CONNOR WINFIELD

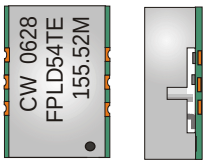
THE CONNOR-WINFIELD CORP.
2111 COMPREHENSIVE DRIVE.
AURORA, IL 60505.
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PRODUCT DATA SHEET

RoHS-5/6 COMPLIANT

CRYSTAL CONTROLLED OSCILLATORS

3.3V SURFACE MOUNT LVPECL CLOCK



FPLD54TE

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	

OPERATING SPECIFICATIONS

TABLE 2.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Center Frequency	(Fo)	16.384	-	200	MHz	
Total Frequency Tolerance		-20		20	ppm	1
Operating Temperature Range		0	-	70	°C	
Supply Voltage	(Vcc)	3.135	3.3	3.465	Vdc	
Supply Current	(Icc)	-	-	60	mA	
Jitter (BW=10Hz to 20MHz)		-	-	5	pS RMS	
Jitter (BW=12kHz to 20MHz)		-	-	1	pS RMS	

INPUT CHARACTERISTICS

TABLE 3.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Disable Input Voltage (High)	(Vih)	2.275	-	-	Vdc	2
Enable Input Voltage (Low)	(Vil)	-	-	1.68	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		45	50	55	%	4
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

Soldering Process	See solder profile page 2.
Wash	Ultrasonic cleaning is not recommended.

Notes
1) Inclusive of initial tolerance, deviation over temperature, supply and load variations, shock, vibration and 20 years aging.
2) When the oscillator is disabled, the true output is in a low state (Vol) and the complementary output is in the high state (VoH).
3) Output must be terminated into 50 ohms to Vcc – 2V or Thevenin equivalent.
4) Duty Cycle measured at 1.977V

DESCRIPTION

The Connor-Winfield FPLD54TE is a fixed frequency, surface mount Crystal Controlled Oscillator (XO) designed for applications requiring low jitter and a ±20ppm overall stability. Operating at 3.3V supply voltage, the FPLD54TE provides LVPECL Differential Outputs with Enable/Disable function.

FEATURES

3.3V OPERATION

LVPECL DIFFERENTIAL OUTPUTS

ENABLE / DISABLE FUNCTION

LOW JITTER <1pS RMS

OVERALL FREQUENCY TOLERANCE: ±20ppm

TEMPERATURE RANGE: 0 to 70°C

SURFACE MOUNT PACKAGE

TAPE AND REEL PACKAGING

RoHS 5/6 COMPLIANT

ORDERING INFORMATION

FPLD54TE - 155.52MHz

CLOCK SERIES — CENTER FREQUENCY

Specifications subject to change without notice.

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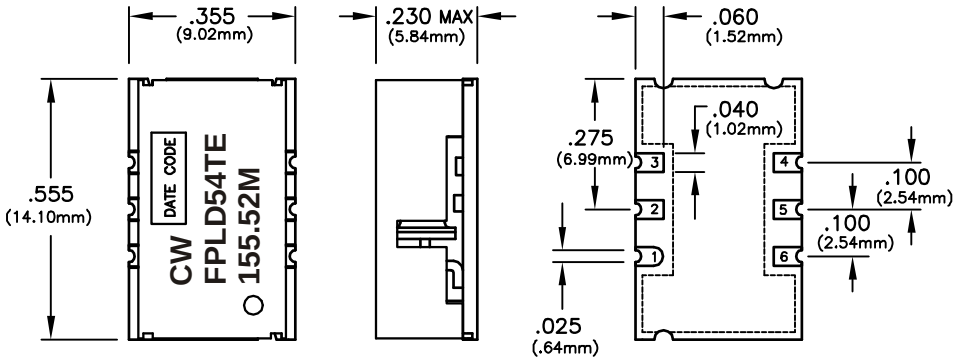
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CRYSTAL CONTROLLED OSCILLATORS

