

# CRYSTAL CONTROLLED OSCILLATORS

## SURFACE MOUNT 3.3V LVPECL CLOCK



### FPLD54T2

#### 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	-	250	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	
Start Up Time		-	-	10	mS	

#### PECL OUTPUT CHARACTERISTICS

TABLE 3.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		-	-	50	Ohms	2
Voltage (High)	(Voh)	2.275	-	-	Vdc	
(Low)	(Vol)	-	-	1.68	Vdc	
Duty Cycle		45	50	55	%	3
Rise / Fall Time 20% to 80%		-	-	1	nS	

#### PACKAGE CHARACTERISTICS

TABLE 4.0

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

TABLE 5.0

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

- Includes initial tolerance, deviation over temperature, supply and load variations, shock, vibration and 20 years aging.
- Output must be terminated into 50 ohms to Vcc - 2V or Thevenin equivalent.
- Duty Cycle measured at 1.977V

#### DESCRIPTION

The Connor-Winfield FPLD54T2 is a fixed frequency, surface mount Crystal Controlled Oscillator (XO) designed for applications requiring low jitter and a  $\pm 20$ ppm overall stability. Operating at 3.3V supply voltage, the FPLD54T2 provides LVPECL Differential Outputs.

#### FEATURES

- 3.3V OPERATION
- LVPECL DIFFERENTIAL OUTPUTS
- LOW JITTER <1pS RMS
- OVERALL FREQUENCY TOLERANCE:  $\pm 20$ ppm
- TEMPERATURE RANGE: 0 to 70°C
- SURFACE MOUNT PACKAGE
- TAPE AND REEL PACKAGING
- RoHS 5/6 COMPLIANT

#### ORDERING INFORMATION

FPLD54T2 - 155.52MHz

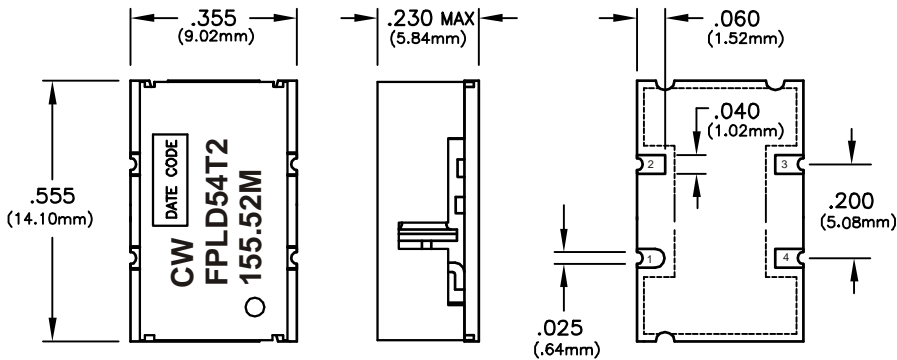
LV PECL  
CLOCK  
SERIES

CENTER  
FREQUENCY

Specifications subject to change without notice.

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## Package Outline and Dimensions

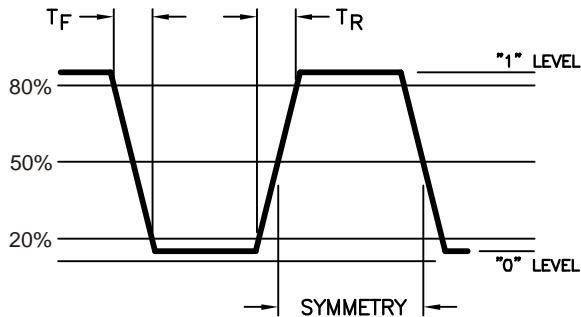


## Pin Connections

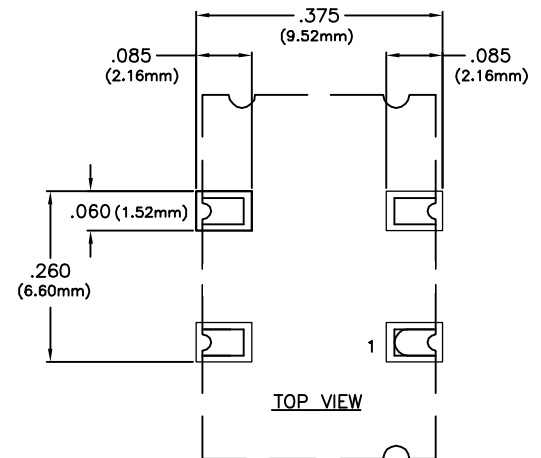
PIN	CONNECTION
1	Q OUTPUT
2	GROUND
3	Q OUTPUT
4	Vcc

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

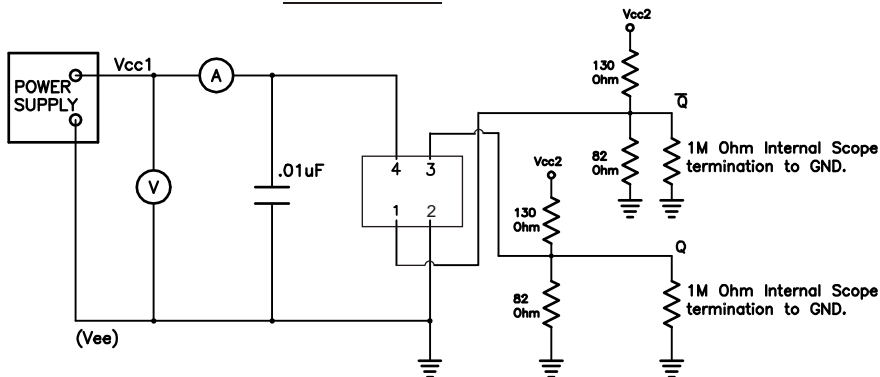
## Output Waveform



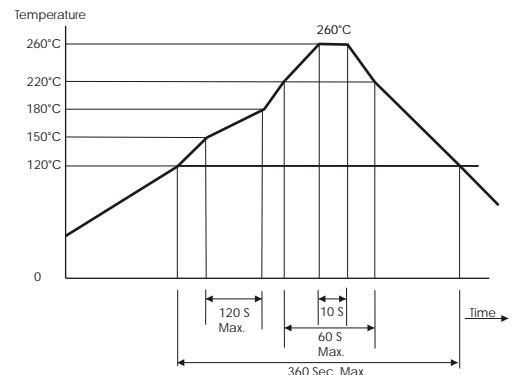
## Suggested Pad Layout



## Test Circuit



## Solder Profile



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