



ECL Compatible SJ-820 Series 100k ECL Supplement

Description

The **SJ-820 Series** of quartz crystal oscillators provide F 100k 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.

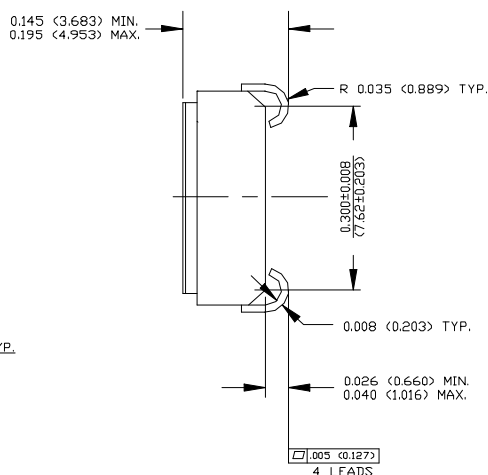
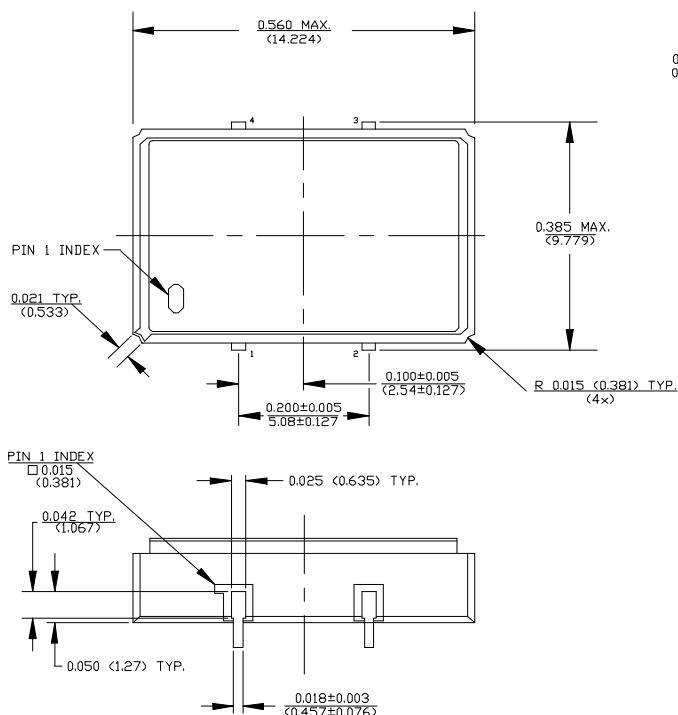
Features

- Wide frequency range—18.0MHz to 250.0MHz
- User specified tolerance from ± 20 ppm
- Will withstand vapor phase temperatures of 253°C for 4 minutes maximum
- F 100k Series compatible output on Pin 8
- High shock resistance, to 3000g
- Space saving alternative to discrete component oscillators
- Metal lid electrically connected to ground to reduce EMI
- Gold plated leads—Solder dipped leads available upon request

Pin Connection

JEDEC XTAL Industry

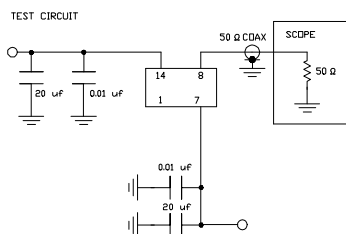
6	1	N.C.
10	2	V _{CC} Grd & Case
20	3	Output
24	4	V _{EE} -4.5V



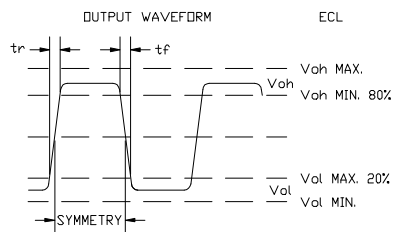
DIMENSIONS ARE IN INCHES & (MM)

Continued
ECL Compatible SJ-820 Series
100k ECL Supplement

Operating Conditions and Output Characteristics			
	PARAMETER	CONDITIONS	MINIMUM MAXIMUM
General Characteristics	Supply voltage (V_{EE})	----- Breakdown	-4.8V -4.2V -8.0V +0.5V
	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⁾	-----	18.0MHz 250.0MHz
	Symmetry	@ -1.33V level	45/55% 55/45%
	Logic 0 (V_{OL}) ⁽²⁾	-----	-1.81V -1.60V
	Logic 1 (V_{OH}) ⁽²⁾	-----	-1.025V -0.88V
	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		



TEST CIRCUIT USES A SPLIT SUPPLY OF +2V AND -2.5V FOR EASE OF TESTING.



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 SJ-829 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.