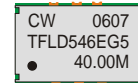


# CRYSTAL CONTROLLED OSCILLATORS

## SURFACE MOUNT 3.3V HCMOS TCXO



## TFLD546EG5

**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

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Enable Voltage (High)	(Vih)	70% Vcc	-	-	Vdc	2
Disable Voltage (Low)	(Vil)	-	-	30% Vcc	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)	(Iol)	-	-	4	mA	
Duty Cycle at 50% of Vcc		45	50	55	%	
Rise / Fall Time 10% to 90%			3	5	nS	

**PACKAGE CHARACTERISTICS**

TABLE 5.0

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

**PROCESS RECOMMENDATIONS**

TABLE 6.0

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

Note:

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

### DESCRIPTION

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

### FEATURES

- 3.3V OPERATION
- OVERALL FREQUENCY TOLERANCE:  $\pm 4.6$ ppm 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 5/6 COMPLIANT

### ORDERING INFORMATION

TFLD546EG5 - 40.00MHZ

TCXO  
SERIES

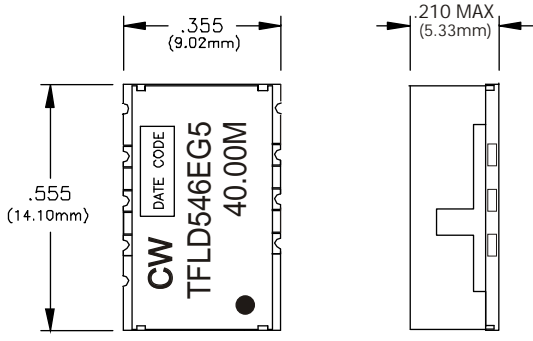
CENTER  
FREQUENCY

Specifications subject to change without notice.

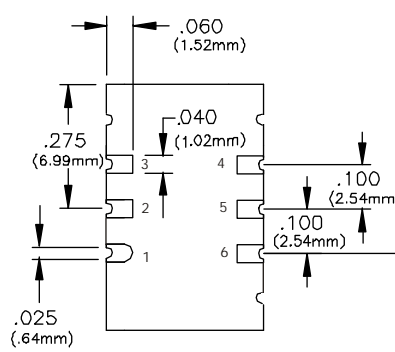
PRODUCT DATA SHEET

CRYSTAL CONTROLLED OSCILLATORS

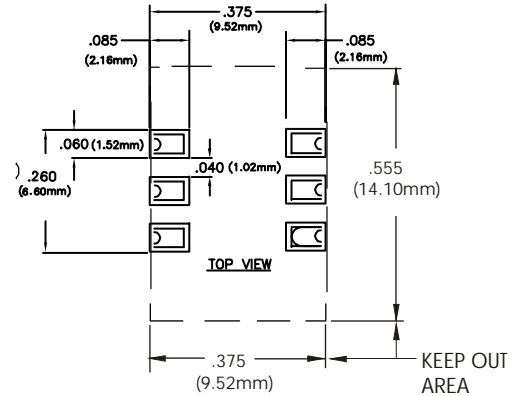
Package Layout



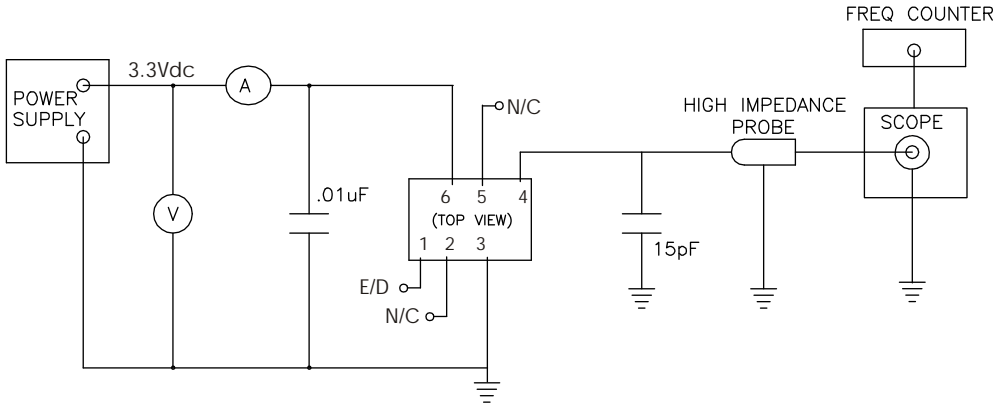
Dimensional Tolerance:  
±.005 (.127mm)



Suggested Pad Layout



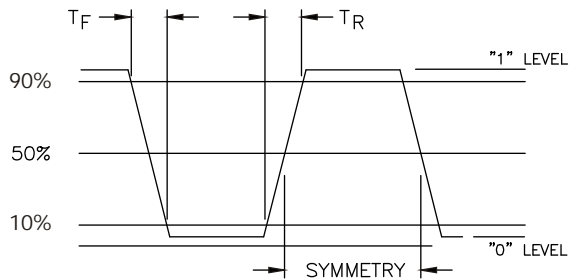
Test Circuit



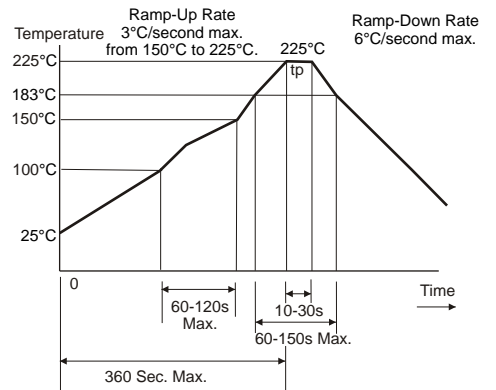
Pin Connections

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

Output Waveform



Solder Profile



Specifications subject to change without notice.