

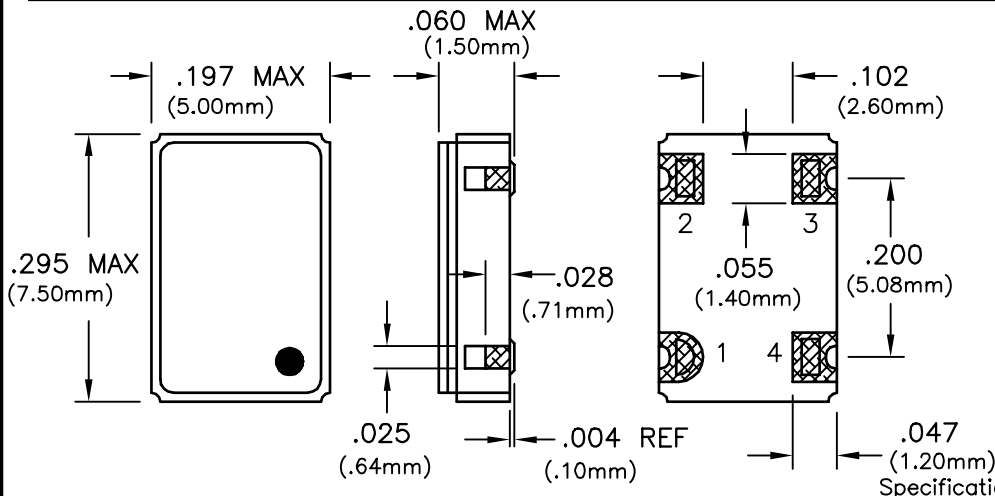


# CONNOR-WINFIELD CORPORATION

AURORA, IL. 60505  
 PHONE (630) 851-4722  
 FAX (630) 851-5040

## HCMOS SURFACE MOUNT OSCILLATORS

SPECIFICATIONS		HSM59			
Frequency Range		1.8MHz to 80MHz			
Frequency Stability		±30ppm			
		(Inclusive of calibration tolerance at 25°C, operating temperature range, input voltage change, load change, aging, shock and vibration)			
Temperature Range		0°C to +70°C			
Output		Waveform			
		HCMOS Squarewave			
		Load			
		50pF			
		Voltage	Voh	4.5V Minimum	
			Vol	0.5V Maximum	
		Current	Ioh	-16mA	
Iol	16mA				
Duty Cycle		45/55% Maximum			
Rise/Fall Time		5nS Maximum			
Input		Output E/D Time			
		100nS Maximum			
		Enable	Vih	2.2V Minimum	
			Iih	400uA Maximum , 30uA Typical	
		Disable	Vil	0.8V Maximum	
Iil	400uA Maximum , 50uA Typical				
Oscillator output is enabled with no connection on pin 1					
Start Up Time		10mS Maximum			
Supply Voltage		+5Vdc ±10%			
Supply Current		1.8MHz to 20MHz: 20mA Maximum			
		20MHz to 50MHz: 30mA Maximum			
		50MHz to 70MHz: 50mA Maximum			
		70MHz to 80MHz: 80mA Maximum			



PIN	CONNECTION
1	ENABLE/DISABLE
2	GROUND
3	OUTPUT
4	VDD

Dimensional Tolerance: .005 (.13mm)

