

CRYSTAL CONTROLLED OSCILLATORS

SURFACE MOUNT 5.0V PECL CLOCK



FPHD54T2

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)	4.75	5.0	5.25	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)	3.96	-	-	Vdc	
(Low)	(Vol)	-	-	3.40	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

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

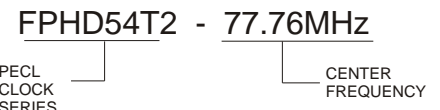
DESCRIPTION

The Connor-Winfield FPHD54T2 is a fixed frequency, surface mount Crystal Controlled Oscillator (XO) designed for applications requiring low jitter and a ±20ppm overall stability. Operating at 5.0V supply voltage, the FPHD54T2 provides PECL Differential Outputs.

FEATURES

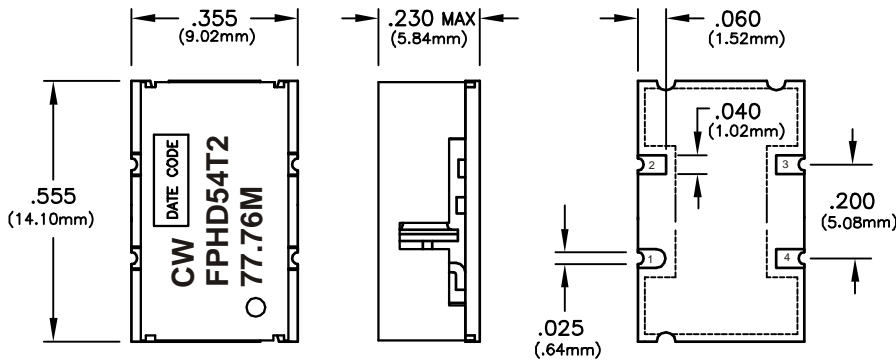
- 5.0V OPERATION
- PECL DIFFERENTIAL OUTPUTS
- LOW JITTER <1pS RMS
- OVERALL FREQUENCY TOLERANCE ±20ppm
- SURFACE MOUNT PACKAGE
- TAPE AND REEL PACKAGING

ORDERING INFORMATION



Specifications subject to change without notice.

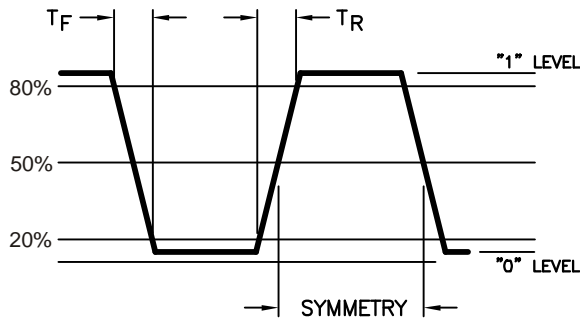
CRYSTAL CONTROLLED OSCILLATORS



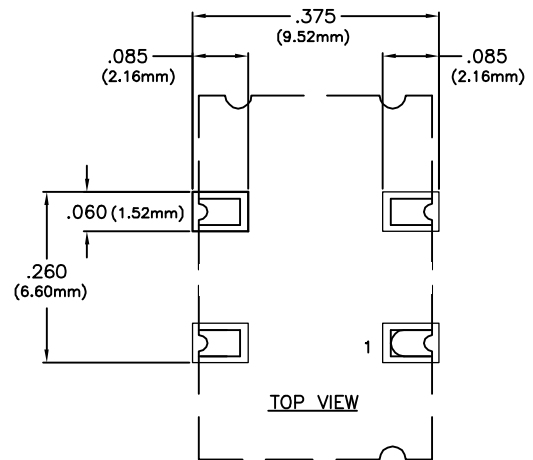
Pin	Connection
1	Q Output
2	Ground
3	Q Output
4	Vcc

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

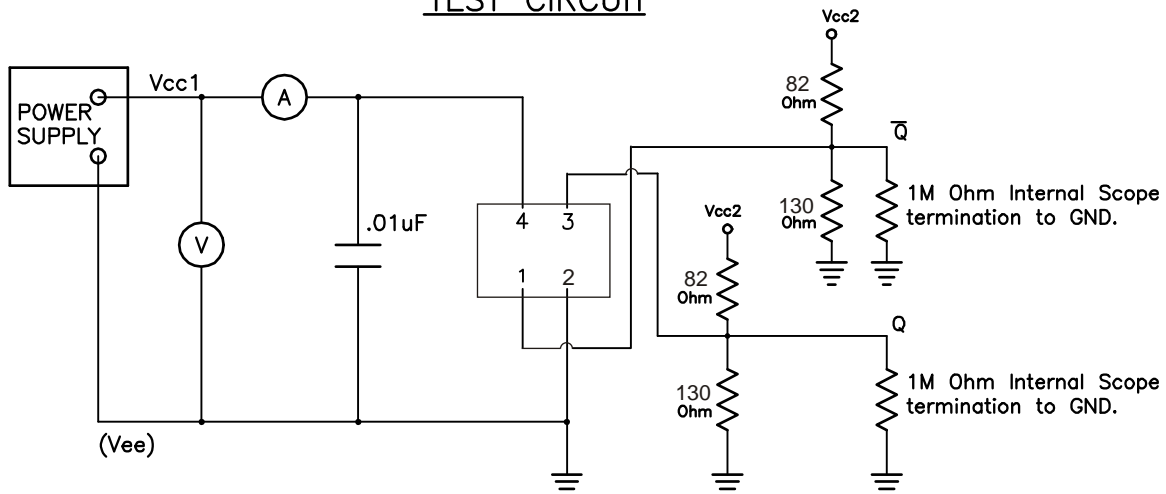
OUTPUT WAVEFORM



SUGGESTED PAD LAYOUT



TEST CIRCUIT



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