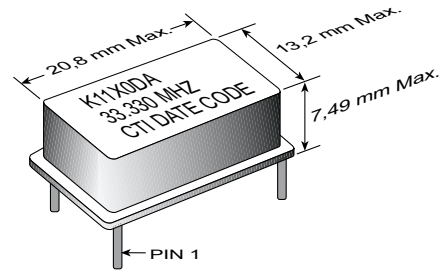


- ♦ **Applications:** Wide Area Networks (WAN's) Reference Clocking
- ♦ Superior Tolerance Performance Including up to 10 years of aging
- ♦ 2.0 to 35.0 MHz Frequency Range
- ♦  $\pm 10\text{ppm}$   $\pm 20\text{ppm}$  Stability Options
- ♦  $-40^{\circ}\text{C}$  to  $85^{\circ}\text{C}$  Operating Temperature - K1120D
- ♦  $0^{\circ}\text{C}$  to  $70^{\circ}\text{C}$  Operating Temperature - K1110D
- ♦ Meets Stratum IV Requirements
- ♦ Enable/Disable Option Available

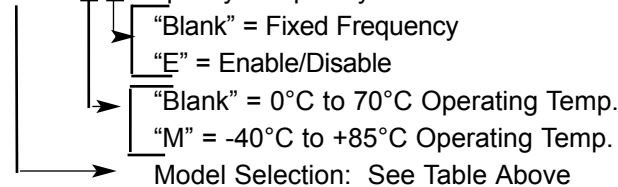


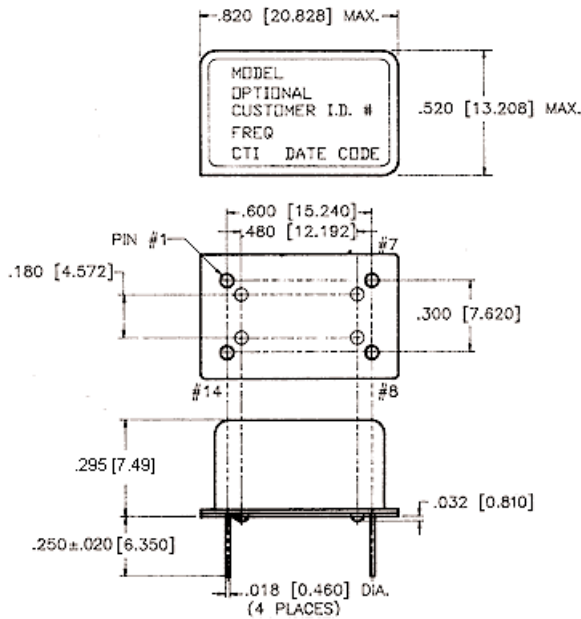
### ELECTRICAL SPECIFICATIONS

Model	K1110DA	K1120DAM
Frequency Range (MHz)	2 to 35	
Input Current (mA)	< 30	
Frequency Stability (ppm)		
Overall	Inclusive of Calibration, Temperature, Voltage, Load, Aging	
$0^{\circ}\text{C}$ to $70^{\circ}\text{C}$	$\pm 10$	-
$-40^{\circ}\text{C}$ to $85^{\circ}\text{C}$	-	$\pm 20$
Aging @ $50^{\circ}\text{C}$ (10 Years)	Inclusive	$\pm 3.0$
Temperature Range ( $^{\circ}\text{C}$ )		
Operating	$0^{\circ}\text{C}$ to $+70^{\circ}\text{C}$	$-40^{\circ}\text{C}$ to $+85^{\circ}\text{C}$
Storage	$-40^{\circ}\text{C}$ to $+85^{\circ}\text{C}$	
Supply Voltage (V)	$+5.0\text{V} \pm 5\%$	
Symmetry CMOS/TTL	45/55 < 16MHz; 40/60 $\geq$ 16MHz	
"0" Level ( $V_{OL}$ )	0.5 max.	
"1" Level ( $V_{OH}$ )	4.5 min	
Rise Time & Fall Time (ns)	< 5	
Start Up Time (ms)	< 10	

### PART NUMBERING GUIDE

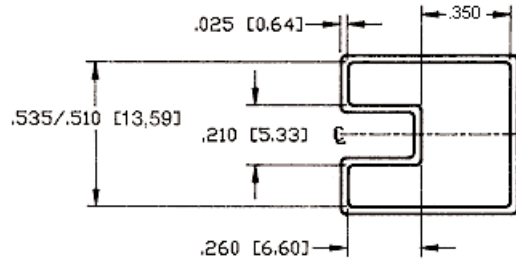
**K11X0DAX X** - Specify Frequency





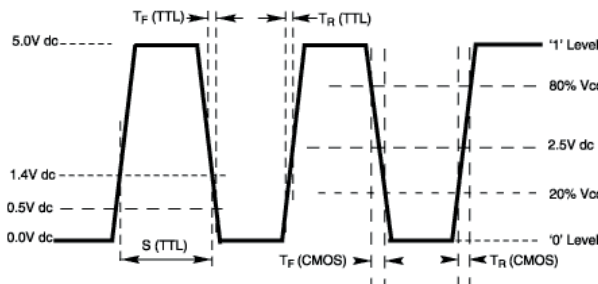
PIN	FUNCTION
1	N/C or Enable/Disable
7	Gnd/ & Case Gnd
8	Output
14	+ V <sub>CC</sub>

### SHIPPING TUBE CROSS SECTION

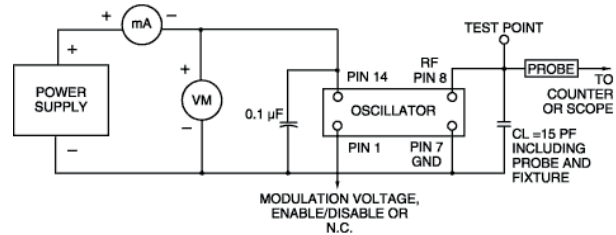


ALL DIMENSIONS ARE INSIDE

### 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-202, Mtd 213, Cond. D	500 g's
Vibration	MIL-STD 202, Mtd 204, Cond. B	10-2000 Hz; 0.06 inch; 15g; 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. A	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 210A, Cond. C	260°C; 10 seconds: 1 inch/sec.
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