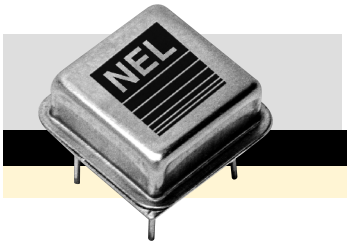
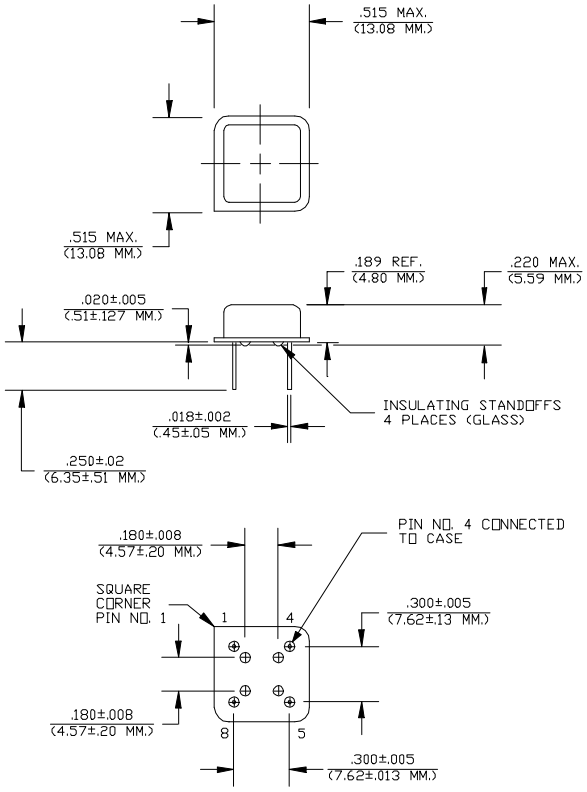


CMOS Compatible HA-1380 Series

Description

The HA-1380 Series of quartz crystal oscillators provide enable/disable 3-state CMOS compatible signals for bus connected systems. Supplying Pin 1 of the HA-1380 units with a logic "1" or open enables the output on Pin 5. In the disable mode, Pin 5 presents a high impedance to the load. All units are resistance welded in an all metal package, offering RFI shielding, and are designed to survive wave soldering operations without damage. Insulated standoffs to enhance board cleaning are standard.

Pin	Connection
1	Enable/Disable
4	Ground
5	Output
8	V_{DD}



Suggested Applications

The HA-1380 Series oscillators are ideally suited for applications involving more than one clock or source on the same bus. This high impedance state allows ATE (Automatic Test Equipment) board testing without having to remove the oscillator. In multiplexing applications, multiplex clock signals can be made available to a system using the enable/disable 3-state feature.

Features

- Wide frequency range—0.5MHz to 36.0MHz
- User specified tolerance from
  ±20ppm ≤25MHz
  ±100ppm >25MHz
- Will withstand vapor phase temperatures of 253°C for 4 minutes maximum
- Low power consumption
- High shock resistance, to 3000g
- Gull wing leads are available for SMD applications: Leads are solder dipped for ease of solder attaching to printed wiring board

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Continued
CMOS Compatible HA-1380 Series

Operating Conditions and Output Characteristics

	PARAMETER	CONDITIONS	MINIMUM	MAXIMUM
General Characteristics	Supply voltage (V_{CC}, V_{DD})	Supply Breakdown	4.50V -0.5V	5.50V 7.0V
	Supply current (I_{CC}, I_{DD})	-----	0.0 mA	55 mA
	Output current (I_O)	-----	0.0 mA	±16.0 mA
	Tolerance	User specified ≤25MHz >25MHz	 ±20ppm ±100ppm	 ----- -----
	Operating temperature (T_A)	-----	0°C	70°C
	Storage temperature (T_S)	-----	-55°C	125°C
	Power dissipation (P_D)	-----	-----	303 mW
	Lead temperature (T_L)	Soldering, 10 sec.	-----	300°C
Output Characteristics	Frequency	-----	0.5MHz	36.0MHz
	Symmetry	V_{DD} /2	40/60%	60/40%
	Logic 0 (V_{OL})	I_{OL}=600µA	-----	0.2V
	Logic 1 (V_{OH})	I_{OH}=600µA	V_{DD} -.2V	-----
	Logic 0 (I_{OL} sink)	V_O=0.2V	-----	600µA
	Logic 1 (I_{OH} source)	V_O=V_{DD}-0.2V	-----	600µA
	Rise & fall time (t_r,t_f)	10 to 90% of V_O	-----	10 ns
	3-state enable/disable (T_{pz})	-----	-----	25 ns
	Enable/Disable Logic high voltage Logic low voltage		 3.0V -----	 2.5V typical 0.4V

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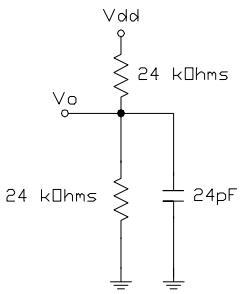

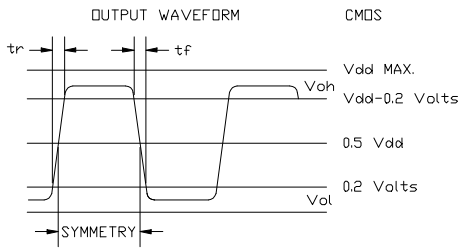

Specialty Oscillators for Unique Requirements
If the characteristics listed above do not meet your specific requirements, specialty solutions are often available.

For example, if you need better stability, extended temperature range, or tighter symmetry, NEL can provide a HA-1389 series oscillator to serve your needs.

To let us know your special requirements, complete our Specialty Oscillator sheet. We will respond with the desired specialty oscillator, or discuss with you a solution that most closely meets your needs.

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