

CRYSTAL CONTROLLED OSCILLATORS

5.0V SURFACE MOUNT 5x3.2mm CRYSTAL CLOCK OSCILLATOR



7115, 7125,
7135

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	

MODEL SPECIFICATIONS:
TABLE 2.0

MODEL 7115						
Frequency Range	(Fo)	1.8	-	50	MHz	
Frequency Tolerance:		-25	-	25	ppm	1
MODEL 7125						
Frequency Range	(Fo)	1.8	-	50	MHz	
Frequency Tolerance:		-50	-	50	ppm	1
MODEL 7135						
Frequency Range	(Fo)	1.8	-	50	MHz	
Frequency Tolerance:		-100	-	100	ppm	1

OPERATING SPECIFICATIONS
TABLE 3.0

PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
Operating Temperature Range		0	-	70	°C	
Supply Voltage	(Vdd)	4.5	5.0	5.5	Vdc	
Supply Current	(Icc)	-	-	45	mA	

INPUT CHARACTERISTICS
TABLE 4.0

Enable Voltage	(Vih)	2.2	-	-	Vdc	2
Disable Voltage	(Vil)	-	-	0.8	Vdc	
Enable Time		-	-	100	nS	
Disable Time		-	-	100	nS	

HCMOS OUTPUT CHARACTERISTICS
TABLE 5.0

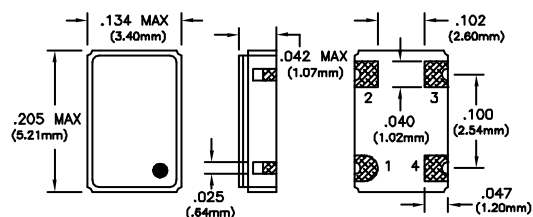
PARAMETER		MINIMUM	NOMINAL	MAXIMUM	UNITS	NOTE
LOAD		-	-	50	pF	
Voltage (High)	(Voh)	4.50	-	-	Vdc	
(Low)	(Vol)	-	-	0.55	Vdc	
Current (High)	(Ioh)	-16	-	-	mA	
(Low)	(Iol)	-	-	16	mA	
Duty Cycle at 50% of Vcc		40	50	60	%	
Rise / Fall Time 10% to 90%		-	-	5	nS	
Start-Up Time		-	-	10	mS	
Jitter		-	-	5	pS RMS	

PACKAGE CHARACTERISTICS
TABLE 6.0

Package	Hermetically sealed ceramic package and metal cover
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Note:

- 1) Inclusive of calibration @ 25°C, frequency vs. temperature stability, supply voltage change, load change, shock and vibration, 10 years aging.
- 2) Oscillator output is enabled with no connection on pad 1



PAD	CONNECTION
1	ENABLE/DISABLE
2	GROUND
3	OUTPUT
4	VCC

Dimensional Tolerance: ±.02" (.508mm)
±.005" (.127mm)

DESCRIPTION

The Connor-Winfield models 7115, 7125 and 7135 are 5.0V HCMOS, Surface Mount, Fixed Frequency Crystal Oscillators (XO) designed for use in all applications requiring precision clocks. The surface mount package is designed for high-density mounting and is optimum for mass production.

FEATURES

- 1.8 to 50 MHz
- 5.0V OPERATION
- TRI-STATE ENABLE / DISABLE FUNCTION
- OVERALL FREQUENCY TOLERANCE:
7115 ±25ppm
7125 ±50ppm
7135 ±100ppm
- TEMPERATURE RANGE: 0 to 70°C
- CERAMIC SURFACE MOUNT PACKAGE
- TAPE AND REEL PACKAGING

