

High Frequency LVPECL Oscillator Model P752



2111 Comprehensive Drive
Aurora, Illinois 60505
Phone: 630-851-4722
Fax: 630-851-5040
www.conwin.com
US Headquarters:
630-851-4722
European Headquarters:
+353-61-472221

Description:

The Connor-Winfield P752 is a 5x7 mm, 3.3V LVPECL, Surface Mount, Crystal Controlled Oscillator (XO) designed for applications requiring low jitter, +/-100 ppm, overall frequency tolerance and -40 to 85 °C operation. The P752 is designed using a PLL multiplier to achieve the high frequency output. The RoHS compliant surface mount package is optimum for mass production.



Features:

3.3 Vdc Operation
Frequency Tolerance: ± 100 ppm
Temperature Range: -40 to 85°C
LVPECL Output Logic
Tri-State Enable/Disable Pad 1
Low Jitter: <2 ps rms
Ceramic Surface Mount Package
Tape and Reel Packaging
RoHS Compliant / Lead Free

Absolute Maximum Ratings

Parameter	Minimum	Nominal	Maximum	Units	Notes
Storage Temperature	-55	-	125	°C	
Supply Voltage (Vcc)	-0.5	-	4.6	Vdc	
Input Voltage	-0.5	-	Vcc + 0.5	Vdc	

Operating Specifications

Parameter	Minimum	Nominal	Maximum	Units	Notes
Output Frequency (Fo)	250	-	800	MHz	
Frequency Tolerance	-100	-	100	ppm	1
Operating Temp Range	-40	-	85	°C	
Supply Voltage (Vcc)	3.135	3.3	3.465	Vdc	
Supply Current (Icc)	-	60	100	mA	
Jitter:					
Period Jitter (Fo=800 MHz)	-	6	8	ps rms	
Integrated Phase Jitter	-	1.5	2.0	ps rms	2
SSB Phase Noise (Fo=800 MHz)					
@ 100 Hz offset	-	-90	-	dBc/Hz	
@ 1 KHz offset	-	-110	-	dBc/Hz	
@ 10 KHz offset	-	-115	-	dBc/Hz	
@ 100 KHz offset	-	-110	-	dBc/Hz	
@ 1 MHz offset	-	-110	-	dBc/Hz	
Start-Up Time	-	-	10	ms	

Enable / Disable Input Characteristics

Parameter	Minimum	Nominal	Maximum	Units	Notes
Enable Input Voltage - (Vih)	2.275	-	-	Vdc	3
Disable Input Voltage - (Vil)	-	-	1.68	Vdc	3

LVPECL Output Characteristics

Parameter	Minimum	Nominal	Maximum	Units	Notes
Load -	-	50	-	Ohm	4
Voltage High (Voh)	2.275	-	-	Vdc	
Low (Vol)	-	-	1.68	Vdc	
Duty Cycle at 50% Level	45	50	55	%	5
Rise / Fall Time: 20% to 80%	-	-	0.5	ns	

Package Characteristics

Package	Hermetically sealed ceramic package and metal cover
---------	---

Notes:

1. Includes calibration @ 25°C, frequency stability vs. change in temperature, supply voltage and load variations, shock and vibration and 20 years aging.
2. BW=12 KHz to 20 MHz, Fo=800 MHz.
3. When the oscillator is disabled the outputs are at high impedance. Outputs are enabled with no connection on pad 1.
4. Outputs must be terminated into 50 ohms to Vcc-2V or Thevenin equivalent.
5. Duty cycle measured at 50% of output voltage swing..



Bulletin **Ec242**
Page **1 of 2**
Revision **02**
Date **20 Sept 2010**

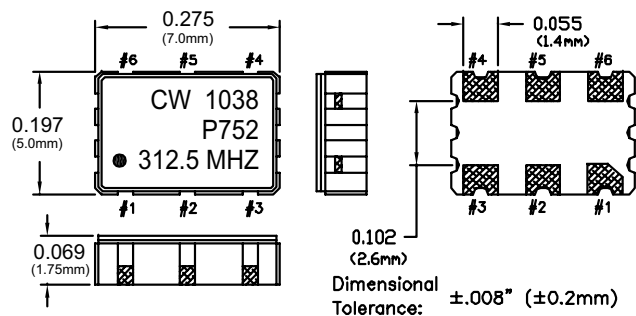
Environmental Characteristics

Vibration:	Vibration per Mil Std 883E Method 2007.3 Test Condition A.
Shock:	Mechanical Shock per Mil Std 883E Method 2002.4 Test Condition B.
Soldering Process:	RoHS compliant lead free. See soldering profile on page 2.

