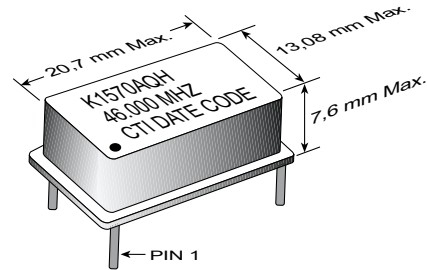


### 5V Voltage Controlled Crystal Oscillators

- ◆ **Applications:** Phase-Locked Loops (PLL's); Clock Recovery; Reference Signal Tracking; Synthesizers; Frequency Modulation/Demodulation
- ◆ 16-pin DIL Package
- ◆ 25.0 to 52.0 MHz Frequency Range
- ◆ 0.5V to 4.5V Control Voltage
- ◆ ±25ppm Stability
- ◆ -40°C to 85°C Operating Temperature



## ELECTRICAL SPECIFICATIONS

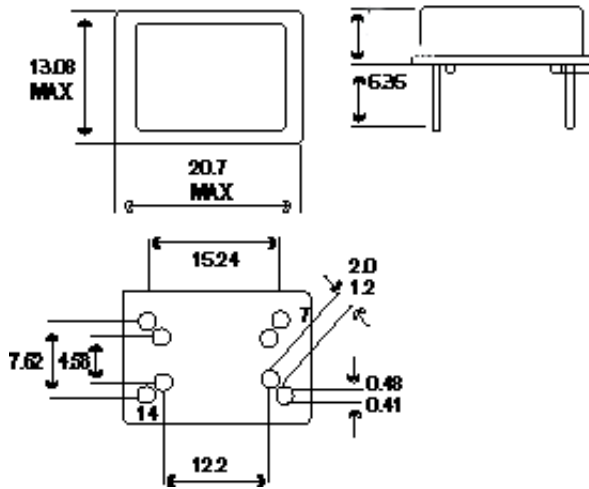
Model	K1570AQH		
Frequency Range (MHz)	25 to 33	33 to 35	35 to 52
Input Current (mA)	< 26		< 45
Frequency Control Function	(For Custom Deviation Range, Vc Range, etc. - Consult Factory)		
Deviation (ppm)			
Minimum	±100		±60
Maximum	±190		±120
Linearity (%)	< 10		< 15
Modulation Bandwidth (±3dB)	> 20KHz		
Nominal Control Voltage (V)	2.5		
Control Voltage Range (V)	0.5 to 4.5		
Transfer Function	Positive		
Input Impedance	> 50KΩ @ 10KHz		
Frequency Stability (ppm)			
Overall	Inclusive of Calibration, Temperature, Voltage, Load and Aging		
0°C to +70°C	±25	±40	
-40°C to +85°C	±50	±55	
Temperature Range (°C)			
Operating	-40°C to +85°C		
Storage	-55°C to +125°C		
Supply Voltage (V)	+5.0V ±5%		
Symmetry (%) CMOS/TTL	40/60		
Start Up Time (ms)	<10		
Typical SSB Phase Noise (dBC/Hz)	10Hz	-65	
Offset from Carrier	100Hz	-95	
	1KHz	-120	
	10KHz	-140	
	100KHz	-150	

## PART NUMBERING GUIDE

**K1570AQHX** - Specify Frequency

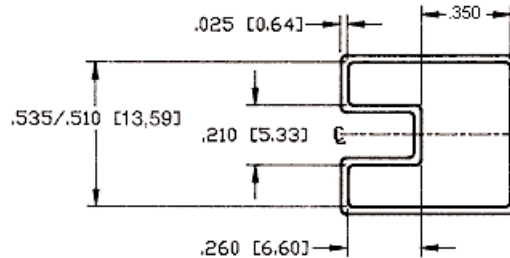
    "Blank" = 0°C to 70°C Operating Temp.

    "**M**" = -40°C to +85°C Operating Temp.



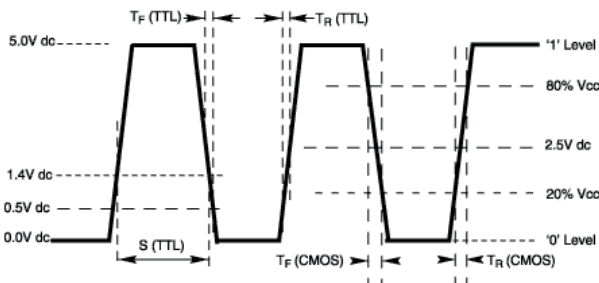
PIN	FUNCTION
1	Voltage Control
7	Gnd/ & Case Gnd
8	Output
14	+ V <sub>CC</sub>

#### SHIPPING TUBE CROSS SECTION

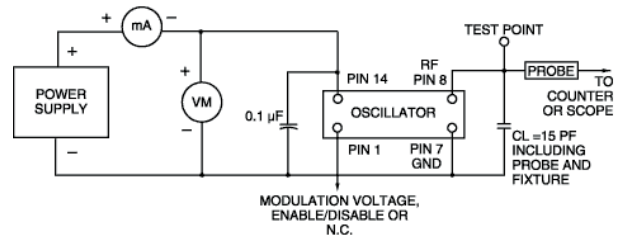


ALL DIMENSIONS ARE INSIDE

#### 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-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. 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