CONNOR WINFIELD

AURORA, IL 60505
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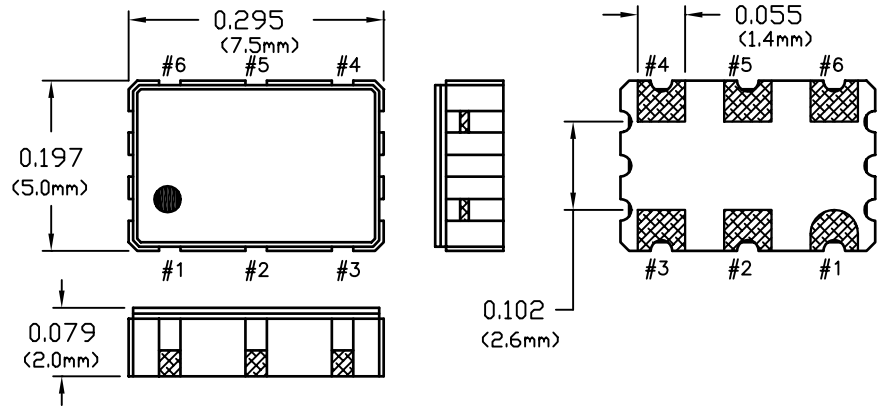
CRYSTAL CONTROLLED OSCILLATORS

5V SM HCMOS VCXO WITH TRI-STATE

SPECIFICATIONS			VKA31A5	VKA32A5	VKA33A5
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		
	Rise/Fall Time		5nS Maximum		
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 5		
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.



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

Dimensional Tolerance: ±.02" ±.005"

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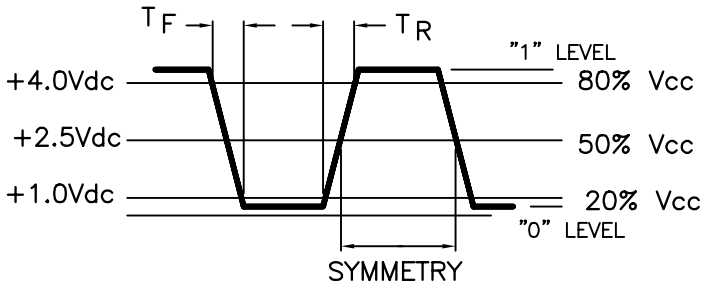
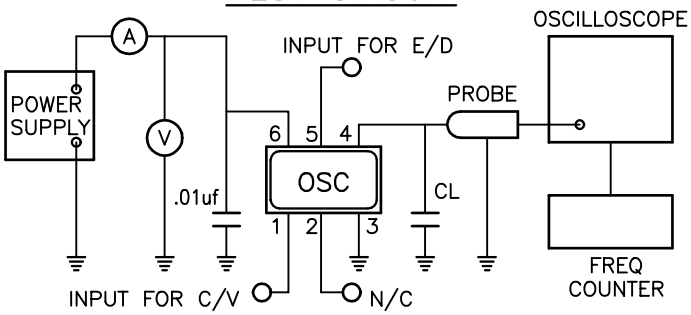
OUTPUT WAVEFORM



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 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.

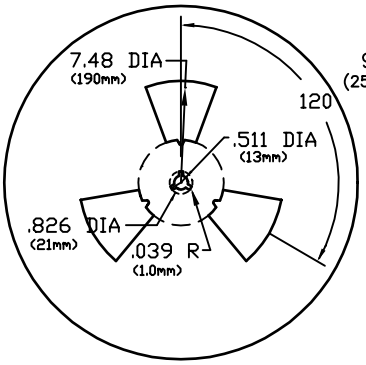
SOLVENT RESISTANCE:
Marking will withstand immersion in Isopropyl Alcohol or Trichloroethylene.

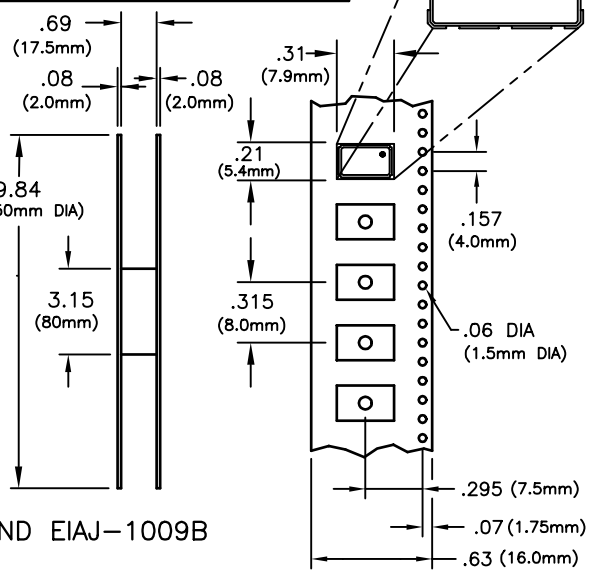
SOLDERING

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

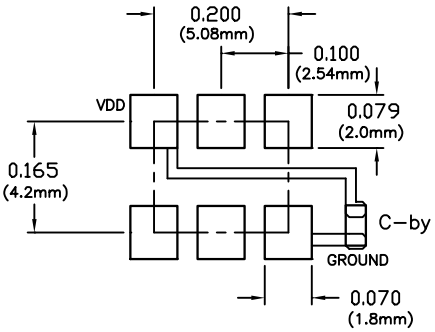
TAPING AND REEL DIMENSIONS





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

SUGGESTED PAD LAYOUT



Bypass capacitor, C–by, should be ceramic capacitor ⩾ .01uf.

BULLETIN #: VX275	REV: 01	Specifications subject to change without notice.	C–W © 1999
INT PAGE 2 OF 2	DATE: 10/14/99	ISSUED BY:	Dimensional Tolerance: ±.02" ±.005"