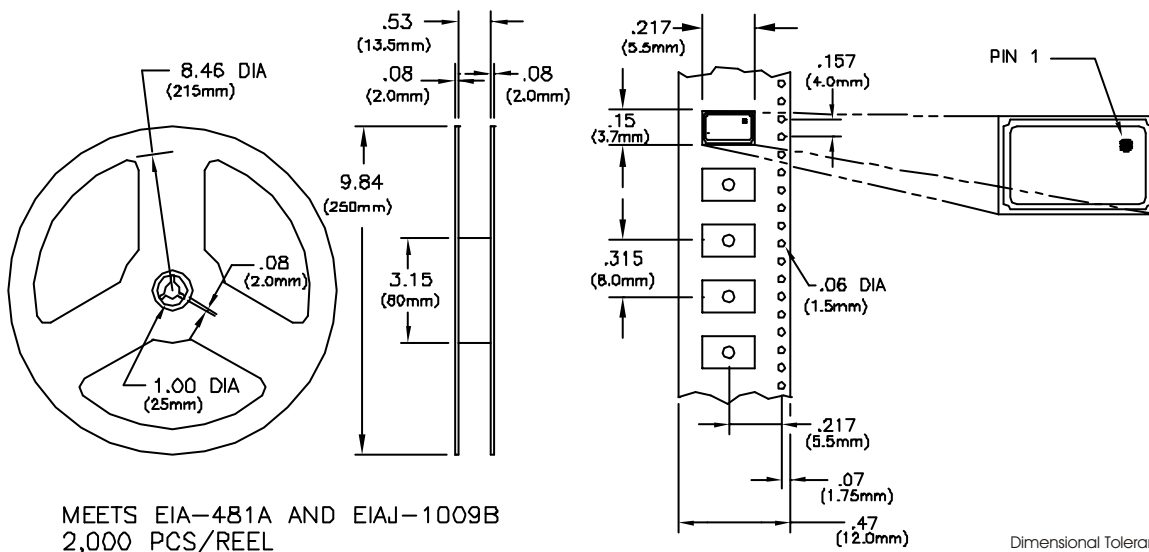
ORDERING INFORMATION

7115	-	20.00 MHz
CLOCK SERIES		CENTER FREQUENCY

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ENVIRONMENTAL CHARACTERISTICS	TEST CIRCUIT
TEMPERATURE CYCLE: The specimen shall meet electrical characteristics after tested 5 cycles of -55°C/30 min & +125°C/30 min. HERMETICAL No bubbles appear in Fluorinert (FC-43) at 125°C ±5°C, for 5 minutes. SOLVENT RESISTANCE: Marking will withstand immersion in Isopropyl Alcohol or Trichloroethylene.	
SOLDERING	OUTPUT WAVEFORM
GENERAL CONDITIONS: 260°C max x 10 sec max x 2 times max or 230°C max x 180 sec max x 1 time. TYPICAL OPERATION DATA (Vapor phase reflow) 20 to 100 sec up to 215°C, 50 sec at 215°C then down to room temperature per 1 to 5°C/sec	
MECHANICAL CHARACTERISTICS	SUGGESTED PAD LAYOUT
FREE DROP: The specimen shall meet electrical characteristics after tested 3 times Free Drop testing on the hard wooden board from a height of 75cm. VIBRATION: The specimen shall meet electrical characteristics after tested by the following conditions: 10-55Hz 1.5mm Amplitude, 55-2000Hz 20G's, 2 hours for each plane. THERMAL SHOCK: After applied Thermal Shock of 260°C max x 10 sec max x 2 times, or 230°C max x 180 sec max, the specimen shall meet electrical characteristics. SOLDERABILITY: (EIAJ-RGX-0102/101 Condition 1a) 1. Flux: MIL-F-14256 (WW Rosin=25%, Isopropyl alcohol=75%) 2. Solder: 60-S-571 (Sn=63%, Pb=37%) 3. Solder bath temperature: 235°C ±5°C. 4. Depth of immersion: Up to electrical terminal. 5. Immersing time: Within 2 sec ±0.5 sec into solder bath. After performing the above procedures, a newly soldered coverage shall be greater than 90%.	Bypass capacitor, C-by, should be ceramic capacitor ≥ .01uF.
TAPING AND REEL DIMENSIONS	



Dimensional Tolerance: ±.02" (.508mm)
±.005" (.127mm)

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