

3.3V 5.0mm x 7mm Surface Mount High Frequency Oscillator V802

**CONNOR
WINFIELD**



2111 Comprehensive Drive
Aurora, Illinois 60505
Phone: 630-851-4722
Fax: 630-851-5040
www.conwin.com
US Headquarters:
630-851-4722
European Headquarters:
+353-61-472221

VCXO

The Connor-Winfield, RoHS compliant, V802 is a 3.3V Voltage Controlled Crystal Oscillator (VCXO) with LVCMOS output and enable/disable function. The V802 is designed for use with applications utilizing a PLL system requiring low jitter and tight frequency stability. The surface mount package is designed for high-density mounting and is optimum for mass production.

Features:

RoHS Compliant
65 to 130MHz
3.3V Operation
Low Jitter <1pS RMS
Absolute Pull Range (APR): ± 50 ppm
Temperature Range: 0° to 70°C
LVCMOS Output
Enable / Disable Function
Surface Mount Package
Tape and Reel Packaging

Absolute Maximum Ratings

Parameter	Minimum	Nominal	Maximum	Units	Notes
Storage Temperature	-40	-	85	°C	
Supply Voltage (Vcc)	-0.5	-	7.0	Vdc	
Control Voltage (Vc)	-0.5	-	Vcc+0.5	Vdc	

Operating Specifications

Parameter	Minimum	Nominal	Maximum	Units	Notes
Center Frequency (Fo)	65	-	130	MHz	
Operating Temperature Range	0	-	70	°C	
Supply Voltage (Vcc)	3.135	3.3	3.465	Vdc	
Supply Current (Icc)	-	-	100	mA	
Jitter: (BW=10Hz to 20 MHz) (BW=12kHz to 20 MHz-	-	-	5 1	ps RMS	
Typical Phase Noise @ 74.25 MHz					
SSB Phase Noise at 10Hz offset	-	-55	-		
at 100Hz offset	-	-85	-		
at 1kHz offset	-	-115	-		
at 10kHz offset	-	-135	-		
at 100kHz offset	-	-150	-		

Input Characteristics

Parameter	Minimum	Nominal	Maximum	Units	Notes
Control Voltage Range (Vc)	0.3	1.65	3.0	Vdc	
Frequency Pullability (APR)	± 50	-	-	ppm	1
Monotonic Linearity	-10	-	10	%	
DC Input Resistance	-	60K	-	Ohm	2
Modulation Bandwidth (3dB)	10	-	-	kHz	
Enable Input Voltage - Low (Vil)	2.4	-	-	Vdc	3
Disable Input Voltage - High (Vih)	-	-	0.4		

LVCMOS Output Characteristics

Parameter	Minimum	Nominal	Maximum	Units	Notes
Load	-	-	15	pF	
Voltage High (Voh)	2.4	-	-	Vdc	
Low (Vol)	-	-	0.4		
Duty Cycle at 50% Level	45	50	55	%	
Rise / Fall Time 20% to 80%	-	-	2	nS	

Package Characteristics

Package Hermetically sealed, ceramic package with grounded metal cover.

Notes:

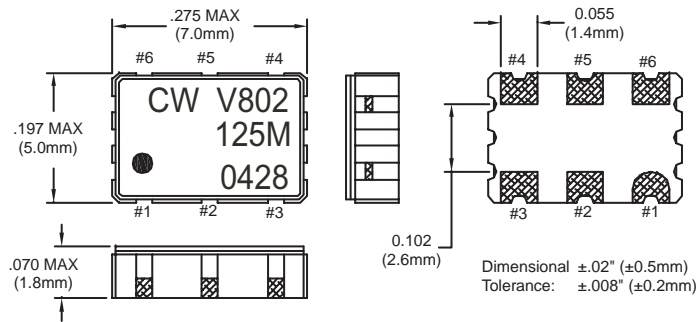
1. Absolute pull range (APR) is the minimum guaranteed pull range of the VCXO under all conditions over the lifetime operation. Including calibration @ 25°C, frequency vs. change in temperature, frequency vs. change in supply voltage, frequency vs. change in load, shock and vibration and aging for ten years. The APR is referenced to Fo. Positive Transfer Function.
2. Measured from pin 1 to ground.
3. Outputs are enabled with no connection on pad 2.

