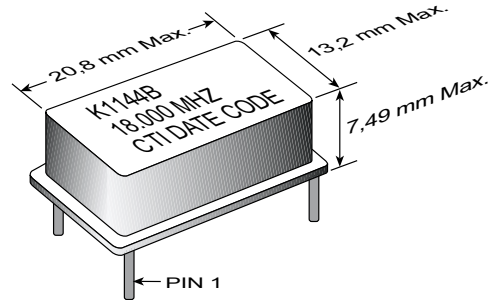


- **Applications:** Local Reference Clock
- 4-pin Package, Compatible with 14-pin DIL
- 1.75 to 35.0MHz Frequency Range
- CMOS/TTL Compatible Output
- Tri-State Option Available
- Tighter Stabilities Available
- Extended Temperature Version Available



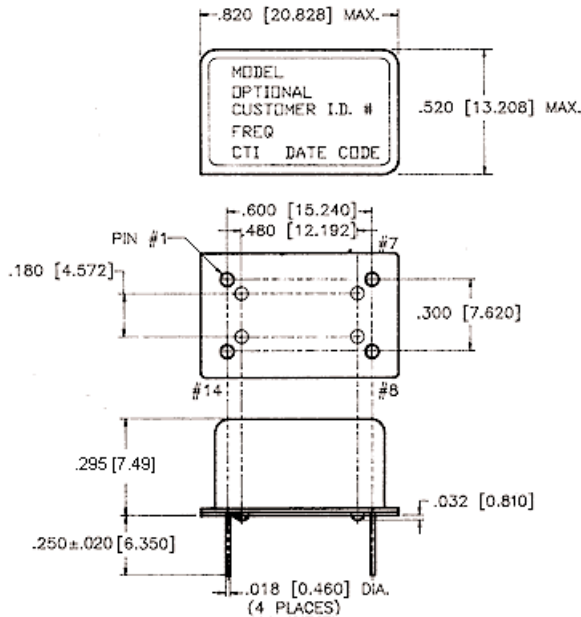
### ELECTRICAL SPECIFICATIONS

MODEL	K1144BME	K1144BH/E	K1144BT/E	K1144BX/E
<b>Frequency Range (MHz)</b>	1.75 to 35.0			
<b>Frequency Stability (ppm)</b>				
Overall	Inclusive of calibration, temperature, voltage, load, shock, vibration, aging			
0°C to 70°C	±20	±16	±14	±20
<b>Temperature Range (°C)</b>				
Operating	0°C to +70°C	-40°C to +85°C		-30°C to +70°C
Storage	-55°C to +125°C			
<b>Supply Voltage (V)</b>	+5.0 ±10%			
<b>Voltage Stability (ppm)</b>	±3			
<b>Supply Current (mA)</b>	<50 @ 25°C, <60 over temperature			
<b>Output TTL/CMOS</b>				
“0” Level (V <sub>OL</sub> )	0.5V max @ I <sub>OL</sub> = 16mA			
“1” Level (V <sub>OH</sub> )	2.5V min @ I <sub>OH</sub> = -24mA			
<b>Load</b>	10TTL Gates; CMOS Compatible			
<b>Load Stability (ppm) (Typical)</b>	±2; C <sub>L</sub> = 15pF			
<b>T<sub>R</sub> &amp; T<sub>F</sub> (ns)</b>	<5			
<b>Symmetry (%) (CMOS/TTL)</b>	45/55 <12MHz, 40/60 13 to 35MHz			
<b>Jitter (Typical)</b>	5ps RMS @ 40MHz			
<b>Start up Time (ms)</b>	<10			

