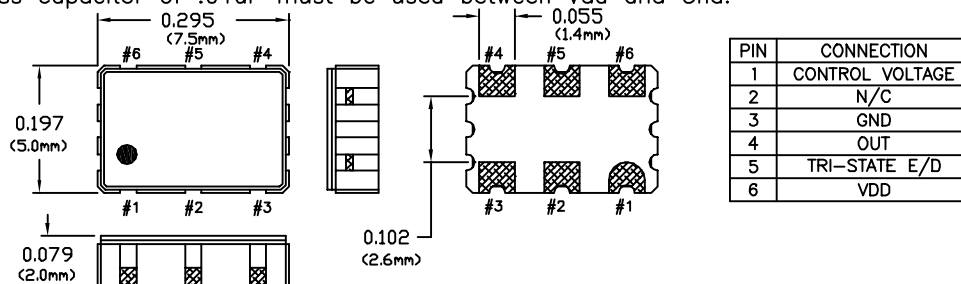


5V SM HCMOS VCXO WITH TRI-STATE

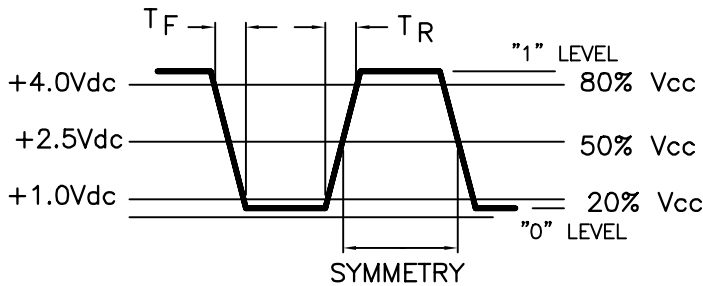
SPECIFICATIONS		VKA61A5
Frequency Range		1.0MHz to 52MHz
Frequency Vs Temperature		±25ppm
Frequency Tolerance		±50ppm (Note 1)
Temperature Range		-40°C to +85°C
Output	Waveform	HCMOS/TTL Compatible Squarewave
	Load	10NTTL/15pF
	Voltage Voh	4.5V Minimum
	Vol	0.5V Maximum
	Current Ioh	-4.0mA
	Iol	16.0mA
	Duty Cycle	45/55 Maximum @ 2.5V
	Rise/Fall Time	5nS Maximum
Jitter		1.0ps RMS Maximum over 12kHz to 20MHz bandwidth 5.0ps RMS Maximum over 10Hz to 20MHz bandwidth
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		Positive Transfer Characteristic
Pullability		±100ppm Minimum
Control Voltage (Vc)		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% (Note 2)
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= 1.65Vdc.

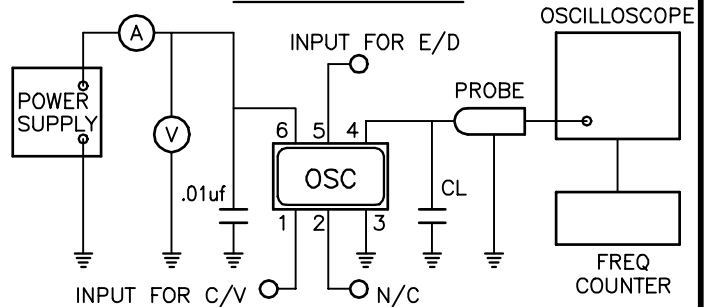
NOTE 2- A bypass capacitor of .01uF must be used between Vdd and Gnd.



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 phase.

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

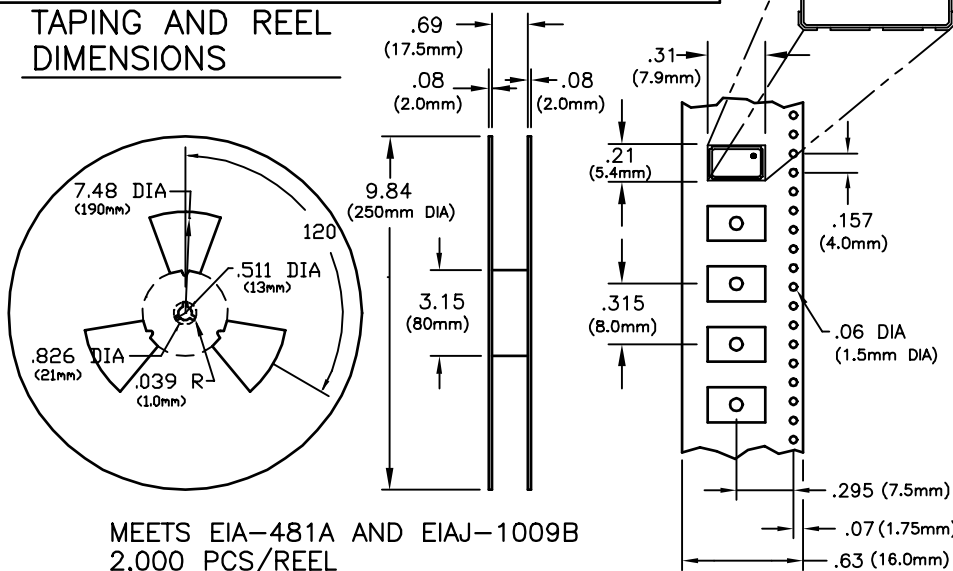
GENERAL CONDITIONS:

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)

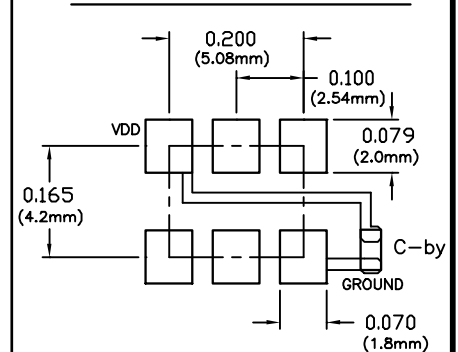
20 to 100 sec up to 215°C, 50 sec at 215°C then down to room temperature per 1 to 5°C/sec

TAPING AND REEL DIMENSIONS



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

SUGGESTED PAD LAYOUT



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