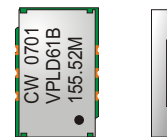


CRYSTAL CONTROLLED OSCILLATORS

3.3V SURFACE MOUNT PECL OSCILLATOR



VPLD61B

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)		155.52 156.25 166.629 167.33 177.37142 178.571428 195.3125		MHz	
Frequency vs. Temperature		-25	-	25	ppm	1
Frequency vs. Aging (10 years)		-10	-	10	ppm	
Total Frequency Tolerance		-35	-	35	ppm	2
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	
SSB Phase Noise at 100Hz offset		-	-80	-	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-100	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-130	-	dBc/Hz	
SSB Phase Noise at 100KHz offset		-	-135	-	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 at Vc=0.3Vdc		-175	-	-65	ppm	3
Frequency at Vc=3.0Vdc		65	-	175	ppm	3
Absolute Pull Range (APR)		+/-30	-	-	ppm	4
Monotonic Linearity		-10	-	10	%	
Input Impedance		-	50K	-	Ohm	
Modulation Bandwidth (3dB)		10	-	-	KHz	

PECL 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	Non-hermetic package consisting of an FR4 substrate with grounded metal cover.
---------	--

PROCESS RECOMMENDATIONS

TABLE 6.0

Solder Reflow	The component solder used internal to this device has a melting point of
---------------	--

Notes

- Control Voltage @ 1.65V
- Includes deviation over temperature, supply and load variations, shock, vibration and aging. Excludes calibration tolerance.
- Referenced to Fo at T=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 terminated into 50 ohms into Vcc - 2.0Vdc or Thevenin equivalent.

DESCRIPTION

The Connor-Winfield VPLD61B is a 3.3V Voltage Controlled Crystal Oscillator (VCXO) with Differential PECL outputs. Based on a fundamental crystal design, the VPLD61B is designed for phased lock loop applications requiring low jitter and tight stability.

FEATURES

- 3.3V OPERATION
- LOW JITTER <1ps RMS
- FREQUENCY STABILITY ±25ppm
- DIFFERENTIAL PECL OUTPUTS
- SURFACE MOUNT PACKAGE
- TAPE AND REEL PACKAGING

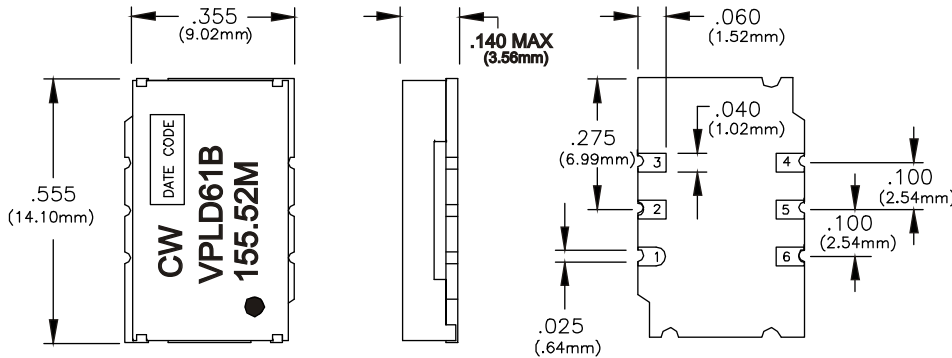
ORDERING INFORMATION

VPLD61B - 155.52MHz

VCXO SERIES CENTER FREQUENCY

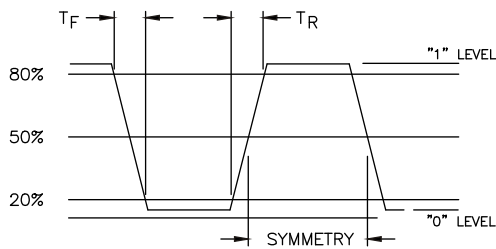
Specifications subject to change without notice.

CRYSTAL CONTROLLED OSCILLATORS

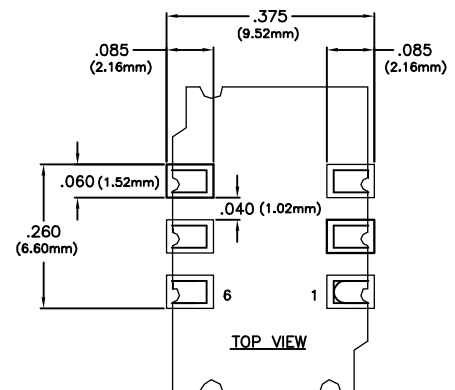


PIN	CONNECTION
1	CONTROL VOLTAGE
2	N/C
3	GROUND
4	Q OUTPUT
5	\bar{Q} OUTPUT
6	Vcc

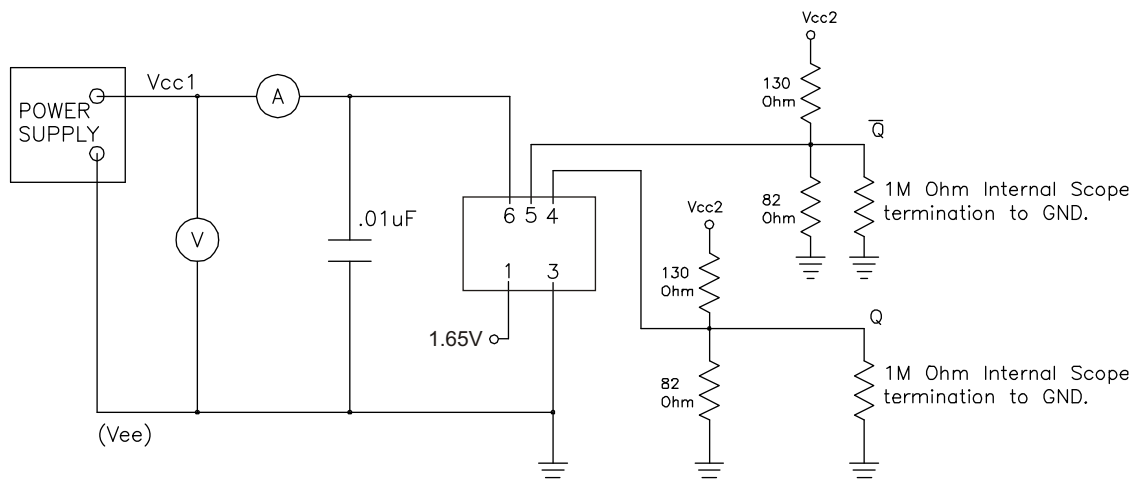
OUTPUT WAVEFORM



SUGGESTED PAD LAYOUT



TEST CIRCUIT



Specifications subject to change without notice.