Specifications subject to change without notice. All dimensions in inches. © Copyright 1998 The Connor-Winfield Corporation



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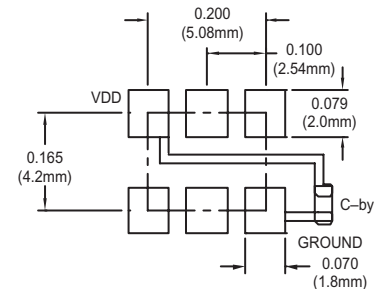
Dimensions



Pin Function

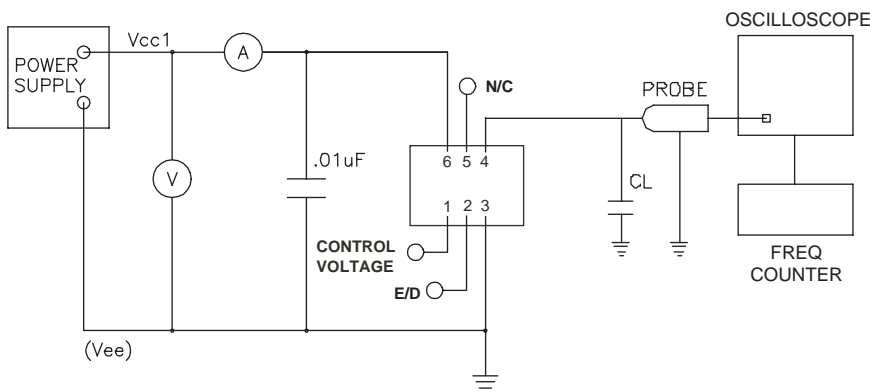
- 1: Control Voltage
- 2: Enable / Disable
- 3: Ground (Case)
- 4: Output Q
- 5: N/C
- 6: Vcc

Suggested Pad Layout

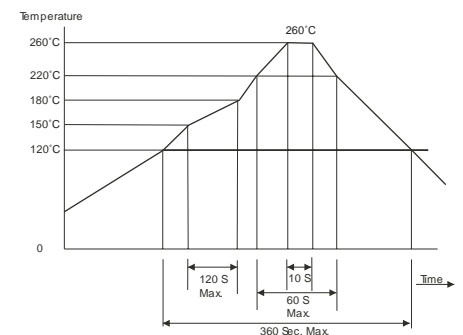


Bypass capacitor, C-by, should be ceramic capacitor $\geq .01\mu\text{f}$.

Test Circuit



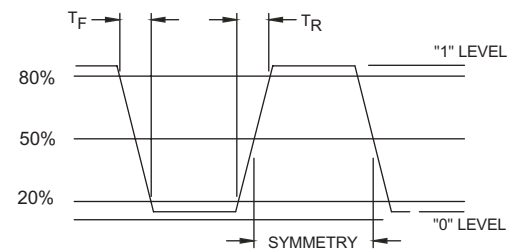
Solder Reflow Profile



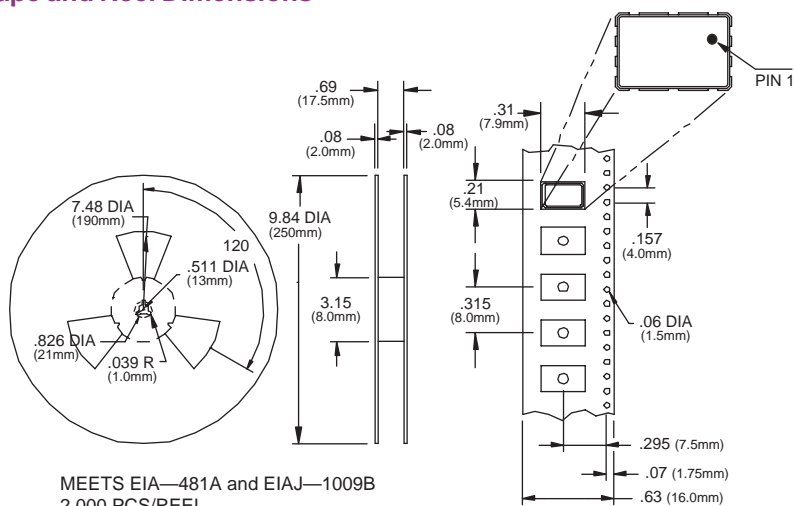
Enable / Disable Function

Output / Disable Function (Pad 2)	Output
High	Enable
Low	Disable (High Impedance)

Output Waveform



Tape and Reel Dimensions



Ordering Information

V802 - 125.00 MHz

VCXO
SERIES

CENTER
FREQUENCY

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