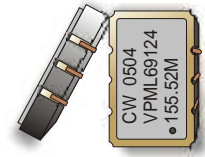


CRYSTAL CONTROLLED OSCILLATORS

3.3V SURFACE MOUNT PECL OSCILLATOR



VPML69124

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)	65	-	200	MHz	
Total Frequency Tolerance		-50	-	50	ppm	1
Operating Temperature Range		-40	-	85	°C	
Supply Voltage	(Vcc)	3.135	3.3	3.465	Vdc	
Supply Current	(Icc)	-	-	80	mA	
Jitter (BW=10Hz to 20MHz)		-	-	5	ps rms	
Jitter (BW=12kHz to 20MHz)		-	-	1	ps rms	
Typical 77.76 MHz Phase Noise Measurements:						
SSB Phase Noise at 10Hz offset		-	-55	-	dBc/Hz	
SSB Phase Noise at 100Hz offset		-	-85	-	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-110	-	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	
Total Pull Range		200	-	450	ppm	2
Absolute Pull Range (APR)		+/-50	-	-	ppm	3
Monotonic Linearity		-20	-	20	%	
Pin 1 DC Input Resistance		-	50K	-	Ohm	
Modulation Bandwidth (3dB)		10	-	-	KHz	
Enable Input Voltage (Low)	(Vil)	-	-	1.68	Vdc	4
Disable Input Voltage (High)	(Vih)	2.275	-	-	Vdc	4

LVPECL OUTPUT CHARACTERISTICS

TABLE 4.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		-	-	50	Ohms	5
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%		-	-	1.0	nS	

PACKAGE CHARACTERISTICS

TABLE 5.0

Package	Hermetically sealed, J leaded ceramic surface mount package.
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Notes

- Includes deviation over temperature, supply and load variations, shock, vibration and 15 years aging.
- Total pull range is the delta ppm from 0.3v to 3.0v measured at 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.
- Oscillator output is enabled with no connection on pad 2. When oscillator is disabled the true output is in a low state (Vol) and the complementary output is in the high state (VoH)
- Output terminated into 50 ohms into Vcc - 2.0Vdc or Thevenin equivalent.

DESCRIPTION

The Connor-Winfield VPML69124 is a surface mount 3.3V voltage controlled crystal oscillator (VCXO) with Differential LVPECL outputs. Based on a fundamental design, the VPML69124 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
- ENABLE/DISABLE FUNCTION
- DIFFERENTIAL LVPECL OUTPUTS
- J LEADED SURFACE MOUNT PACKAGE
- TAPE AND REEL PACKAGING

ORDERING INFORMATION

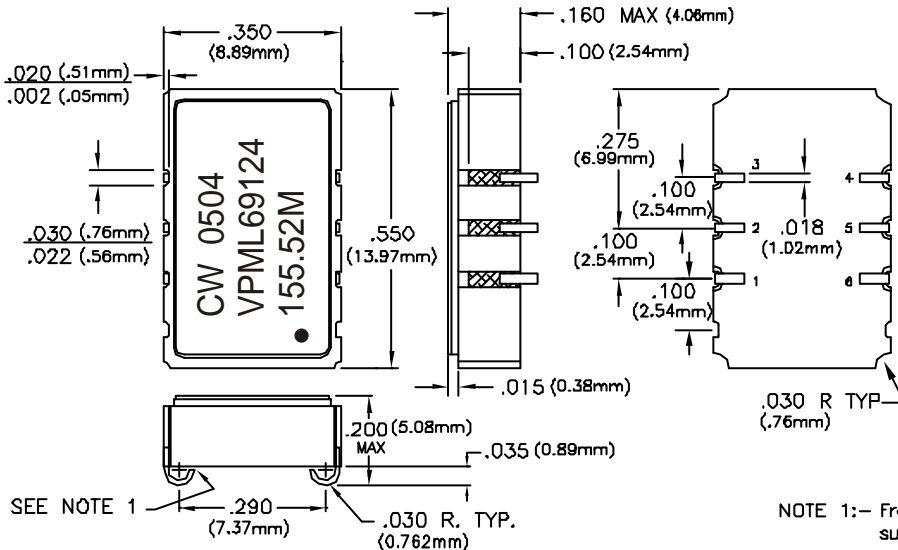
VPML69124 - 155.52 MHz

VCXO
SERIES

CENTER
FREQUENCY

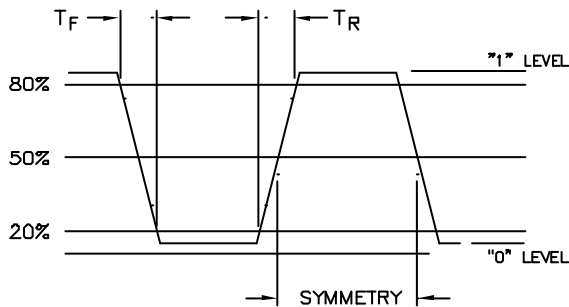
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CRYSTAL CONTROLLED OSCILLATORS

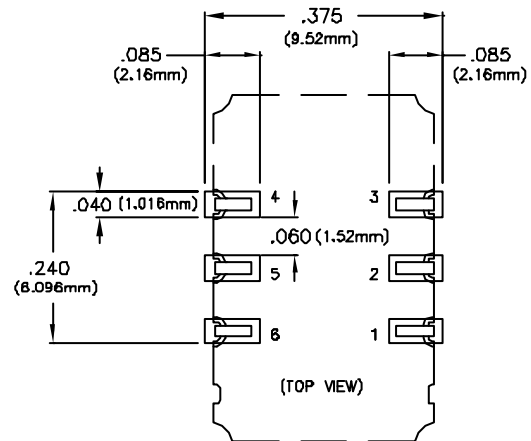


PIN	CONNECTION
1	CONTROL VOLTAGE
2	ENABLE/DISABLE
3	GROUND
4	Q OUTPUT
5	\bar{Q} OUTPUT
6	Vcc

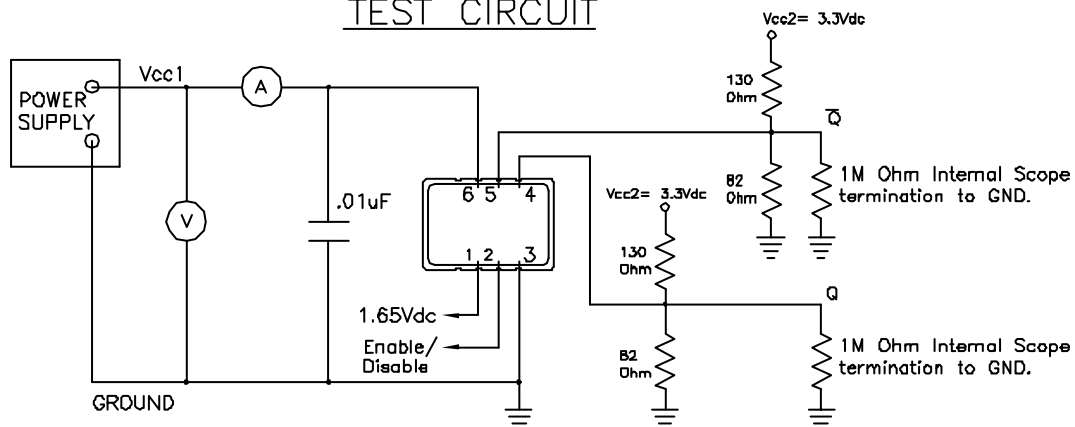
OUTPUT WAVEFORM



SUGGESTED PAD LAYOUT



TEST CIRCUIT



Specifications subject to change without notice.