CONNOR WINFIELD

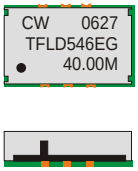
THE CONNOR-WINFIELD CORP.
2111 COMPREHENSIVE DRIVE.
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PRODUCT DATA SHEET

RoHS COMPLIANT

CRYSTAL CONTROLLED OSCILLATORS

SURFACE MOUNT 3.3V HCMOS TCXO



TFLD546EG

ABSOLUTE MAXIMUM RATINGS

TABLE 1.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Storage Temperature		-40	-	85	°C	
Supply Voltage	(Vcc)	-0.6	-	6	Vdc	

OPERATING SPECIFICATIONS

TABLE 2.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Frequency Range	(Fo)	12.80	-	156.25	MHz	
Frequency Tolerance		-4.6	-	4.6	ppm	1
Operating Temperature Range		0	-	70	°C	
Supply Voltage	(Vcc)	3.135	3.3	3.465	Vdc	
Supply Current	(Icc)	-	9	25	mA	
Jitter (BW=10Hz to 20MHz)		-	-	5	ps rms	
Jitter (BW=12kHz to 20MHz)		-	-	1	ps rms	
SSB Phase Noise at 10Hz offset		-	-60	-	dBc/Hz	
SSB Phase Noise at 100Hz offset		-	-90	-	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-120	-	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

Enable Voltage (High)	(Vih)	≥ 70% Vdd	-	-	Vdc	2
Disable Voltage (Low)	(Vil)	-	-	≤ 30% Vdd	Vdc	

HCMOS OUTPUT CHARACTERISTICS

TABLE 4.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		-	-	15	pF	
Voltage (High)	(Voh)	2.0	-	-	Vdc	
(Low)	(Vol)	-	-	0.4	Vdc	
Current (High)	(Ioh)	-4	-	-	mA	
(Low)	(Ioh)	-	-	4	mA	
Duty Cycle at 50% of Vcc		45	50	55	%	
Rise / Fall Time 10% to 90%			3	5	nS	

PACKAGE CHARACTERISTICS

TABLE 4.0

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.

Note:

1) Inclusive of calibration, frequency vs. temperature stability, supply voltage change, load change, shock and vibration, 20 years aging.
2) Oscillator output is enabled with no connection on pad 1. Output is at high impedance when disabled.

DESCRIPTION

The Connor-Winfield TFLD546EG is a Surface Mount Temperature Compensated Crystal Oscillator (TCXO). Operating at 3.3Vdc, the TFLD546EG5 will maintain ±4.6ppm frequency tolerance over 20 years. The TFLD546EG is offered in a surface mount package for automated assembly.

FEATURES

3.3V OPERATION

OVERALL FREQUENCY TOLERANCE: ±4.6ppm OVER 20 YEARS.

TEMPERATURE RANGE: 0 to 70°C

LOW JITTER <1pS RMS

TRI-STATE ENABLE/DISABLE FUNCTION

SURFACE MOUNT PACKAGE

TAPE AND REEL PACKAGING

RoHS COMPLIANT / LEAD FREE

ORDERING INFORMATION

TFLD546EG - 40.00MHz

TCXO SERIES

CENTER FREQUENCY

Specifications subject to change without notice.

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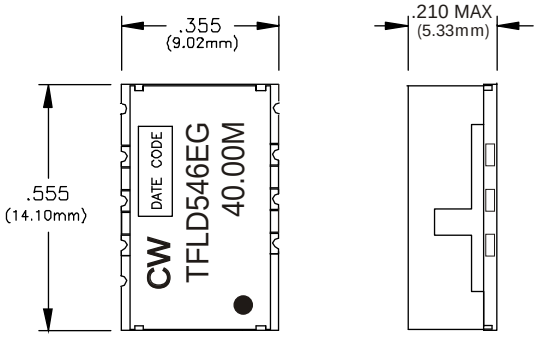
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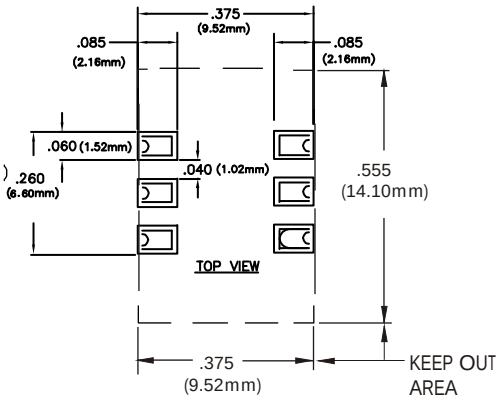
CRYSTAL CONTROLLED OSCILLATORS

Package Layout

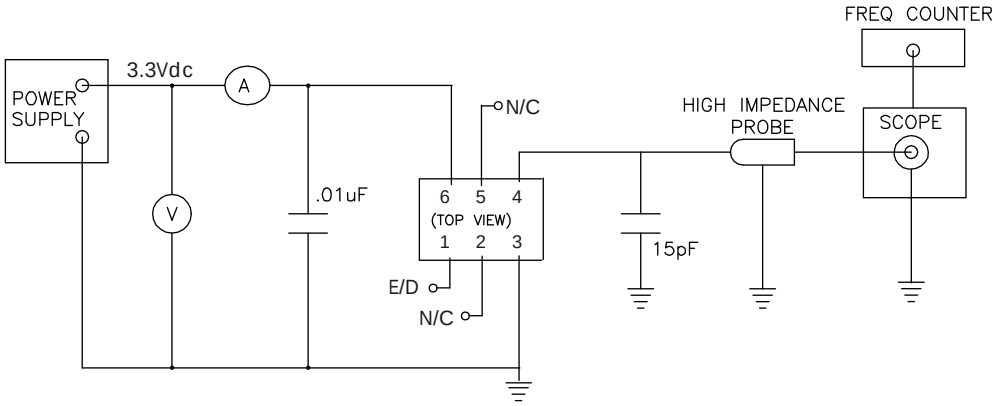


Dimensional Tolerance:
±.005 (.127mm)

Suggested Pad Layout



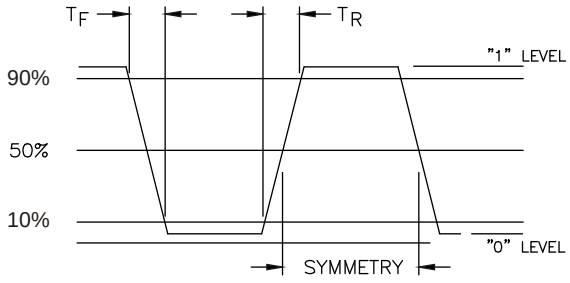
Test Circuit



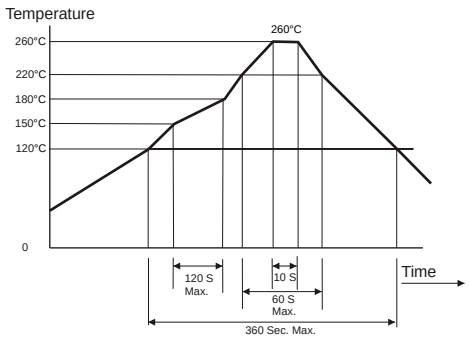
Pin Connections

Pin	Connection
1	Enable / Disable
2	N/C
3	Ground
4	Output
5	N/C
6	Vcc

Output Waveform



Reflow Profile



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