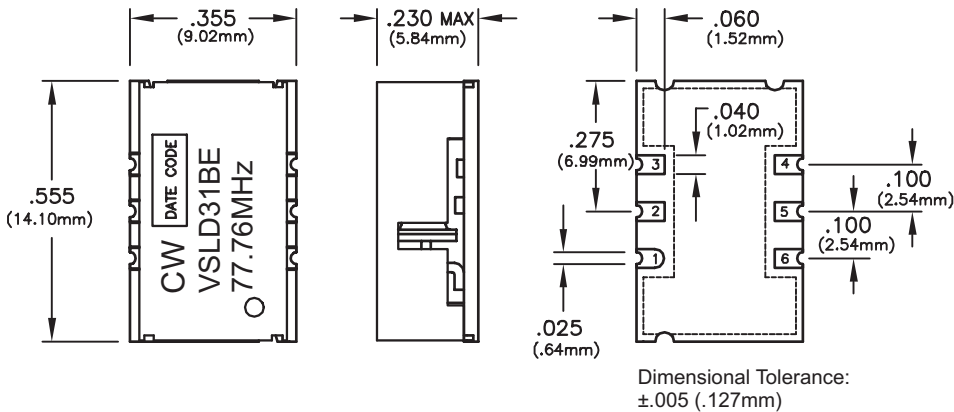
CENTER
FREQUENCY

Specifications subject to change without notice.

PRODUCT DATA SHEET

CRYSTAL CONTROLLED OSCILLATORS

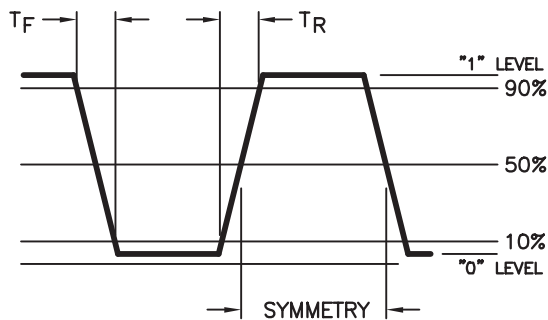
Package Outline



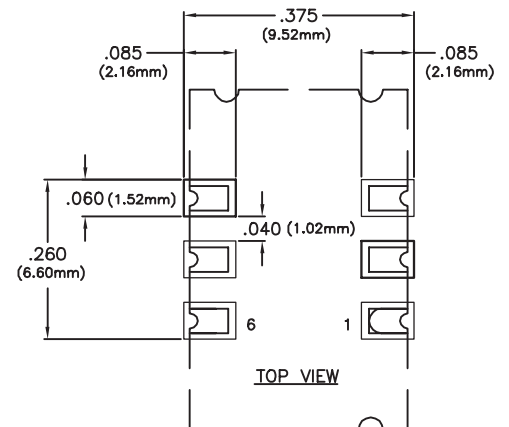
Pad Connections

Pad	Connection
1	Control Voltage
2	Tri-state Enable / Disable
3	Ground
4	Output
5	N/C
6	Vcc

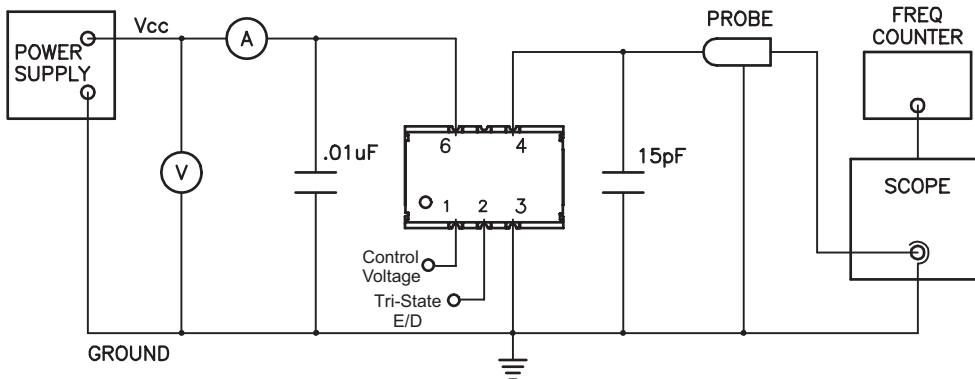
Output Waveform



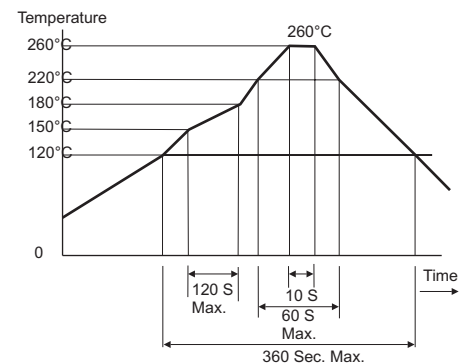
Suggested Pad Layout



Test Circuit



Solder Profile



Specifications subject to change without notice.