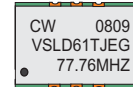


# CRYSTAL CONTROLLED OSCILLATORS

## SURFACE MOUNT 3.3V LVCMOS VCXO



### VSLD61TJEG

**ABSOLUTE MAXIMUM RATINGS**

**TABLE 1.0**

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Storage Temperature		-55	-	125	°C	
Supply Voltage	(Vcc)	-0.5	-	7.0	Vdc	
Control Voltage	(Vc)	-0.5	-	7.0	Vdc	

**OPERATING SPECIFICATIONS**

**TABLE 2.0**

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Center Frequency	(Fo)	19.44	-	80.00	MHz	
Frequency Stability (Vc=1.65V)		-20	-	20	ppm	
Aging (15 years)		-5	-	5		
Total Frequency Tolerance		-25	-	25	ppm	1
Operating Temperature Range		-40	-	85	°C	
Supply Voltage	(Vcc)	3.135	3.300	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		-	-90	-	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-100	-	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		-	-	±80	ppm	2
Absolute Pull Range		±20	-	-	ppm	3
Monotonic Linearity		-10	-	10	%	
Input Impedance		-	50K	-	Ohm	
Modulation Bandwidth (3dB)		15	-	-	KHz	
Enable Input Voltage (High)	(Vih)	2.0	-	-	Vdc	4
Disable Input Voltage (Low)	(Vil)	-	-	0.5	Vdc	4
Output Enable / Disable Time		-	-	100	nS	

**LVCMOS OUTPUT CHARACTERISTICS**

**TABLE 4.0**

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		-	-	15	pF	
Voltage (High)	(Voh)	2.4	-	-	Vdc	
(Low)	(Vol)	-	-	0.4	Vdc	
Current (High)	(Ioh)	-8	-	-	mA	
(Low)	(Iol)	-	-	8	mA	
Duty Cycle measured at 1.5 Vdc		40	50	60	%	
Rise / Fall Time 10% to 90%		-	-	5	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**

- Inclusive of calibration, frequency vs. temperature stability, supply voltage change, load change, shock and vibration and aging over 15 years, Vc=1.65 Vdc.
- Referenced to Fo @ 25°C, Positive Slope.
- 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.
- Output is enabled with no connection on pin 2.

### DESCRIPTION

The Connor-Winfield VSLD61TJEG is a surface mount 3.3V Voltage Controlled Crystal Oscillator (VCXO) with an LVCMOS output. Based on a fundamental crystal design the VSLD61TJEG is designed for phased lock loop applications requiring low jitter and tight frequency stability.

### FEATURES

3.3V OPERATION

FREQUENCY STABILITY: ±20ppm

INDUSTRIAL TEMPERATURE RANGE:  
-40 to 85°C

LOW JITTER <1ps RMS

LVCMOS OUTPUT

TRI-STATE ENABLE/DISABLE  
FUNCTION

SURFACE MOUNT PACKAGE

TAPE AND REEL PACKAGING

RoHS COMPLIANT / LEAD FREE

### ORDERING INFORMATION

VSLD61TJEG - 077.76M

VCXO  
SERIES

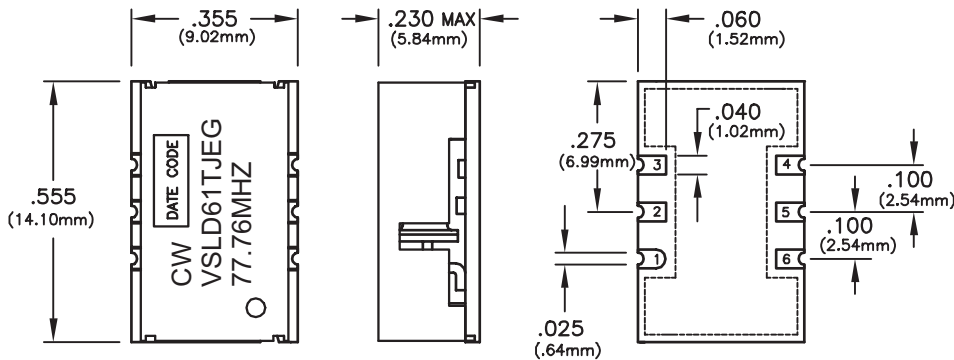
CENTER  
FREQUENCY

Specifications subject to change without notice.

