CONNOR WINFIELD

THE CONNOR-WINFIELD CORP.
2111 COMPREHENSIVE DRIVE.
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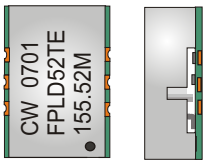
PRODUCT DATA SHEET

CRYSTAL CONTROLLED OSCILLATORS

SURFACE MOUNT 3.3V LVPECL CLOCK



FPLD52TE

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		-50		50	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

PECL 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

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) Includes 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 FPLD52TE is a fixed frequency, surface mount Crystal Controlled Oscillator (XO) designed for applications requiring low jitter and a ±50ppm overall stability. Operating at 3.3V supply voltage, the FPLD52TE 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: ±50ppm

TEMPERATURE RANGE: 0 to 70°C

SURFACE MOUNT PACKAGE

TAPE AND REEL PACKAGING

ORDERING INFORMATION

FPLD52TE - 155.52MHz

CLOCK SERIES — CENTER FREQUENCY

Specifications subject to change without notice.

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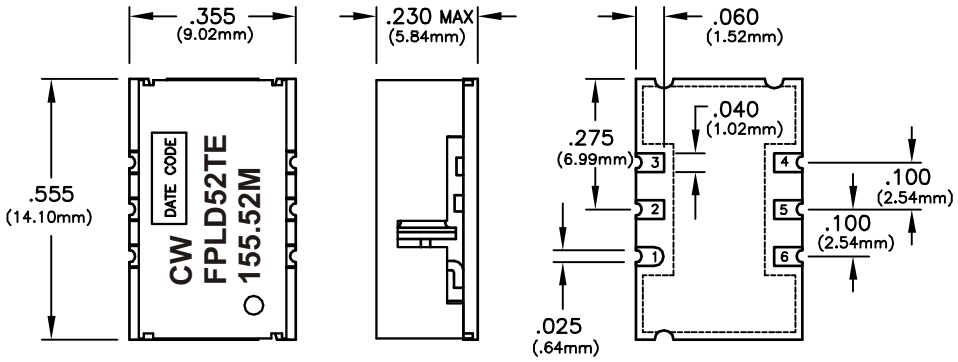
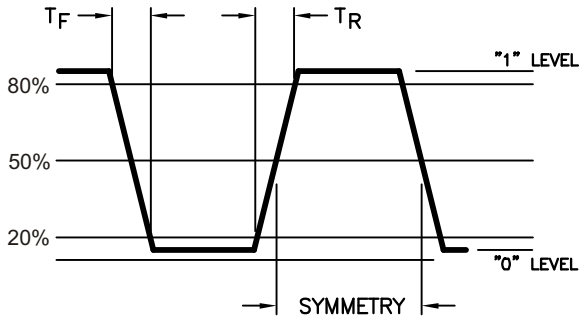


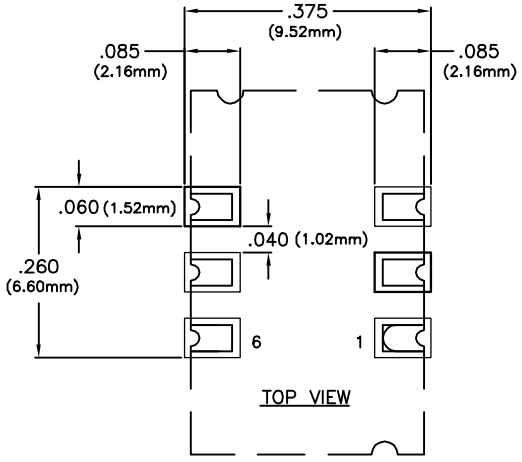
PIN	CONNECTION
1	ENABLE / DISABLE
2	N/C
3	GROUND
4	Q OUTPUT
5	$\overline{Q}$ OUTPUT
6	Vcc

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

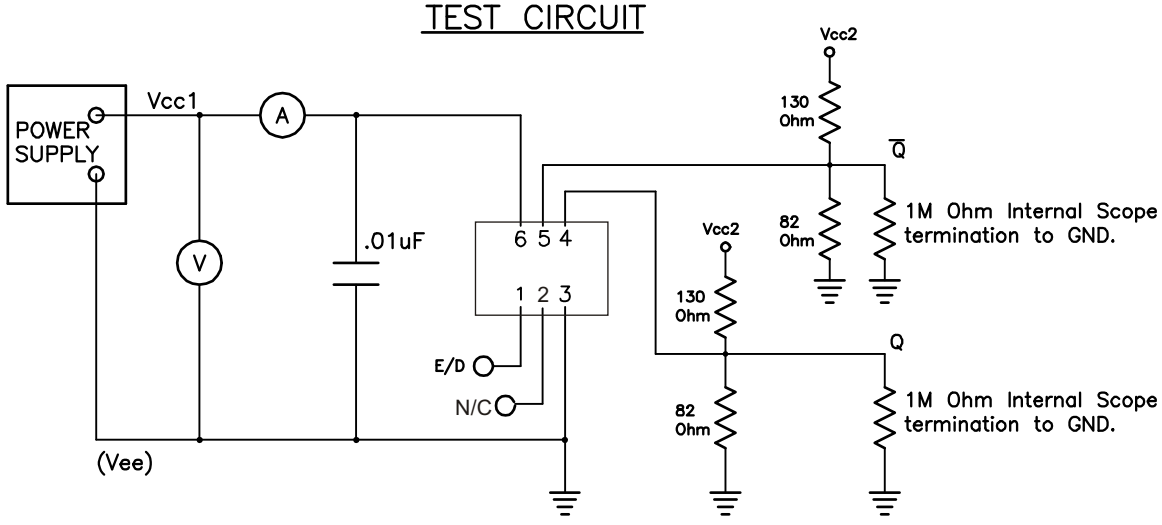
OUTPUT WAVEFORM



SUGGESTED PAD LAYOUT



TEST CIRCUIT



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