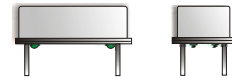


# CRYSTAL CONTROLLED OSCILLATORS

## 14 PIN 3.3V LVPECL CLOCK OSCILLATOR



### 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	

### MODEL SPECIFICATIONS:

TABLE 2.0

#### MODEL EE14-511G

Center Frequency	(Fo)	13	-	225	MHz	
Total Frequency Tolerance		-25		25	ppm	1

#### MODEL EE14-521G

Center Frequency	(Fo)	13	-	230	MHz	
Total Frequency Tolerance		-50		50	ppm	1

#### MODEL EE14-531G

Center Frequency	(Fo)	13	-	230	MHz	
Total Frequency Tolerance		-100		100	ppm	1

#### MODEL EE14-541G

Center Frequency	(Fo)	13	-	225	MHz	
Total Frequency Tolerance		-20		20	ppm	1

### OPERATING SPECIFICATIONS

TABLE 3.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
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 100Hz offset		-	-60	-	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-100	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-130	-	dBc/Hz	
SSB Phase Noise at 100KHz offset		-	-140	-	dBc/Hz	

### PECL OUTPUT CHARACTERISTICS

TABLE 4.0

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 5.0

Package	Hermetically sealed, 14 pin DIP metal package.
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#### Notes

- Inclusive of calibration tolerance @ 25°C, frequency vs. temperature, frequency vs. change in supply voltage, frequency vs. load variations, shock and vibration and 10 years aging.
- Output must be terminated into 50 ohms to Vcc - 2V or Thevenin equivalent.
- Duty Cycle measured at 1.977V

EE14-511G, EE14-521G,  
EE14-531G, EE14-541G

### DESCRIPTION

The Connor-Winfield EE14-5xxG series are fixed frequency Crystal Controlled Oscillators (XO) designed for applications requiring low jitter and a tight frequency stability. Operating at 3.3V supply voltage, the EE14-5xx series provides LVPECL Differential outputs.

### FEATURES

3.3V OPERATION

LOW JITTER <1pS RMS

LVPECL DIFFERENTIAL OUTPUTS

OVERALL FREQUENCY TOLERANCE:

MODEL EE14-511G ±25ppm  
MODEL EE14-521G ±50ppm  
MODEL EE14-531G ±100ppm  
MODEL EE14-541G ±20ppm

TEMPERATURE RANGE: 0 to 70°C

HERMETICALLY SEALED 14 PIN DIP PACKAGE

RoHS COMPLIANT / LEAD FREE

### ORDERING INFORMATION

EE14-511G - 125.00 MHz

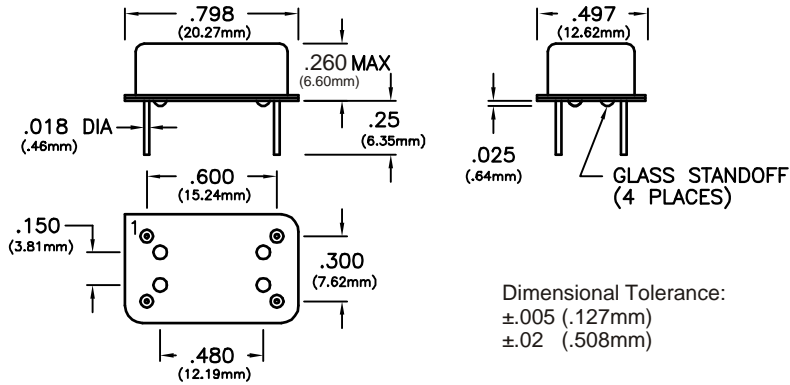
LVPECL  
CLOCK  
SERIES

CENTER  
FREQUENCY

Specifications subject to change without notice.

# CRYSTAL CONTROLLED OSCILLATORS

## Package Outline

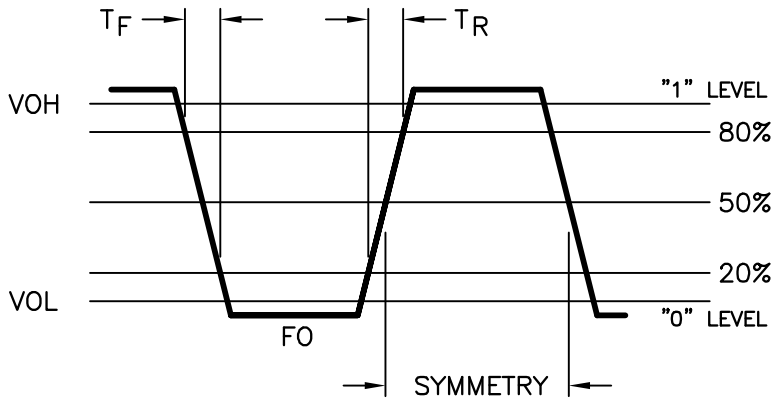


## Pin Connections

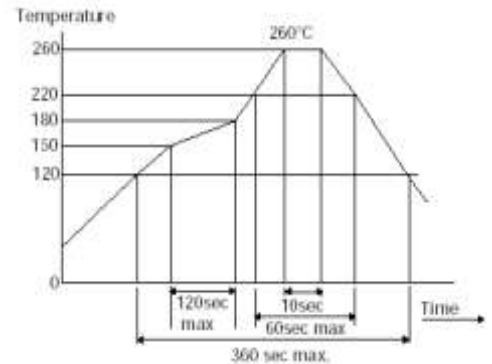
TABLE 6.0

Pin	Connection
1	Q Output
7	Ground
8	Q Output
14	Vcc

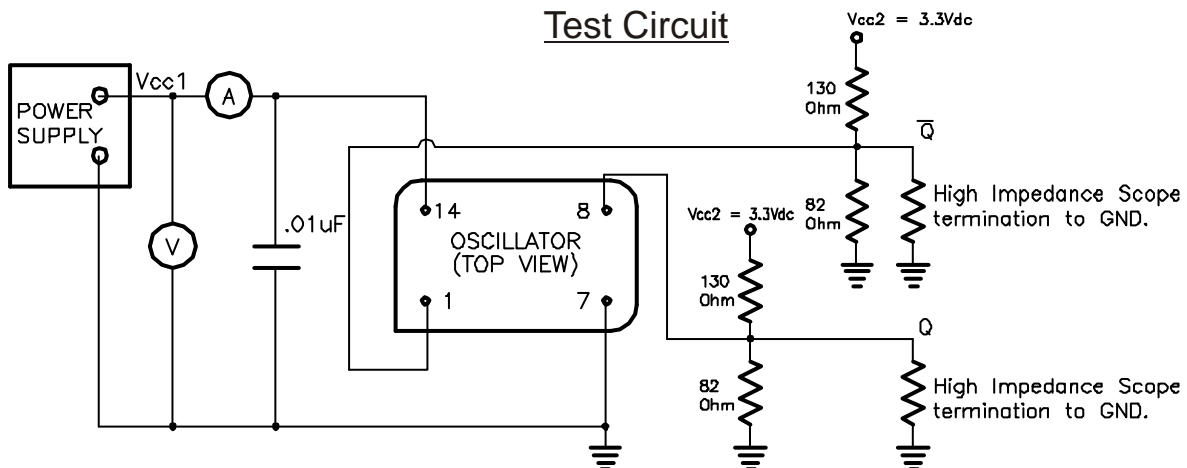
## Output Waveform



## Reflow Profile



## Test Circuit



Specifications subject to change without notice.