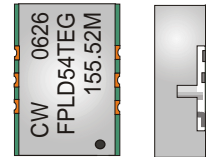


# CRYSTAL CONTROLLED OSCILLATORS

## SURFACE MOUNT 3.3V LVPECL CLOCK



### 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)	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	
SSB Phase Noise at 10Hz offset		-	-45	-	dBc/Hz	
SSB Phase Noise at 100Hz offset		-	-80	-	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-110	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-135	-	dBc/Hz	
SSB Phase Noise at 100KHz offset		-	-145	-	dBc/Hz	

### 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	
Startup 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

Solder Process	See solder profile page2.
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

## FPLD54TEG

### DESCRIPTION

The Connor-Winfield FPLD54TEG 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 FPLD54TEG 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:  $\pm 20$ ppm
- TEMPERATURE RANGE: 0 to 70°C
- SURFACE MOUNT PACKAGE
- TAPE AND REEL PACKAGING
- RoHS COMPLIANT / LEAD FREE

### ORDERING INFORMATION

FPLD54TEG - 155.52MHz

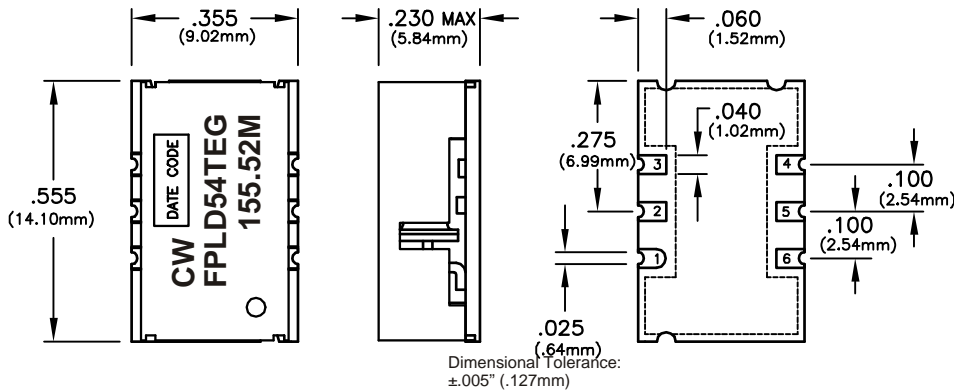
CLOCK  
SERIES

CENTER  
FREQUENCY

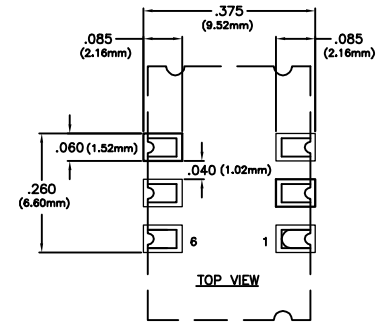
Specifications subject to change without notice.

# CRYSTAL CONTROLLED OSCILLATORS

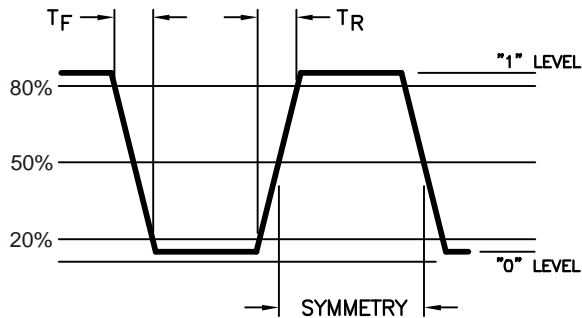
## Package Outline



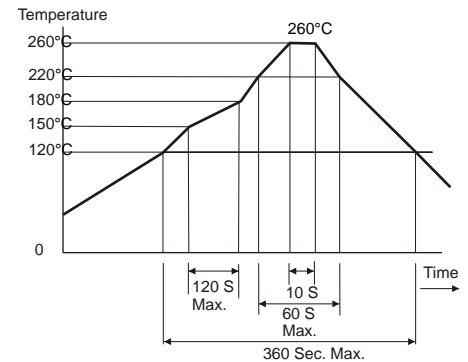
## Suggested Pad Layout



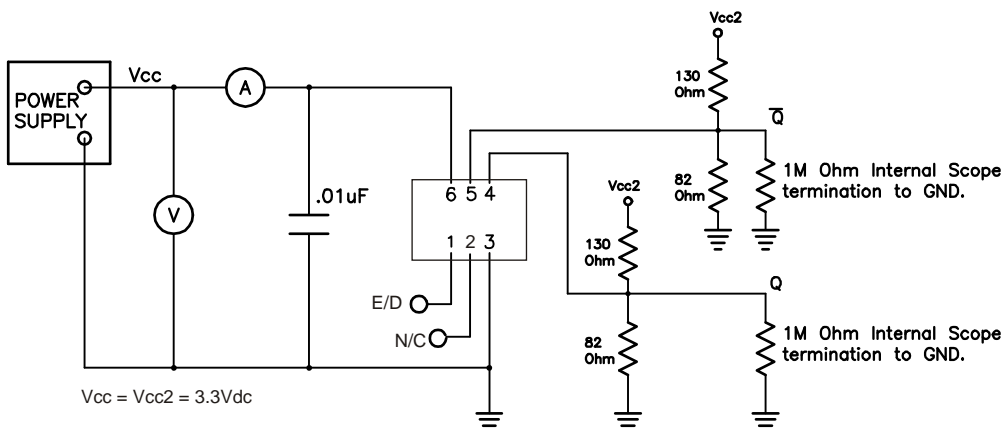
## Output Waveform



## Solder Profile



## Test Circuit



## Pin Connections

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