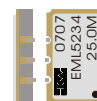


CRYSTAL CONTROLLED OSCILLATORS

3.3V 9x14mm SURFACE MOUNT LVPECL CLOCK OSCILLATOR



EML5234

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)	19.44	-	167	MHz	
Total Frequency Tolerance		-50	-	50	ppm	1
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 10Hz offset		-	-60	-	dBc/Hz	
SSB Phase Noise at 100Hz offset		-	-90	-	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-100	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-125	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-135	-	dBc/Hz	

INPUT CHARACTERISTICS

TABLE 3.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Enable Input Voltage (Low)	(Vil)	-	-	1.68	Vdc	2
Disable Input Voltage (High)	(Vih)	2.275	-	-	Vdc	2

LVPECL 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%		-	-	1	nS	

PACKAGE CHARACTERISTICS

TABLE 5.0

Package	Hermetically sealed, ceramic package with gold plated J leads.
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Notes

- Inclusive of calibration @ 25°C, frequency stability vs. change in temperature, supply and load variations, shock, vibration and aging (10 years).
- When oscillator is disabled the true output is in a low state (Vol) and the complementary output is in the high state (Voh)
- Output must be terminated into 50 ohms to Vcc - 2V or Thevenin equivalent.
- Duty Cycle measured at 1.977V

DESCRIPTION

The Connor-Winfield EML5234 is a fixed frequency surface mount Crystal Controlled Oscillator (XO) designed for applications requiring low jitter and tight frequency stability. Operating at 3.3V supply voltage, the EML5234 provides complementary LVPECL compatible outputs.

FEATURES

- 3.3V OPERATION
- LVPECL DIFFERENTIAL OUTPUTS
- LOW JITTER <1ps RMS
- OVERALL FREQUENCY TOLERANCE: ±50ppm
- INDUSTRIAL TEMPERATURE RANGE: 0 to 70°C
- ENABLE / DISABLE FUNCTION
- SURFACE MOUNT PACKAGE
- TAPE AND REEL PACKAGING
- RoHS COMPLIANT / LEAD FREE

ORDERING INFORMATION

EML5234 - 25.0MHz

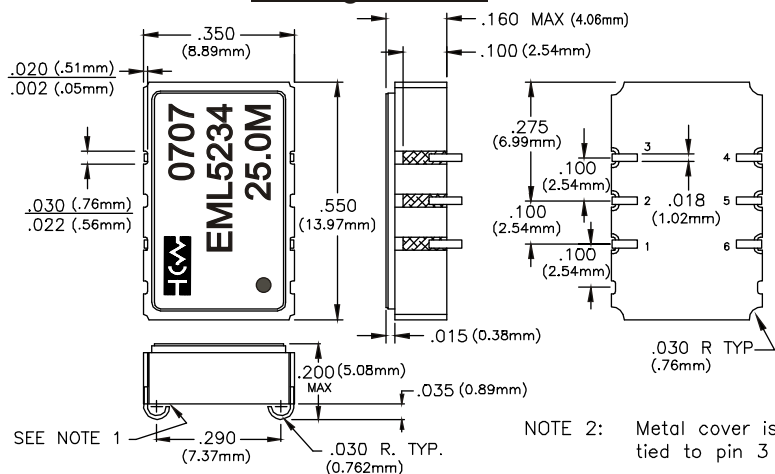
LVPECL
SERIES

CENTER
FREQUENCY

Specifications subject to change without notice.

CRYSTAL CONTROLLED OSCILLATORS

Package Outline



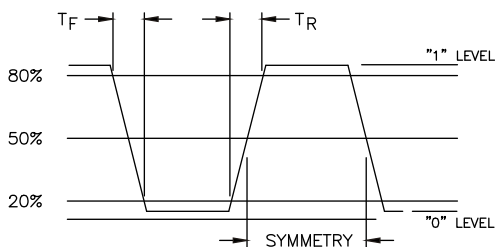
SEE NOTE 1

NOTE 1:— Free end of J lead not attached to bottom surface.

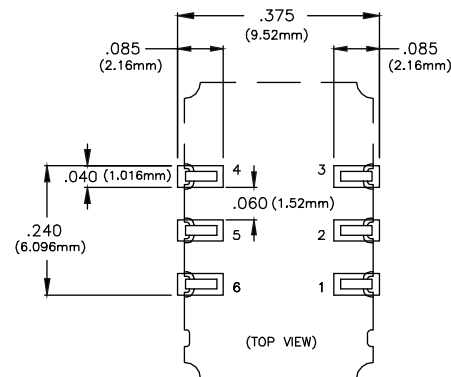
Pin Connections

PIN	CONNECTION
1	E/D
2	N/C
3	GROUND
4	Q OUTPUT
5	\bar{Q} OUTPUT
6	Vcc

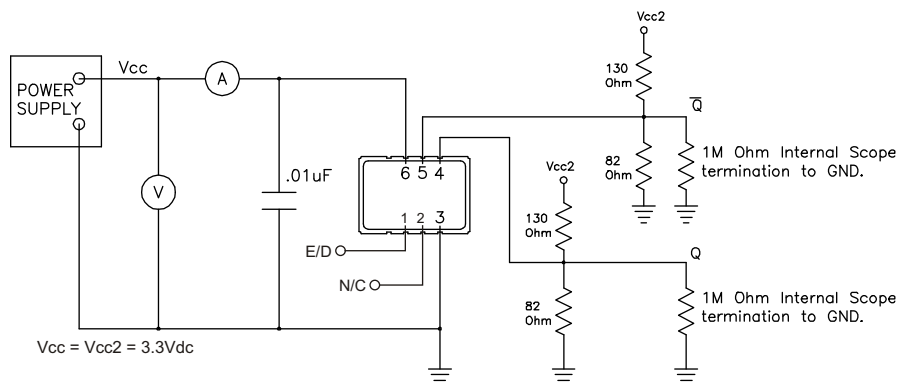
Output Waveform



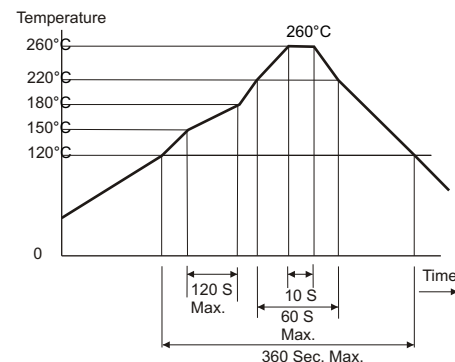
Suggested Pad Layout



Test Circuit



Solder Profile



Specifications subject to change without notice.