



TTL Compatible HS-160 Series

Description

The **HS-160 Series** of quartz crystal oscillators are general purpose TTL oscillators. 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.

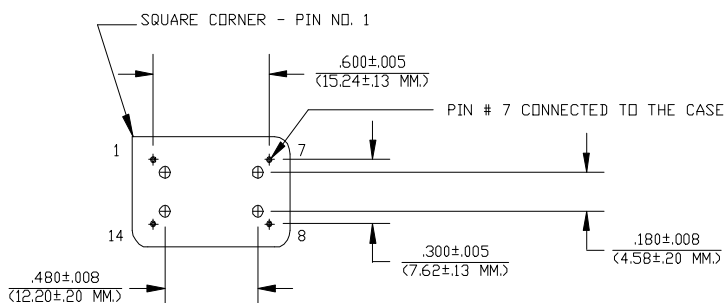
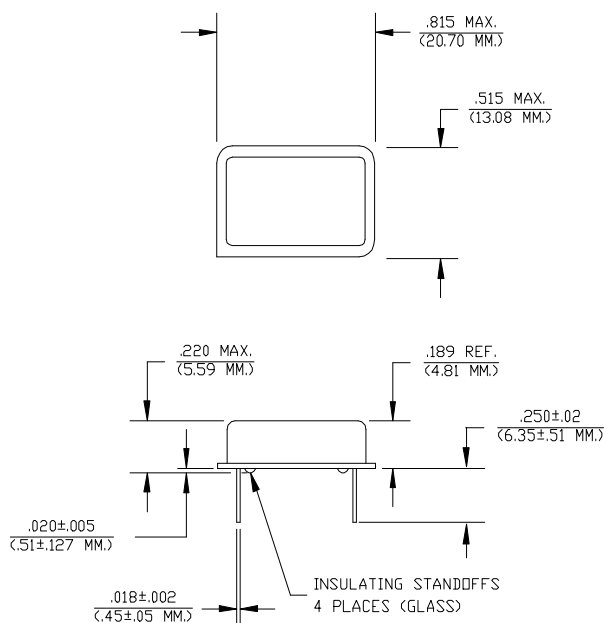
Pin	Connection
1	N.C.
7	Grd & Case
8	Output
14	V _{CC}

Suggested Applications

The **HS-160 Series** oscillators are ideally suited for microprocessor timing control and are used in instrument controllers.

Features

- Wide frequency range—0.5MHz to 85.0MHz
- User specified tolerance from ± 20 ppm
- Case at electrical ground
- Will withstand vapor phase temperatures of 253°C for 4 minutes maximum
- Low power consumption
- All metal, resistance weld, hermetically sealed package
- High shock resistance, to 3000g

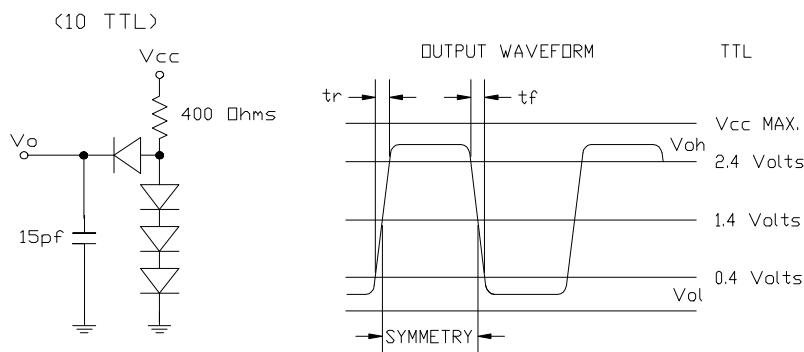


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Operating Conditions and Output Characteristics

	PARAMETER	CONDITIONS	MINIMUM	MAXIMUM
General Characteristics	Supply voltage (V_{CC})	Supply	4.75V	5.25V
		Breakdown	-0.5V	7.0V
	Supply current (I_{CC})	-----	0.0 mA	50 mA
	Output current (I_O)	High or low level output	-----	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 _{CC}	45/55%	55/45%
	Logic 0 (V_{OL})	Driving equiv. load	-----	0.4V
	Logic 1 (V_{OH})	Driving equiv. load	2.4V	-----
	Logic 0 (I_{OL} sink)	Driving equiv. load	-----	16mA
	Logic 1 (I_{OH} source)	Driving equiv. load	-----	400μA
	Rise & fall time (t_r, t_f)	@0.4V to 2.4V	-----	-----
		<40MHz	-----	8 ns
		40MHz	-----	5 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-169 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.