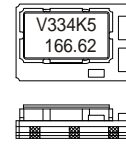


CRYSTAL CONTROLLED OSCILLATORS

3.3V 5 x 7mm SURFACE MOUNT HIGH FREQUENCY LVPECL VCXO OSCILLATOR



V334

ABSOLUTE MAXIMUM RATINGS

TABLE 1.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Storage Temperature		-40	-	85	°C	
Supply Voltage	(Vcc)	-0.5	-	7.0	Vdc	
Control Voltage	(Vc)	-0.5	-	Vcc+0.5	Vdc	

OPERATING SPECIFICATIONS

TABLE 2.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Center Frequency	(Fo)	65	-	200	MHz	
Operating Temperature Range		0	-	85	°C	
Supply Voltage	(Vcc)	3.135	3.3	3.465	Vdc	
Supply Current	(Icc)	-	-	100	mA	
Jitter (BW=10Hz to 20MHz)		-	-	5	ps rms	
Jitter (BW=12KHz to 20MHz)		-	-	1	ps rms	
SSB Phase Noise at 100Hz offset		-	-95	-	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-125	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-140	-	dBc/Hz	
SSB Phase Noise at 100KHz offset		-	-145	-	dBc/Hz	

INPUT CHARACTERISTICS

TABLE 3.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Control Voltage Range	(Vc)	0.3	1.65	3.0	Vdc	
Absolute Pull Range (APR)		±100	-	-	ppm	1
Maximum Pull Range @ 25°C		-	-	±225	ppm	
Monotonic Linearity		-10	-	10	%	
Input Impedance		-	60K	-	Ohm	
Modulation Bandwidth (3dB)		25	-	-	KHz	
Enable Input Voltage (Low)	(Vil)	-	-	1.68	Vdc	2
Disable Input Voltage (High)	(Vih)	2.275	-	-	Vdc	2

LVPECL OUTPUT CHARACTERISTICS

TABLE 4.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		-	-	50	Ohms	3
Voltage (High)	(Voh)	2.275	-	-	Vdc	
(Low)	(Vol)	-	-	1.68	Vdc	
Duty Cycle at 50% Level		45	50	55	%	
Rise / Fall Time 20% to 80%		-	0.6	1.5	nS	

PACKAGE CHARACTERISTICS

TABLE 5.0

Package	Hermetically sealed ceramic package with grounded metal cover
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Notes

- 1.0 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.
- 2.0 Outputs are enabled with no connection on pad 2. When oscillator is disabled both outputs are in a high impedance state.
- 3.0 50 ohm termination into Vcc-2V or Thevein equivalent.

DESCRIPTION

The Connor-Winfield V334 is a 3.3V Voltage Controlled Crystal Oscillator (VCXO) with LVPECL Differential outputs and enable/disable function. The V334 is designed for use with applications utilizing a PLL system requiring low jitter and tight frequency stability. No multiplication schemes are used in this oscillator design. The surface mount package is designed for high-density mounting and is optimum for mass production.

FEATURES

- 65 to 200MHz
- 3.3V OPERATION
- LOW JITTER <1ps RMS
- ABSOLUTE PULL RANGE (APR): ±100ppm
- TEMPERATURE RANGE: 0 to 85°C
- DIFFERENTIAL LVPECL OUTPUTS
- ENABLE / DISABLE FUNCTION
- SURFACE MOUNT PACKAGE
- TAPE AND REEL PACKAGING
- RoHS COMPLIANT

ORDERING INFORMATION

V334 - 166.6285 MHz

VCXO
SERIES

CENTER
FREQUENCY

Specifications subject to change without notice.

