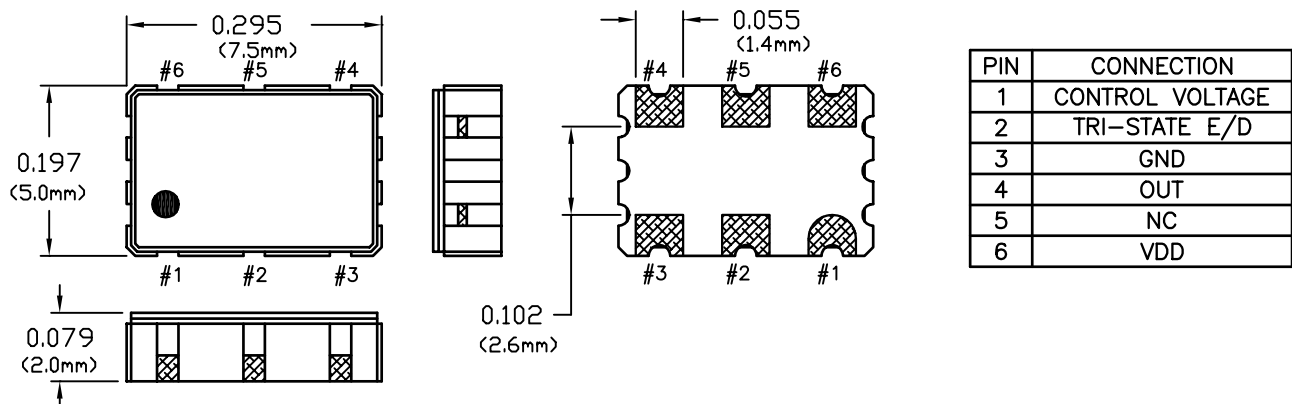


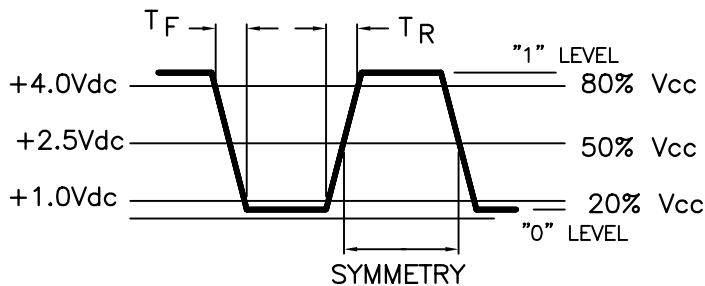
5V SM HCMOS VCXO WITH TRI-STATE

SPECIFICATIONS	VKA31A2	VKA32A2	VKA33A2
Frequency Range	1.0MHz to 52MHz		
Frequency Vs Temperature	±25ppm	±50ppm	±100ppm
Temperature Range	0°C to +85°C		
Output	Waveform	HCMOS/TTL Compatible Squarewave	
	Load	10NTTL/15pF	
	Voltage Voh	4.5V Minimum	
	Vol	0.5V Maximum	
	Current Ioh	-4.0mA	
	Iol	16.0mA	
	Duty Cycle	40/60 Maximum at 2.5Vdc	
Tri-State Input	Output E/D Time	100nS Typical	
	Enable (Vih)	2.2V Minimum	
	Disable (Vil)	0.8V Maximum	
Oscillator output is enabled with no connection on pin 2			
Frequency Control Input	Positive Transfer Characteristic		
Pullability	±100ppm Minimum		
Control Voltage	0.5Vdc to 4.5Vdc		
Center Frequency	2.5Vdc ±0.5Vdc		
Monotonic Linearity	< ±10%		
Input Impedance	50K ohms Nominal		
Modulation Bandwidth	10KHz Minimum		
Supply Voltage	+5Vdc ±5%		
Supply Current	1.0 to 18 MHz, 20 mA Maximum 18 to 36 MHz, 30 mA Maximum 36 to 52 MHz, 40 mA Maximum		
Package	Hermetically sealed, leadless ceramic package		

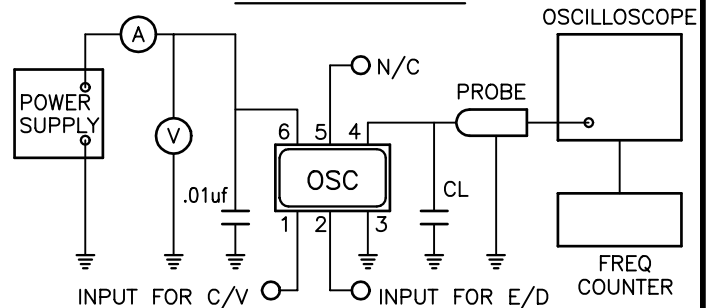
NOTE 1- A bypass capacitor of .01uF must be used between Vdd and Gnd.



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 245°C max x 10 sec max x 2 times, or 215°C max x 180 sec max, the specimen shall meet electrical characteristics.

SOLDERABILITY: (EIAJ-RCX-0102/101 Condition 1a)

1. Flux: MIL-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

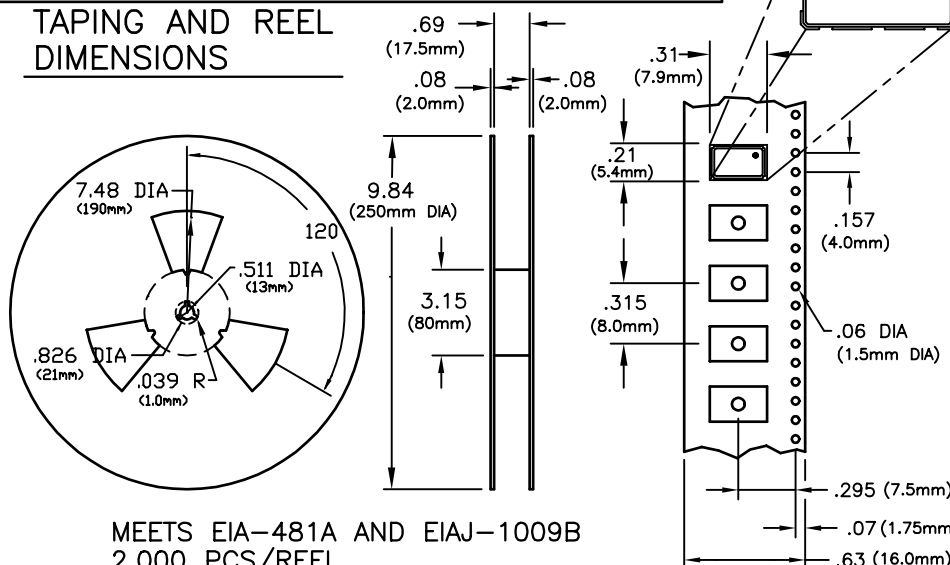
GENERAL CONDITIONS:

245°C max x 10 sec max x 2 times max or 215°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

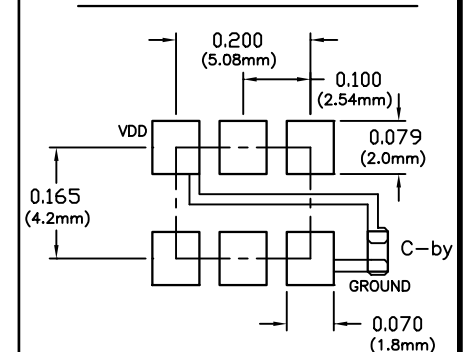
TAPING AND REEL DIMENSIONS



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

PIN 1

SUGGESTED PAD LAYOUT



Bypass capacitor, C-by, should be ceramic capacitor ≥ .01uf.