PRODUCT DATA SHEET

CRYSTAL CONTROLLED OSCILLATORS

Package Outline

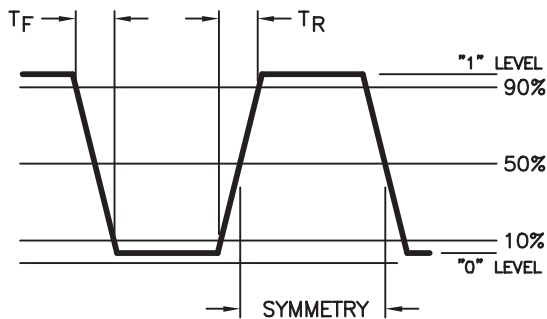


Pad Connections

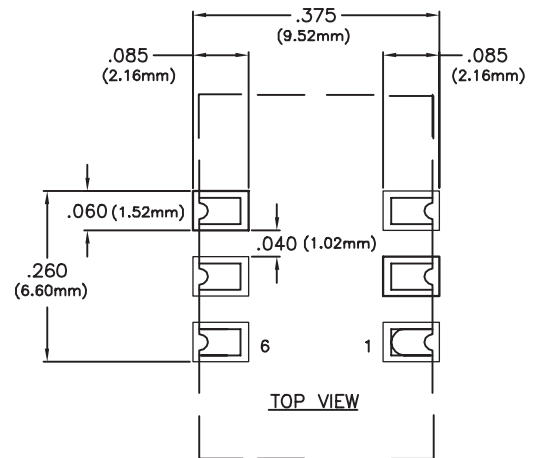
PIN	CONNECTION
1	CONTROL VOLTAGE
2	TRI-STATE
3	GROUND
4	OUTPUT
5	N/C
6	Vcc

Dimensional Tolerance:  
±.005" (.127mm)

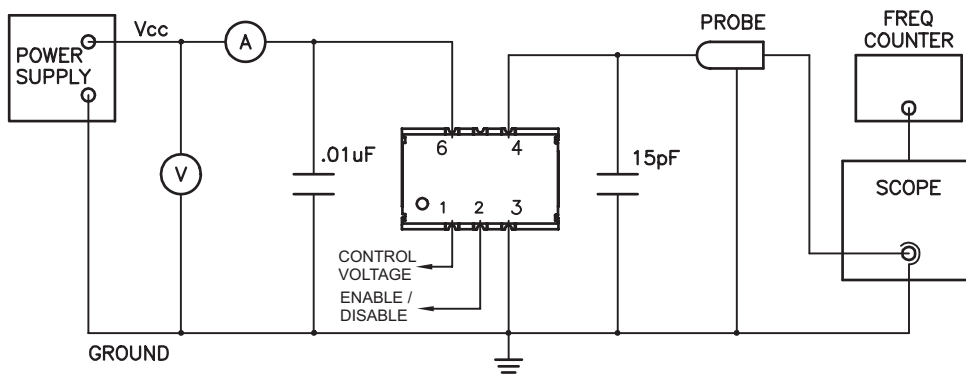
Output Waveform



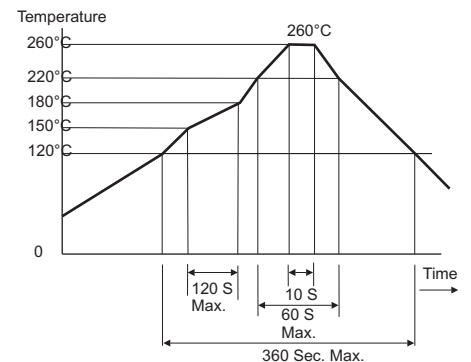
Suggested Pad Layout



Test Circuit



Solder Profile



Specifications subject to change without notice.