

## SC-A1420 CMOS Compatible

### Description

The **SC-A1420 Series** of quartz crystal oscillators provide enable/disable 3-state CMOS compatible signals for bus connected systems. Supplying Pin 1 of the -1420 units with a logic "1" or open enables its Pin 3 output. In the disable mode, Pin 3 presents a high impedance to the load. All units are designed to survive standard wave soldering operations without damage.

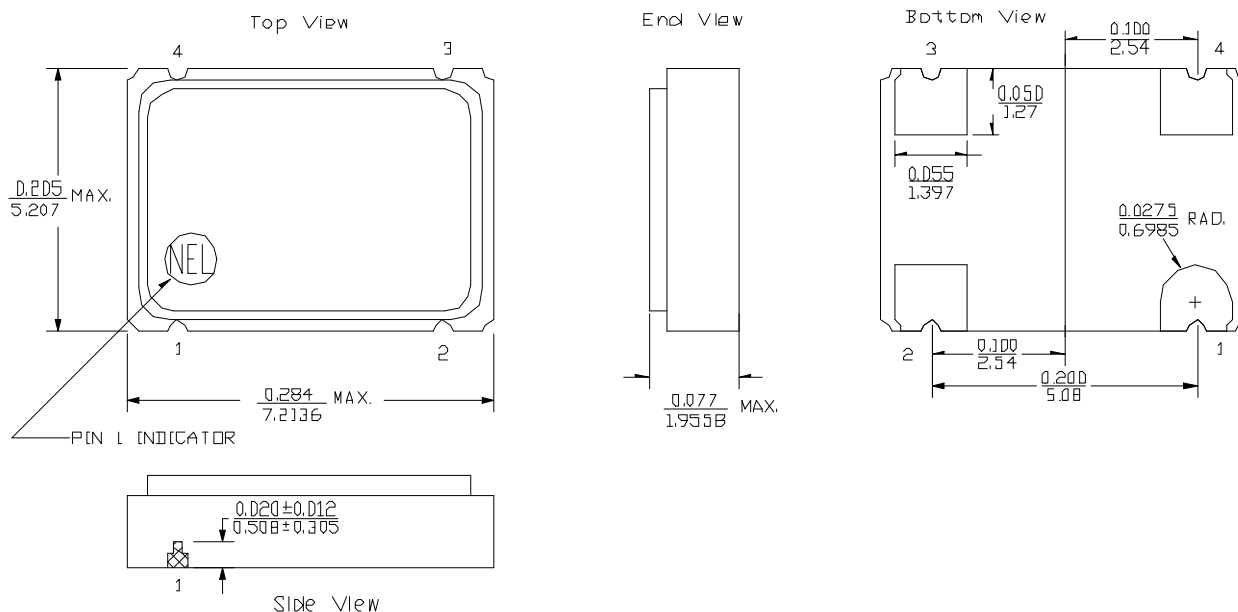
Pin	Connection
1	Enable/Disable Input
2	Ground
3	Output
4	V <sub>DD</sub>

### Suggested Applications

The **SC-A1420 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—40.1MHz to 70.0MHz
- User specified tolerance from  $\pm 20$ ppm
- Will withstand vapor phase temperatures of 253°C for 4 minutes maximum
- Low power consumption
- High shock resistance, to 3000g
- 3.3 volt operation
- Metal lid electrically connected to ground to reduce EMI

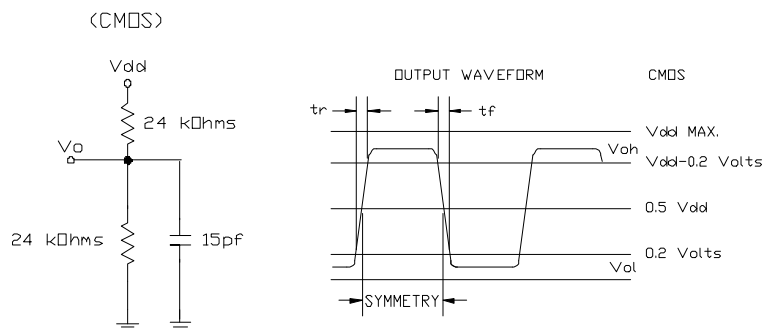


ALL DIMENSIONS:  $\frac{\text{IN}}{\text{MM}}$

**Continued**  
**SC-A1420 CMOS Compatible**

### Operating Conditions and Output Characteristics

	PARAMETER	CONDITIONS	MINIMUM	MAXIMUM
General Characteristics	Supply voltage ( $V_{DD}$ )	Supply Breakdown	3.15V -0.5V	3.45V 7.0V
	Supply current ( $I_{DD}$ )	$V_{DD}$ or ground current	0.0 mA	40mA
	Output current ( $I_O$ )	Low level output current	0.0 mA	$\pm 16.0$ mA
	Tolerance	User specified	$\pm 20$ ppm	-----
	Operating temperature ( $T_A$ )	-----	0°C	70°C
	Storage temperature ( $T_S$ )	-----	-55°C	125°C
	Power dissipation ( $P_D$ )	-----	-----	138 mW
	Lead temperature ( $T_L$ )	Soldering, 10 sec.	-----	300°C
Output Characteristics	Frequency	-----	40.1MHz	70.0MHz
	Symmetry	@ 0.5V <sub>DD</sub>	45/55%	55/45%
	Logic 0 ( $V_{OL}$ )	$I_O = 600\mu A$	-----	0.2V
	Logic 1 ( $V_{OH}$ )	$I_O = 600\mu A$	$V_{DD} - 0.2V$	-----
	Logic 0 ( $I_{OL}$ sink)	$V_O = 0.2V$	-----	600 $\mu A$
	Logic 1 ( $I_{OH}$ source)	$V_O = V_{DD} - 0.2V$	-----	600 $\mu A$
	Rise & fall time ( $t_r, t_f$ )	10-90% $V_O$	-----	8 ns
	$T_{pz}$ (enable/disable to high or low)	-----	-----	25 ns
	Enable/Disable			
	Logic High Voltage	-----	2.0V	-----
	Logic Low Voltage	-----	-----	.8V



#### 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 SC-A1429 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.