

CRYSTAL CONTROLLED OSCILLATORS

SURFACE MOUNT 3.3V LVPECL CLOCK



EML5443G

ABSOLUTE MAXIMUM RATINGS

TABLE 1.0

PARAMETER	UNITS	MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Storage Temperature		-55	-	125	°C	
Supply Voltage	(Vcc)	-0.5	-	4.6	Vdc	
Input Voltage	(Vcc)	-0.5	-	Vcc+0.5	Vdc	

OPERATING SPECIFICATIONS

TABLE 2.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Center Frequency	(Fo)	35	-	200	MHz	
Total Frequency Tolerance		-20	-	20	ppm	1
Operating Temperature Range		0	-	70	°C	
Supply Voltage	(Vcc)	3.135	3.3	3.465	Vdc	
Supply Current	(Icc)	-	-	70	mA	
Period Jitter (BW=10Hz to 20MHz)		-	3	5	ps rms	
Period Jitter (BW=12kHz to 20MHz)		-	0.5	1	ps rms	
Allan Variance (1 Second)		-	-	1.00 E-9		2
SSB Phase Noise at 10Hz offset		-	-60	-	dBc/Hz	
SSB Phase Noise at 100Hz offset		-	-90	-	dBc/Hz	
SSB Phase Noise at 1KHz offset		-	-115	-	dBc/Hz	
SSB Phase Noise at 10KHz offset		-	-135	-	dBc/Hz	
SSB Phase Noise at 100KHz offset		-	-140	-	dBc/Hz	
Start Up Time		-	-	10	ms	

LVPECL OUTPUT CHARACTERISTICS

TABLE 3.0

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%		-	-	450	ps	

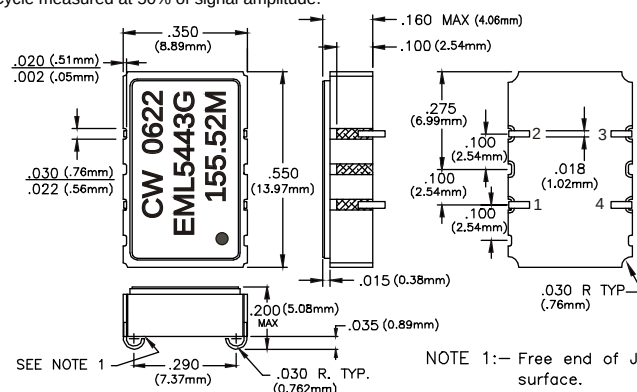
PACKAGE CHARACTERISTICS

TABLE 4.0

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

Notes

- 1) Includes calibration, stability vs. temperature, supply and load variations, shock, vibration and aging (10 years).
- 2) Measured at 1 second gate with 10 samples after 2 hours minimum warm up.
- 3) Output must be terminated into 50 ohms to Vcc - 2V or Thevenin equivalent.
- 4) Duty Cycle measured at 50% of signal amplitude.



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

DESCRIPTION

The Connor-Winfield EML5443G 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 EML5443G provides LVPECL compatible outputs.

FEATURES

- 3.3V OPERATION
- LVPECL DIFFERENTIAL OUTPUTS
- LOW JITTER <1pS RMS
- OVERALL FREQUENCY TOLERANCE: ±20ppm
- TEMPERATURE RANGE: 0 to 70°C
- SURFACE MOUNT PACKAGE
- TAPE AND REEL PACKAGING
- RoHS COMPLIANT / LEAD FREE

ORDERING INFORMATION

EML5443G - 155.52MHz

LVPECL
SERIES

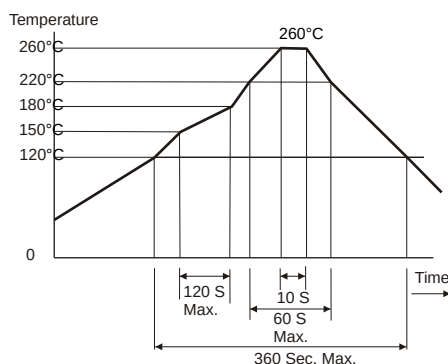
CENTER
FREQUENCY

Specifications subject to change without notice.

PRODUCT DATA SHEET

CRYSTAL CONTROLLED OSCILLATORS

SOLDER PROFILE

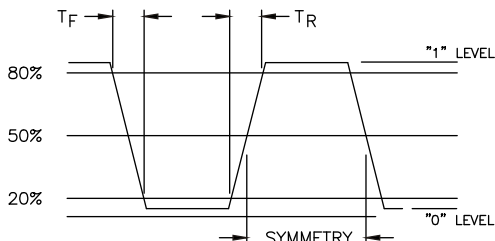


PIN CONNECTIONS

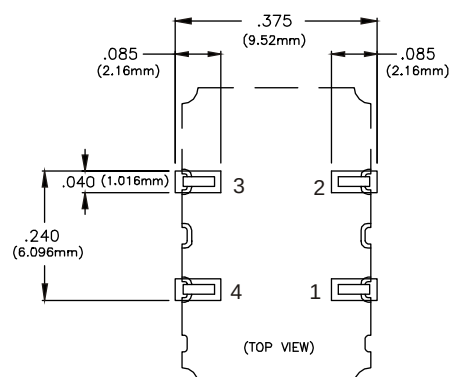
TABLE 5.0

Pin	Connection
1	Q Output
2	Ground
3	Q Output
4	Vcc

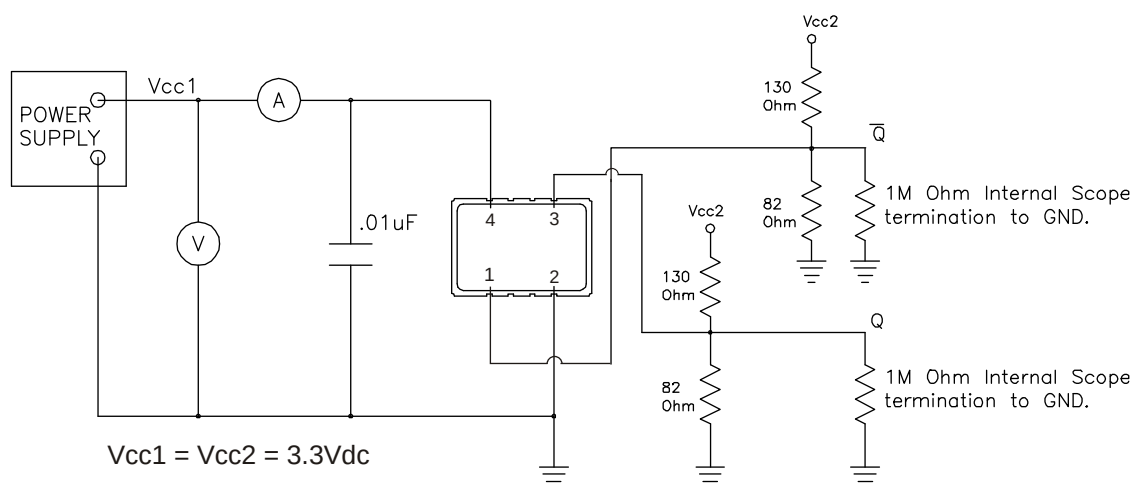
OUTPUT WAVEFORM



SUGGESTED PAD LAYOUT



TEST CIRCUIT



Specifications subject to change without notice.