



Positive ECL Compatible HS-1870 Series

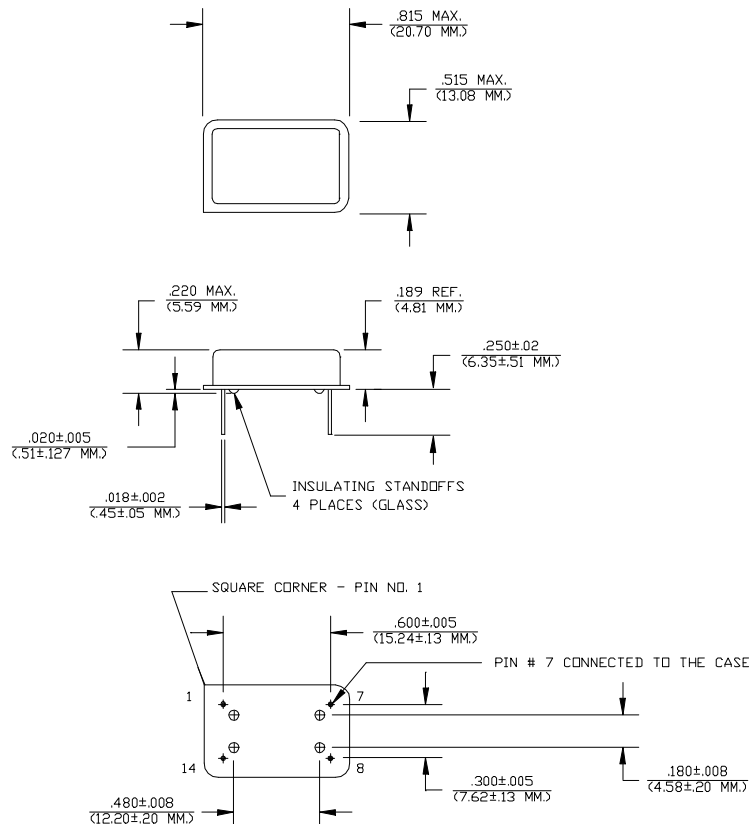
Description

The **HS-1870 Series** of crystal oscillators provide MECL 10k and 10kH series compatible signals in industry standard four-pin DIP hermetic packages. Systems designers may now specify space-saving, cost-effective packaged ECL oscillators to meet their timing requirements. This device is intended to operate on positive voltage for PECL applications.

Features

- Wide frequency range—90.0MHz to 250.0MHz
- User specified tolerance from ± 20 ppm
- Case at electrical ground
- Will withstand vapor phase temperatures of 253°C for 4 minutes maximum
- MECL 10k and 10kH series compatible output on Pin 8
- All metal, resistance weld, hermetically sealed package
- High shock resistance, to 3000g
- Space saving alternative to discrete component oscillators

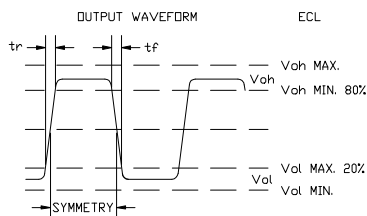
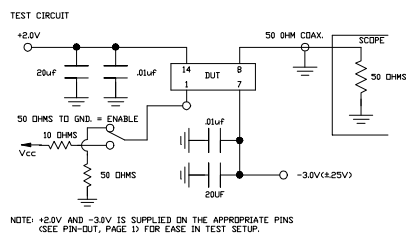
Pin	Connection
1	/EN
7	V_{EE} Grd & Case
8	Output
14	$V_{CC} + 5.0V$



Continued

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Operating Conditions and Output Characteristics			
	PARAMETER	CONDITIONS	MINIMUM MAXIMUM
General Characteristics	Supply voltage (V_{CC})	----- Breakdown	4.75V 5.25V -0.5V +8.0V
	Supply current (I_{CC})	V_{CC} or ground current	0.0 mA 80 mA
	Output current (I_O)	Low level output current	0.0 mA +50.0 mA
	Tolerance	User specified	± 20 ppm -----
	Operating temperature (T_A)	-----	0°C 70°C
	Storage temperature (T_S)	-----	-55°C 125°C
Output Characteristics	Frequency ⁽³⁾	-----	90.0MHz 250.0MHz
	Symmetry	@ $V_O/2$ level	45/55% 55/45%
	Logic 0 (V_{OL}) ⁽²⁾	-----	3.05V 3.40V
	Logic 1 (V_{OH}) ⁽²⁾	-----	3.98V 4.26V
	Rise & fall time (t_r, t_f)	20-80% V_O	----- 2.25 ns
	Footnote: (2) V_{OL} , V_{OH} , referenced to ground (3) Frequencies up to 320MHz available upon request (4) /EN must be logic to Enable and logic high to Disable. Capacitance on pin should be less than 25pf external to the oscillator. Pin 8 is logic low when disabled		



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-1879 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.