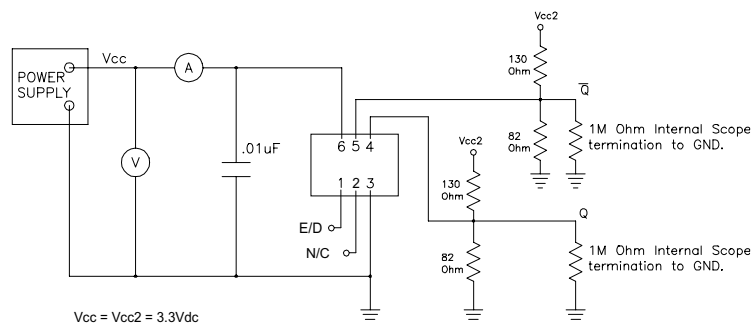
Enable / Disable Function

Function:	Output
Low:	Disabled (High Impedance)
High or Open:	Enabled

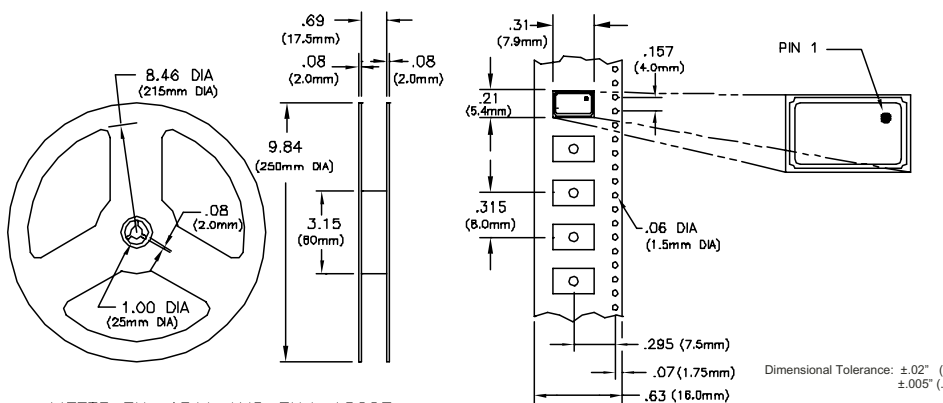
Package Layout



Test Circuit



Tape and Reel Dimensions



MEETS EIA-481A AND EIAJ-1009B
2,000 PCS/REEL

Ordering Information

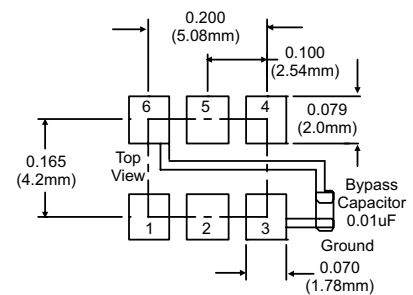
P752 - 312.5M

LVPECL
CLOCK
SERIES

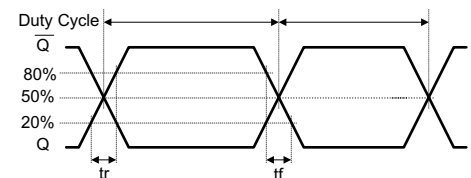
Pad Connections

1:	Enable / Disable
2	N/C
3:	Ground
4:	Output
5:	Complementary Output
6:	Supply Voltage (Vcc)

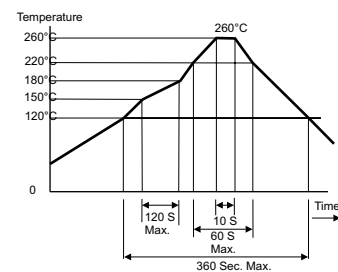
Suggested Pad Layout



Output Waveform



Solder Profile



Bulletin	Ec242
Page	2 of 2
Revision	02
Date	20 Sept 2010