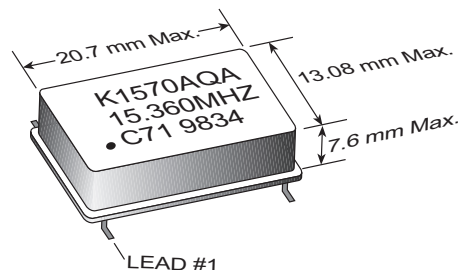


5V Voltage Controlled Crystal Oscillators

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



V
C
X
O

ELECTRICAL SPECIFICATIONS

Model	K1570AQA	
Frequency Range (MHz)	1 to 52	
Input Current (mA)	< 26	
Frequency Control Function	(For Custom Deviation Range, Vc Range, etc. - Consult Factory)	
Deviation (ppm)		
Minimum	±100	
Maximum	±150	
Linearity (%)	< 10	
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°C to +85°C	±50	
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

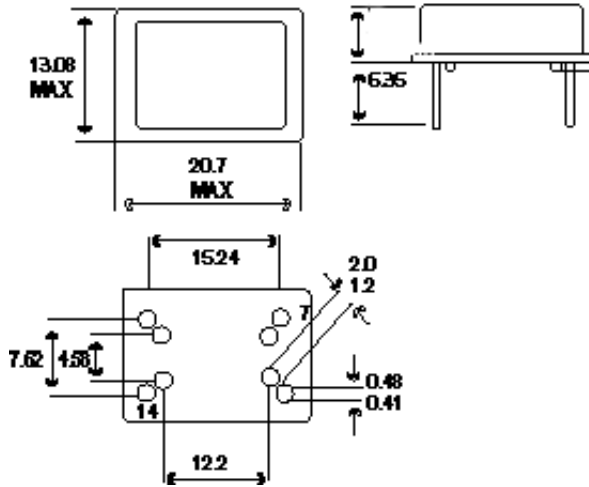
PART NUMBERING GUIDE

K1570AQA X - Specify Frequency

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

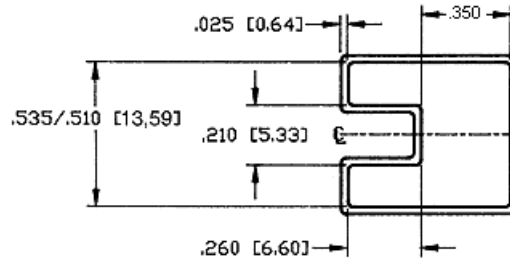
 "M" = -40°C to +85°C Operating Temp. (±50ppm only)

5V Voltage Controlled Crystal Oscillators



PIN	FUNCTION
1	Voltage Control
7	Gnd/ & Case Gnd
8	Output
14	+ V _{CC}

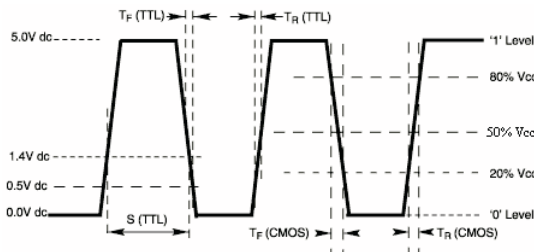
SHIPPING TUBE CROSS SECTION



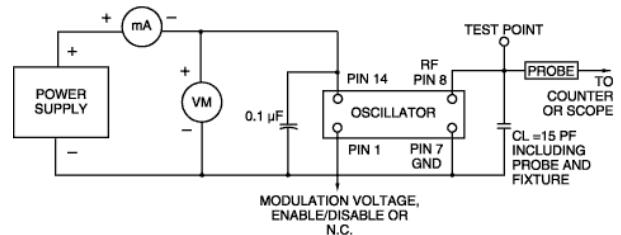
ALL DIMENSIONS ARE INSIDE

Specifications Subject to Change Without Notice

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 ⁻⁸ 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