CRYSTAL CONTROLLED OSCILLATORS

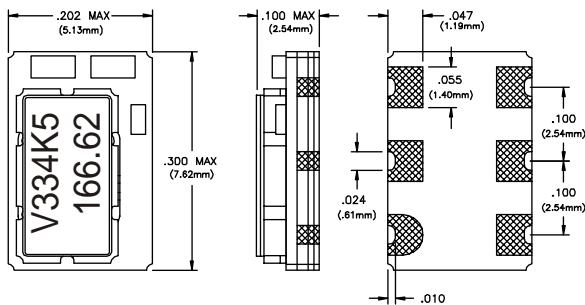
Pin Connections

TABLE 6.0	
Pin	Pin Connection
1	Control Voltage
2	Enable / Disable
3	Ground (Case)
4	Output Q
5	Output Q
6	Vcc

Enable / Disable Function

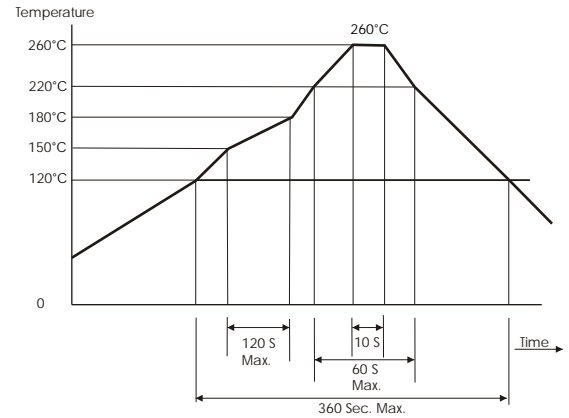
TABLE 7.0	
Output Enable Function	Output
Enable / Disable Function (Pad 2)	Output
Low	Enable
High	Disable (High Impedance)

Package Outline and Dimensions

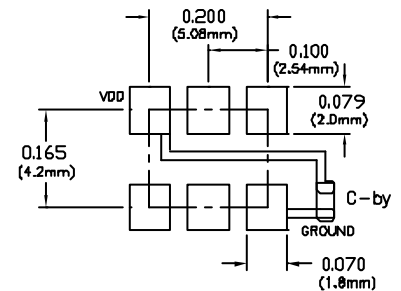


Dimensional Tolerance:
±.005 (.127mm)

Solder Profile

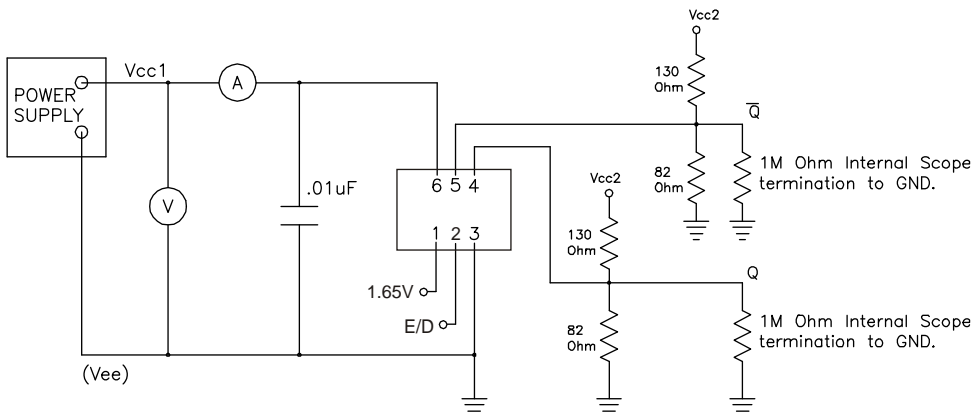


Suggested Pad Layout

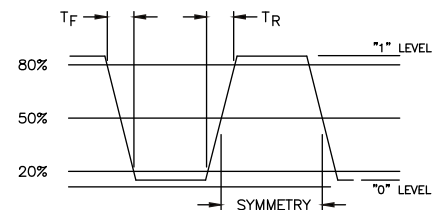


Bypass capacitor, C-by, should be ceramic capacitor $\geq .01\mu\text{f}$.

Test Circuit



Output Waveform



Specifications subject to change without notice.