### PART NUMBERING GUIDE (Use this chart for ordering)

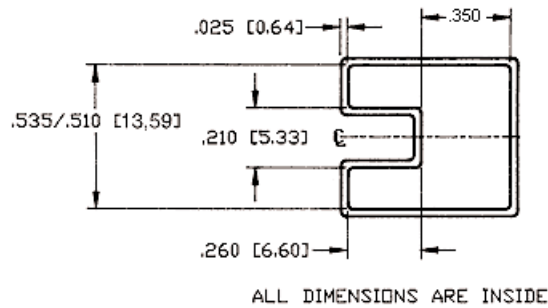
Model Characteristics	K1144BM/E	K1144BH/E	K1144BT/E	K1144BX/E
Calibration (ppm)	±5	±4	±4	±15
vs. Temperature (ppm)	±11 0°C to 70°C	±8 0°C to 60°C	±6 0°C to 60°C	-30°C to 70°C (incl. Cal & Temp.)
vs. Voltage (ppm)	±0.5	±0.5	±0.5	±0.5
vs. Load (ppm)	±0.5	±0.5	±0.5	±0.5
vs. Shock (ppm)	±0.5	±0.5	±0.5	±0.5
vs. Vibration (ppm)	±0.5	±0.5	±0.5	±0.5
1 Year Aging (ppm)	±2.0	±2.0	±2.0	±2.0
Total Stability	±20	±16	±14	±20

**Tri-State Option on E Models**

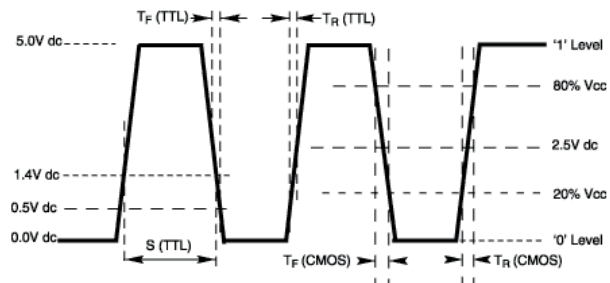


PIN	FUNCTION
1	N/C / Tri-State
2	Ground
3	Output
4	+V <sub>CC</sub>

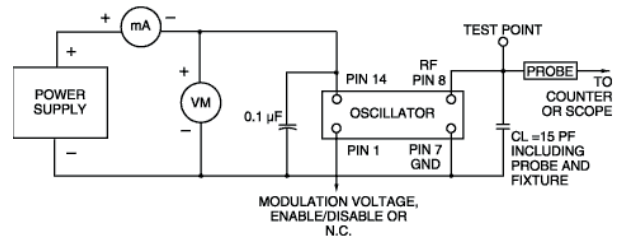
### SHIPPING TUBE CROSS SECTION



### OUTPUT WAVEFORM



### TEST CIRCUIT DIAGRAM



### MECHANICAL AND ENVIRONMENTAL SPECIFICATIONS

TEST METHODS	REFERENCE PROCEDURES	DESCRIPTION
Temperature Cycle	MIL-STD-833, Mtd 1010, Cond. B	-55°C to +125°C; Air-to-Air; 100 cycles; 10 min. dwell
Mechanical Shock	MIL-STD-883, Mtd 2002, Cond. B	1500 g's
Vibration	MIL-STD 883, Mtd 2007, Cond. B	20-2000 Hz; 0.06 inch; 15g's; 3 planes
Humidity Steady State	MIL-STD-202, Mtd 103	40°C; 90%-95% R.H.; 56 days
Thermal Shock	MIL-STD-883, Mtd 1011.7 Cond. B	100°C to 0°C; Water-to-Water; 15 cycles
Electrostatic Discharge	MIL-STD-883, Mtd 3015 Class II	2 KV to 4 KV Threshold
Solderability	MIL-STD-883, Mtd 2022.2	Solder dip; Meniscograph Criteria
Hermeticity	MIL-STD-883, Mtd 1014.8, Cond. A1	Mass spectro. 2 x 10 <sup>-8</sup> atmos. CC/sec He
Resistance to Soldering	MIL-STD-202, Mtd 210D, Cond. J	235°C; 30 seconds
Lead Integrity	MIL-STD-883, Mtd 2004.5, Cond. A, B1	Lead tension & bend stress
Marking Permanence	MIL-STD-883, Mtd 2015.8	Resistance to solvents
Life Test	MIL-STD-883, Mtd 1005.6	125°C, powered, 1000 hours minimum