



TTL Compatible HS-1520 Series

Description

The **HS-1520 Series** of quartz crystal oscillators provide enable/disable 3-state TTL compatible signals for bus connected systems. Supplying enable/disable pin of the HS-1520 units with a logic "1" or open enables its output. In the disable mode, output pin presents a high impedance to the load. All units are resistance welded in an all metal package, offering RFI shielding, and are designed to service standard wave soldering operations without damage. Insulated standoffs to enhance board cleaning are standard.

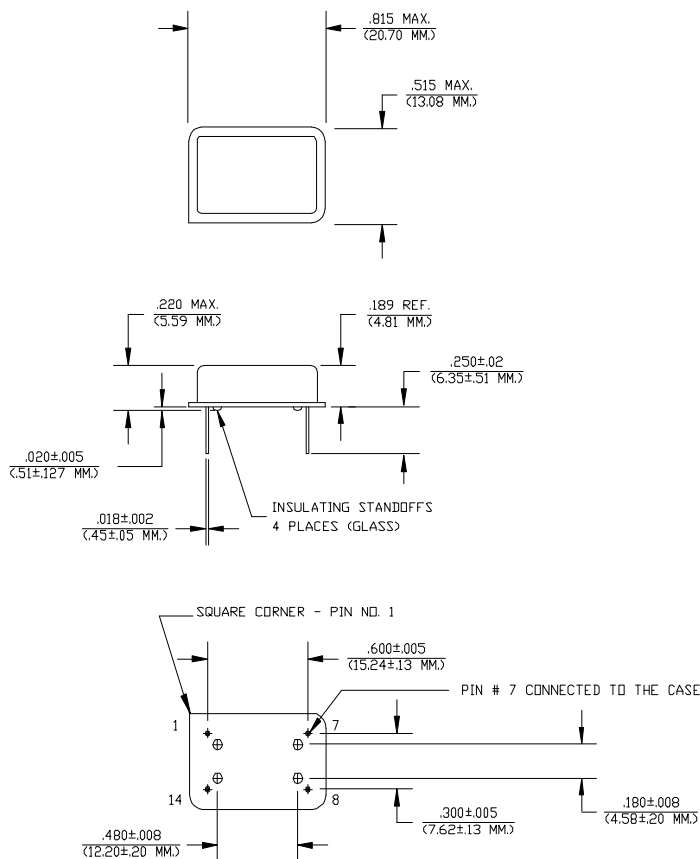
Pin	Connection
1	Enable/Disable Input
7	Grd & Case
8	Output
14	V _{CC}

Suggested Applications

The **HS-1520 Series** oscillators are ideally suited for applications involving more than one clock or 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 85.0MHz
- User specified tolerance from ± 20 ppm
- Will withstand vapor phase temperatures of 253°C for 4 minutes maximum
- Low power consumption
- High shock resistance, to 3000g
- All metal, resistance weld hermetically sealed package

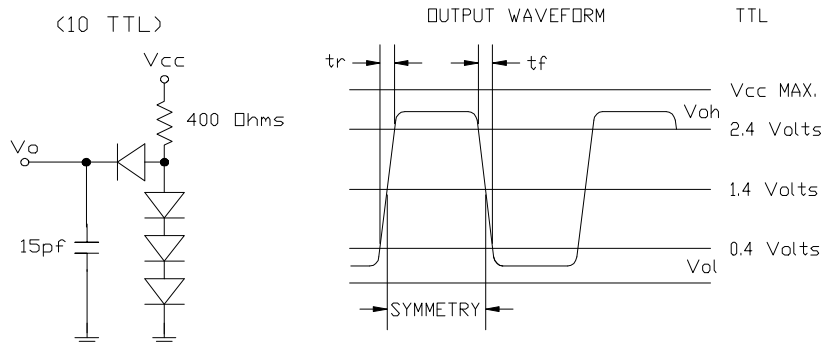


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Operating Conditions and Output Characteristics

	PARAMETER	CONDITIONS	MINIMUM	MAXIMUM
General Characteristics	Supply voltage (V_{DD})	Supply	4.75V	5.25V
		Breakdown	-0.5V	7.0V
	Supply current (I_{DD})	V_{DD} or ground current	0.0 mA	50 mA
	Output current (I_O)	Low level output current	0.0 mA	± 16.0 mA
	Tolerance	User specified	± 20 ppm	-----
	Operating temperature (T_A)	-----	0°C	70°C
	Storage temperature (T_S)	-----	-55°C	125°C
	Power dissipation (P_D)	-----	-----	263 mW
	Lead temperature (T_L)	Soldering, 10 sec.	-----	300°C
Output Characteristics	Frequency	-----	0.5MHz	85.0MHz
	Symmetry	@.5V _{DD}	45/55%	55/45
	Logic 0 (V_{OL})	TTL, driving equiv. load	-----	0.4V
	Logic 1 (V_{OH})	TTL, driving equiv. load	2.4V	-----
	Logic 0 (I_{OL} sink)	TTL, driving equiv. load	-----	16mA
	Logic 1 (I_{OH} source)	TTL, driving equiv. load	-----	400 μ A
	Rise & fall time (t_r, t_f)	TTL @ 0.4V to 2.4V	-----	-----
		<40MHz	-----	8 ns
		40MHz	-----	5 ns
	3-state enable/disable (T_{pz})	-----	-----	25 ns



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 HS-1529 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.

This information has been carefully prepared and is believed to be entirely reliable. However, no responsibility is assumed for inaccuracies. NEL reserves the right to make changes at any time in order to improve design and supply the best product possible.