

# CRYSTAL CONTROLLED OSCILLATORS

## CERAMIC SURFACE MOUNT 3.3V LVPECL 5x7.5mm CLOCK



P214

### ABSOLUTE MAXIMUM RATINGS

TABLE 1.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Storage Temperature		-55	-	125	°C	
Supply Voltage	(Vcc)	-0.5	-	7.0	Vdc	

### OPERATING SPECIFICATIONS

TABLE 2.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Center Frequency	(Fo)	75	-	170	MHz	
Total Frequency Tolerance		-25	-	25	ppm	1
Operating Temperature Range		-40	-	85	°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	

### INPUT CHARACTERISTICS

TABLE 3.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Disable Input Voltage (Low)	(Vil)	-	-	≤30% Vcc	Vdc	2
Enable Input Voltage (High)	(Vih)	≥70% Vcc	-	-	Vdc	2
Standby Current	(Icc)	-	-	10	uA	

### PECL OUTPUT CHARACTERISTICS

TABLE 4.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		-	-	50	Ohms	3
Voltage (High)	(Voh)	2.275	-	-	Vdc	
(Low)	(Vol)	-	-	1.68	Vdc	
Duty Cycle		45	50	55	%	4
Rise / Fall Time 20% to 80%		-	0.5	1	nS	

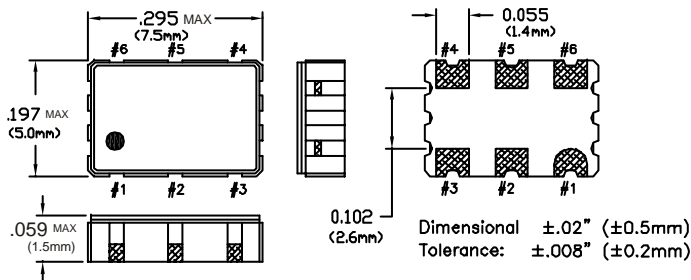
### PACKAGE CHARACTERISTICS

TABLE 5.0

Package	Hermetically sealed ceramic package and metal cover.
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Notes

- 1) Includes initial tolerance, deviation over temperature, supply and load variations, shock, vibration and 20 years aging.
- 2) When the oscillator is disabled, the outputs are at High Impedance. Output is enabled with no connection on pad 2.
- 3) Output must be terminated into 50 ohms to Vcc - 2V or Thevenin equivalent.
- 4) Duty Cycle measured at 50% of output swing.



### DESCRIPTION

The Connor-Winfield P214 is a fixed frequency, surface mount Crystal Controlled Oscillator (XO) designed for applications requiring low jitter and a  $\pm 25\text{ppm}$  overall stability. Operating at 3.3V supply voltage, the P214 provides LVPECL Differential Outputs with Enable/Disable function on Pad 2.

### FEATURES

- 3.3V OPERATION
- LVPECL DIFFERENTIAL OUTPUTS
- ENABLE / DISABLE on PAD 2
- LOW JITTER <1pS RMS
- OVERALL FREQUENCY TOLERANCE  $\pm 25\text{ppm}$
- TEMPERATURE RANGE: -40 to 85°C
- SURFACE MOUNT PACKAGE
- TAPE AND REEL PACKAGING