Package Outline

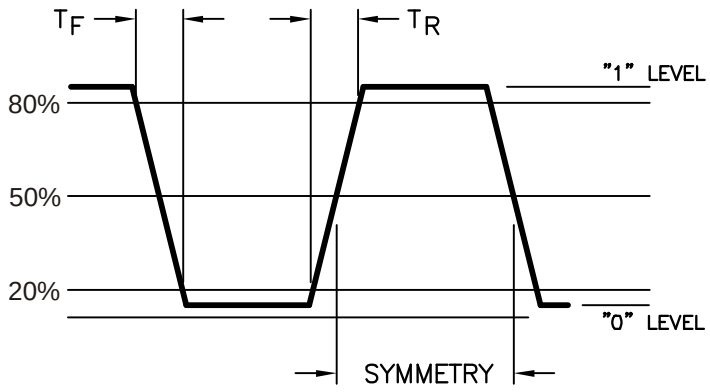


Pin Connections

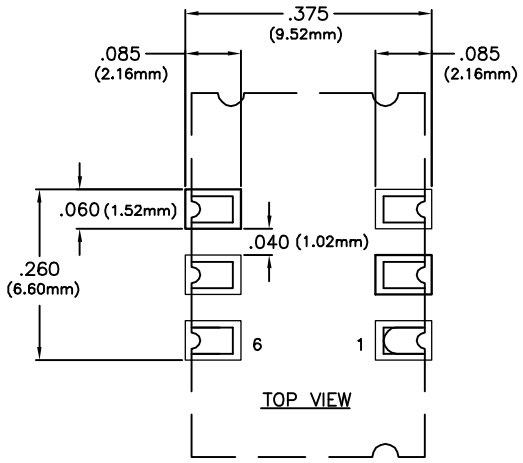
PIN	CONNECTION
1	ENABLE / DISABLE
2	N/C
3	GROUND
4	Q OUTPUT
5	$\overline{Q}$ OUTPUT
6	Vcc

Dimensional Tolerance:
±.005" (.127mm)

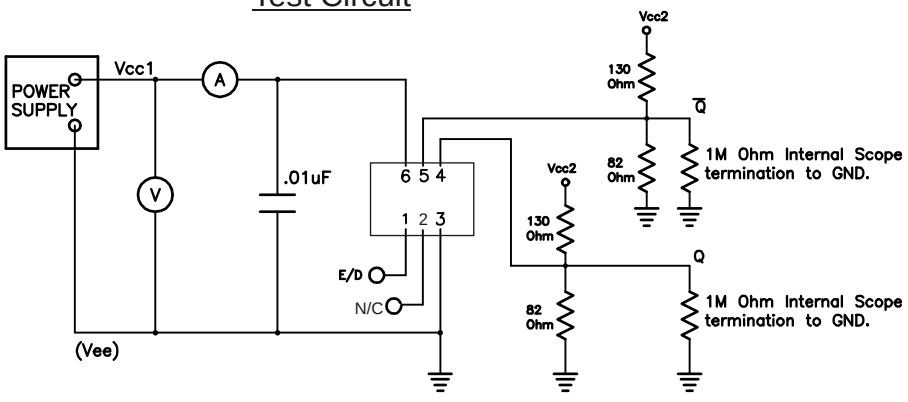
Output Waveform



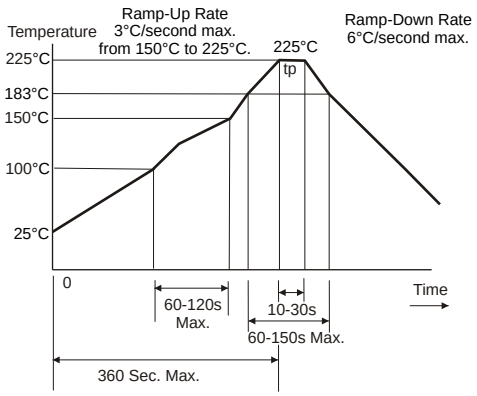
Suggested Pad Layout



Test Circuit



Solder Profile



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