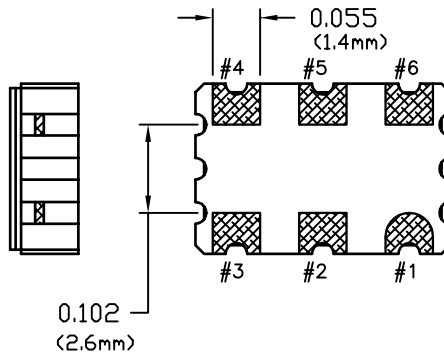
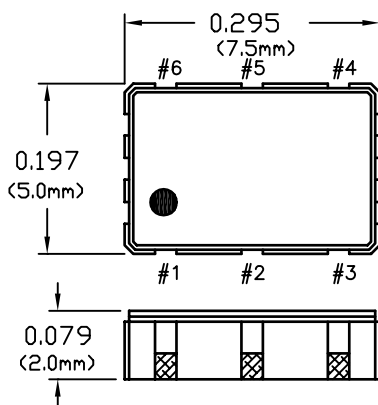


**5V SM HCMOS VCXO WITH TRI-STATE**

SPECIFICATIONS	VKA51A5	VKA52A5	VKA53A5	VKA62A5	VKA63A5
Frequency Range	1.0MHz to 52MHz				
Frequency Stability (See note 1)	±25ppm	±50ppm	±100ppm	±50ppm	±100ppm
Temperature Range	0°C to +70°C			-40°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 @ 2.5V			
Tri-State Input	Output E/D Time	100nS Typical			
	Enable (Vih)	2.7V Minimum			
	Disable (Vil)	0.3V Maximum			
Oscillator output is enabled with no connection on pin 5					
Frequency Control Input					
Pullability	±100ppm Minimum				
Control Voltage (Vc)	0.5Vdc to 4.5Vdc				
Slope	Positive				
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				

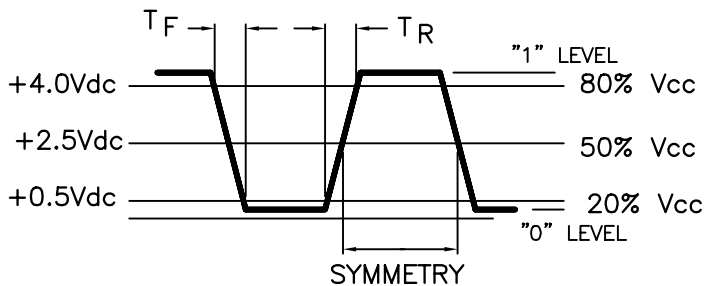
NOTE 1- Inclusive of calibration tolerance at 25°C, operating temperature range, supply voltage change, load change, and aging, with Vc= 2.5Vdc.

NOTE 2- A bypass capacitor of .01uF must be used between Vdd and Gnd.

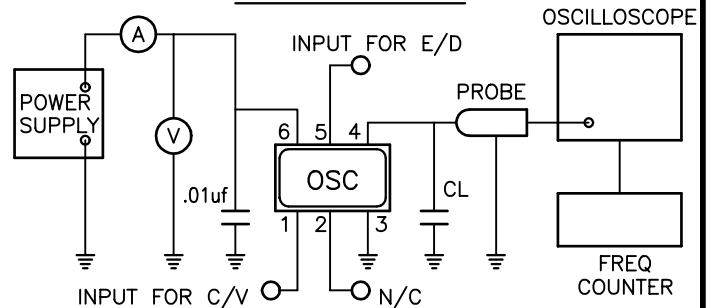


PIN	CONNECTION
1	CONTROL VOLTAGE
2	N/C
3	GND
4	OUT
5	TRI-STATE E/D
6	VDD

**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**

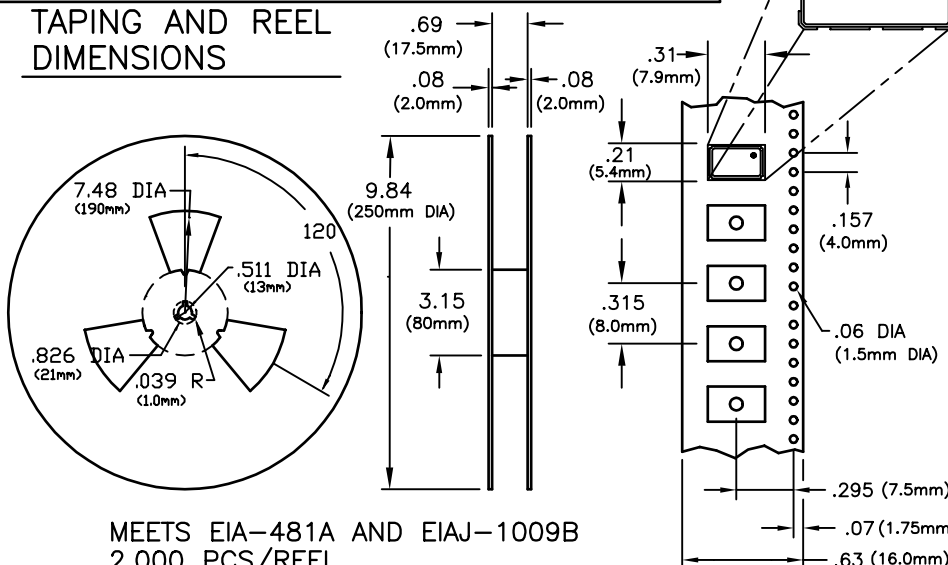
**GENERAL CONDITIONS:**

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

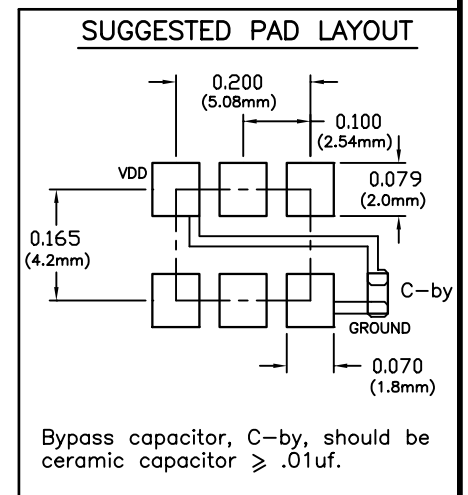
**TAPING AND REEL DIMENSIONS**



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

PIN 1

**SUGGESTED PAD LAYOUT**



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