### ORDERING INFORMATION

P214 - 155.52MHz

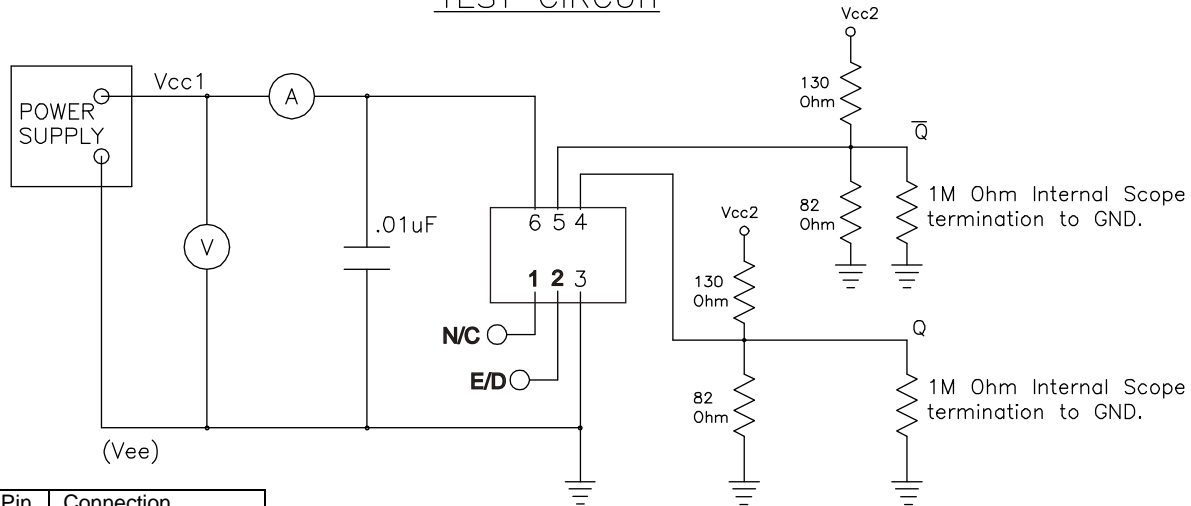
LVPECL  
CLOCK  
SERIES

CENTER  
FREQUENCY

Specifications subject to change without notice.

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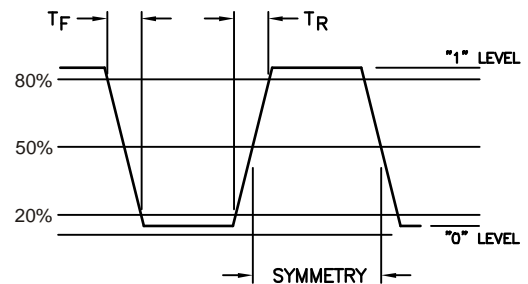
TEST CIRCUIT



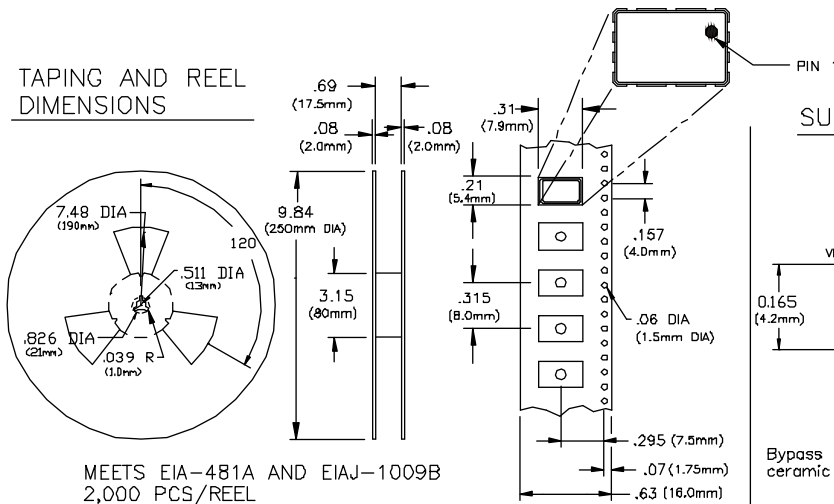
Pin	Connection
1	N/C
2	Enable / Disable
3	Ground
4	Q Output
5	Q Output
6	Vcc

Enable / Disable Function (Pad 2)	Output
High or Open	Enable
Low	Disable (High Impedance)

OUTPUT WAVEFORM

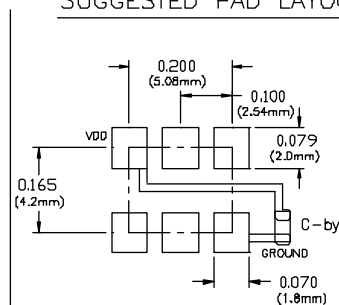


TAPING AND REEL DIMENSIONS



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

SUGGESTED PAD LAYOUT



Bypass capacitor, C-by, should be ceramic capacitor  $\geq .01\mu\text{f}$ .

Dimensional  $\pm .02"$  ( $\pm 0.5\text{mm}$ )  
Tolerance:  $\pm .008"$  ( $\pm 0.2\text{mm}$ )

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