### ORDERING INFORMATION

HSM59 - 50.00MHz

CLOCK SERIES

CENTER FREQUENCY

Specifications subject to change without notice

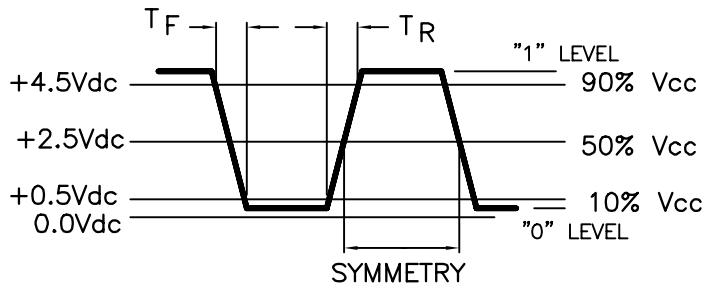
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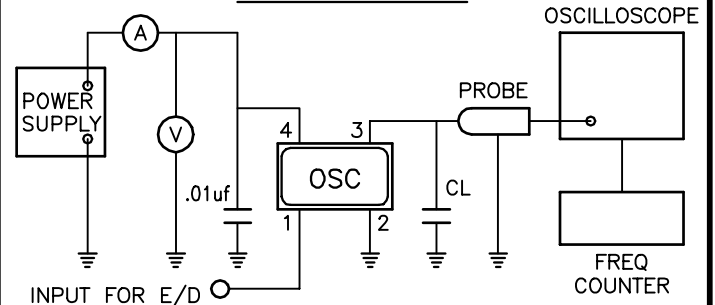
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## OUTPUT WAVEFORM



## TEST CIRCUIT



## MECHANICAL CHARACTERISTICS

### 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-RCX-0102/101 Condition 1a)

1. Flux: ML-F-14256 (WW Rosin=25%, Isopropyl alcohol=75%)
2. Solder: QQ-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%.

## ENVIRONMENTAL CHARACTERISTICS

### 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 Flourinert (FC-43) at 125 C +/-5 C, for 5 minutes.

### SOLVENT RESISTANCE:

Marking will withstand immersion in Isopropyl Alcohol or Trichloroethylene.

## SOLDERING

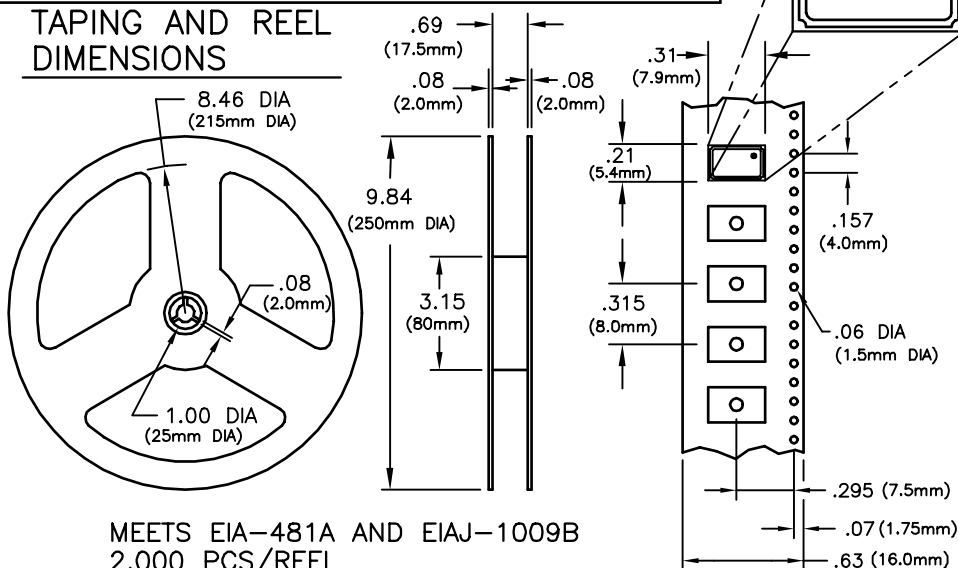
### GENERAL CONDITIONS:

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

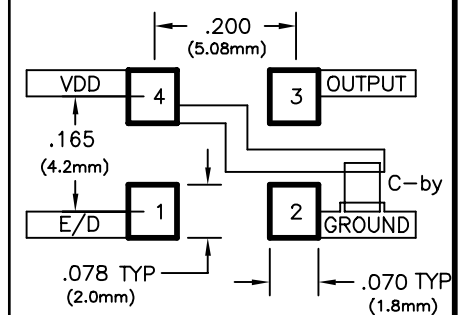
## TAPING AND REEL DIMENSIONS



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

PIN 1

## SUGGESTED PAD LAYOUT



Bypass capacitor, C-by, should be ceramic capacitor  $\geq$  .01uf.

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