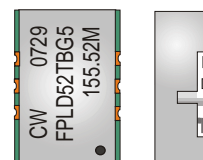


# CRYSTAL CONTROLLED OSCILLATORS

## 3.3V SURFACE MOUNT LVPECL CLOCK



### FPLD52TBG5

#### 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	-	400	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

#### 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	
Start-up Time		-	-	10	ms	

#### PACKAGE CHARACTERISTICS

TABLE 5.0

Package	Non-hermetic package consisting of an FR4 substrate with grounded metal cover.
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#### PROCESS RECOMMENDATIONS

TABLE 6.0

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

#### Notes

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

#### DESCRIPTION

The Connor-Winfield FPLD52TBG5 is a fixed frequency, surface mount Crystal Controlled Oscillator (XO) designed for applications requiring low jitter and a  $\pm 50$ ppm overall stability. Operating at 3.3V supply voltage, the FPLD52TBG5 provides LVPECL Differential Outputs with Enable/Disable function.

#### FEATURES

- 3.3V OPERATION
- LVPECL DIFFERENTIAL OUTPUTS
- ENABLE / DISABLE FUNCTION PAD 2
- LOW JITTER <1ps RMS
- OVERALL FREQUENCY TOLERANCE:  $\pm 50$ ppm
- TEMPERATURE RANGE: 0 to 70°C
- SURFACE MOUNT PACKAGE
- TAPE AND REEL PACKAGING
- RoHS 5/6 COMPLIANT

#### ORDERING INFORMATION

FPLD52TBG5 -155.52MHz

LVPECL  
CLOCK  
SERIES

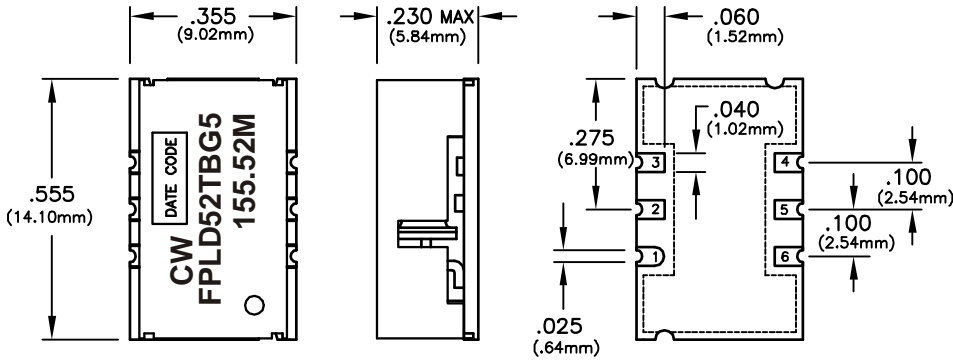
CENTER  
FREQUENCY

Specifications subject to change without notice.

**PRODUCT DATA SHEET**

**CRYSTAL CONTROLLED OSCILLATORS**

**Package Outline**

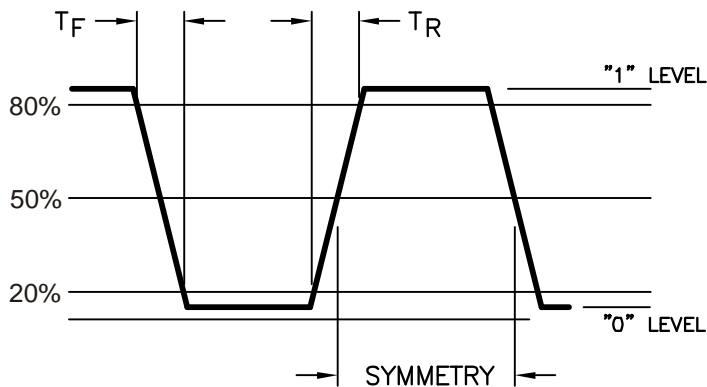


**Pin Connections**

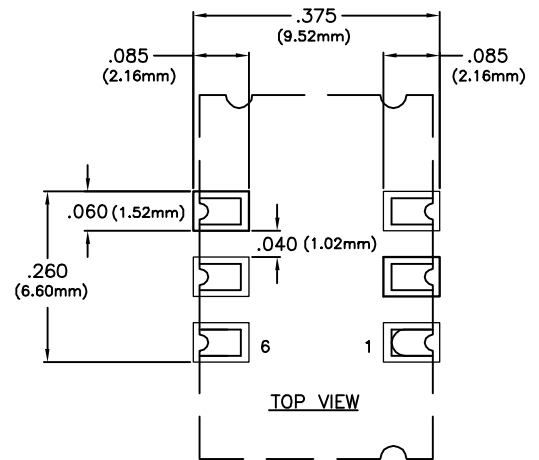
PIN	CONNECTION
1	N/C
2	ENABLE / DISABLE
3	GROUND
4	Q OUTPUT
5	Q̄ OUTPUT
6	Vcc

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

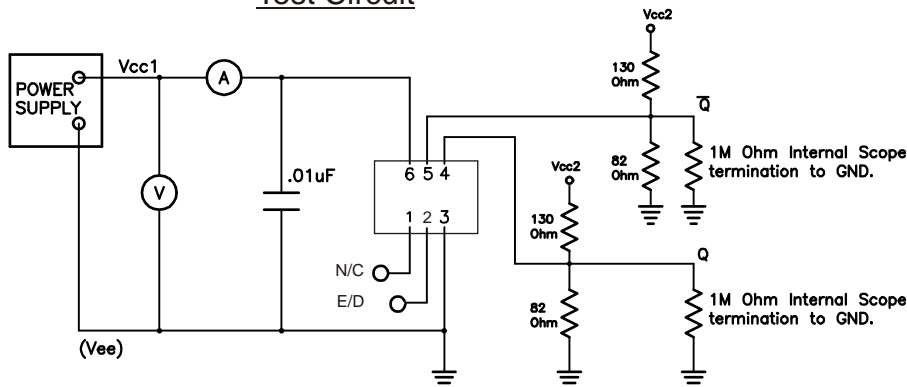
**Output Waveform**



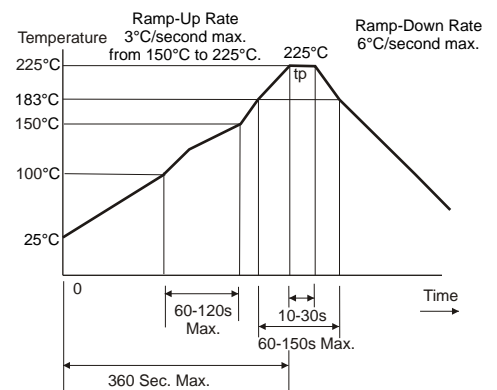
**Suggested Pad Layout**



**Test Circuit**



**Solder Profile**



Specifications subject to change without notice.