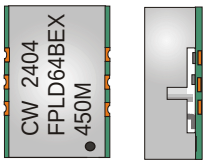
CONNOR WINFIELD

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PRODUCT DATA SHEET

CRYSTAL CONTROLLED OSCILLATORS

SURFACE MOUNT 3.3V LVPECL CLOCK



FPLD64BEX

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	

OPERATING SPECIFICATIONS

TABLE 2.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Center Frequency	(Fo)	200	-	800	MHz	
Frequency Stability		-20		20	ppm	1
Total Frequency Tolerance		-30		30	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)		-	-	8	pS RMS	
Jitter (BW=12kHz to 20MHz)		-	-	3	pS RMS	

INPUT CHARACTERISTICS

TABLE 3.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Disable Input Voltage (High)	(Vih)	2.275	-	-	Vdc	3
Enable Input Voltage (Low)	(Vil)	-	-	1.68	Vdc	3

PECL OUTPUT CHARACTERISTICS

TABLE 4.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		-	-	50	Ohms	4
Voltage (High)	(Voh)	2.275	-	-	Vdc	
(Low)	(Vol)	-	-	1.68	Vdc	
Duty Cycle		45	50	55	%	5
Rise / Fall Time 20% to 80%		-	-	1	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 221°C. The peak temperature inside the device should be less than or equal to 220°C for a maximum of 10 seconds
Wash	Ultrasonic cleaning is not recommended.

Notes
1) Frequency stability vs. change in temperature.
2) Inclusive of frequency calibration @ 25°C, frequency stability vs. change in temperature, supply and load variations, shock and vibration and 15 years aging.
3) When the oscillator is disabled, the true output and the complementary output are in the high impedance state.
4) Output must be terminated into 50 ohms to Vcc – 2V or Thevenin equivalent.
5) Duty Cycle measured at 1.977V

DESCRIPTION

The Connor-Winfield FPLD64BEX is a fixed frequency, surface mount Crystal Controlled Oscillator (XO) designed for applications requiring low jitter and a ±20ppm frequency stability. Operating at 3.3V supply voltage, the FPLD64BEX provides LVPECL Differential Outputs with Enable/Disable function.

FEATURES

3.3V OPERATION

LVPECL DIFFERENTIAL OUTPUTS

ENABLE / DISABLE FUNCTION PAD 2

OVERALL FREQUENCY TOLERANCE ±30ppm

SURFACE MOUNT PACKAGE

TAPE AND REEL PACKAGING

ORDERING INFORMATION

FPLD64BEX - 450MHz

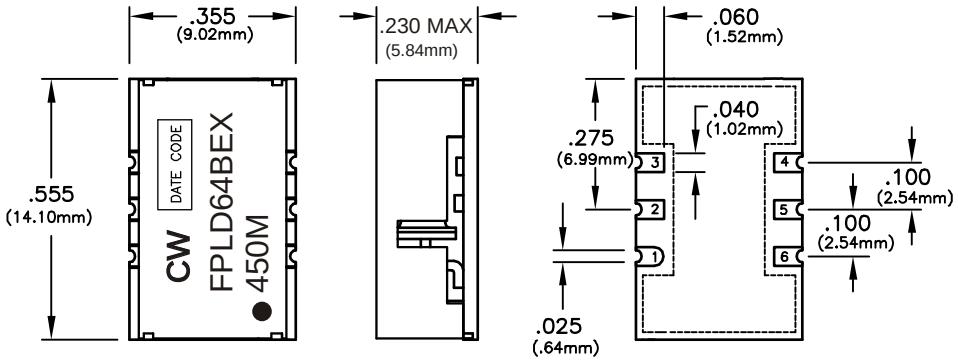
FPLD64BEX: LVPECL CLOCK SERIES
450MHz: CENTER FREQUENCY

Specifications subject to change without notice.

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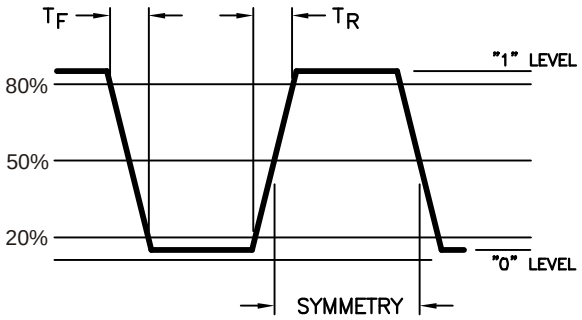
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CRYSTAL CONTROLLED OSCILLATORS

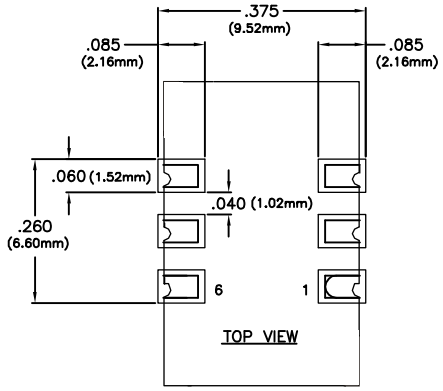


PIN	CONNECTION
1	N/C
2	ENABLE / DISABLE
3	GROUND
4	Q OUTPUT
5	$\overline{Q}$ OUTPUT
6	Vcc

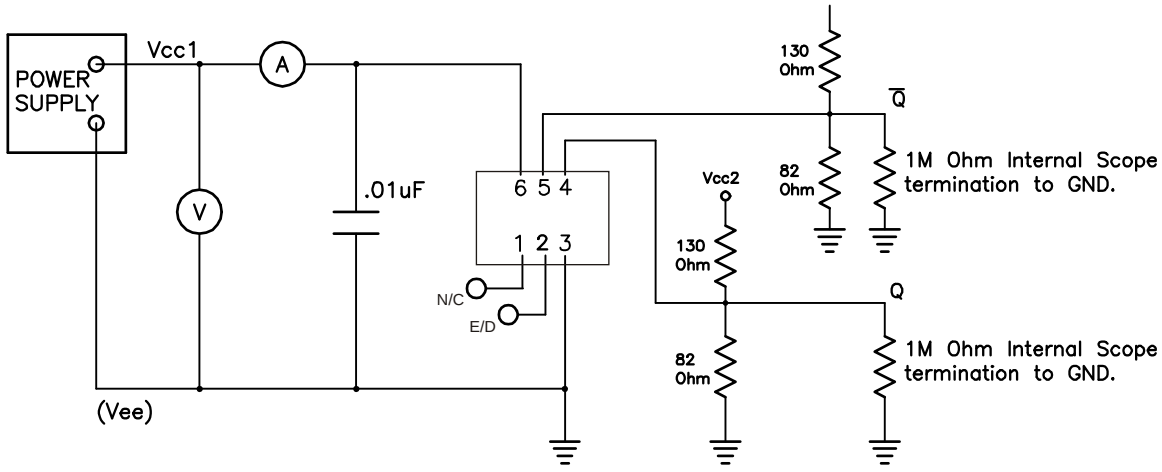
OUTPUT WAVEFORM



SUGGESTED PAD LAYOUT



TEST CIRCUIT



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INT