9420C Rev. E

NEL CRYSTAL CLOCK OSCILLATORS

SPECIFICATION
HS/SM/HA/SA Packages -1420 CMOS

Pin Connection

HS/SM Connection

1	Enable/disable input
7	Grd & case
8	Output
14	V_{DD}

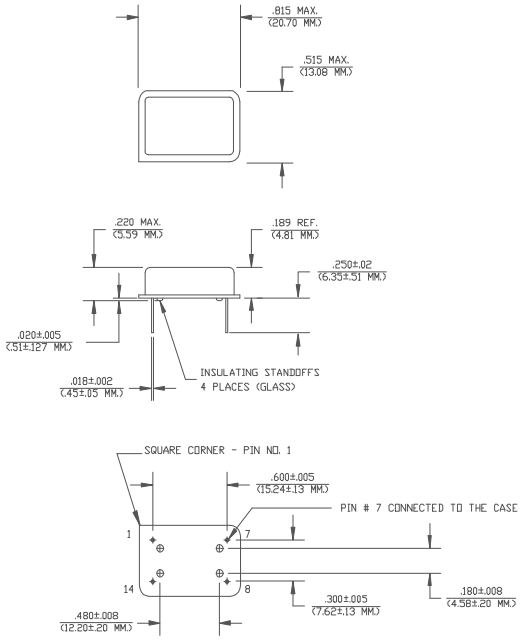
HA/SA Connection

1	Enable/disable input
4	Grd & case
5	Output
8	V_{DD}

HS- Outline drawing shown
Contact NEL for others.

Description

-1420 Series of quartz crystal oscillators provide enable/disable 3-state CMOS compatible signals for bus connected systems. Supplying enable/disable pin of the -1420 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.



Suggested Applications

-1420 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 ±25ppm

[] 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

[] SM & SA versions:
Leads are solder dipped for ease of solder attaching to printed wiring board.

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Crystal Clock Oscillators

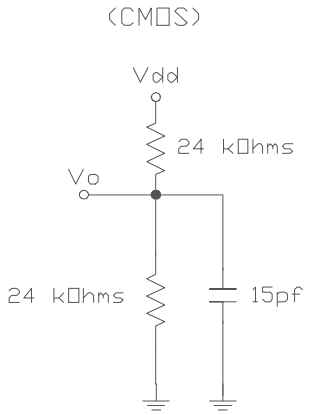
Operating Conditions and Output Characteristics

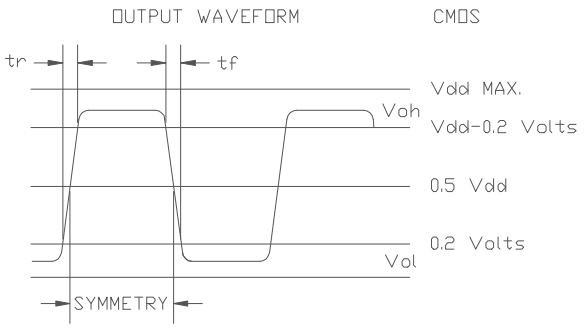
-1420 CMOS

(Continued)

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(1)	User specified	±25ppm	-----
Operating temperature (T_A)	------	0°C	70°C
Storage temperature (T_S)	-----	-55°C	125°C
Power dissipation (P_D)	-----	------	400 mW
Lead temperature (T_L)	Soldering, 10 sec.	------	300°C
Output Characteristics			
Frequency	------	0.5MHz	85.0MHz
Symmetry	@ .5V_{DD}	40/60%	60/40%
Logic 0 (V_{OL})	I_O=600µA	-----	0.2V
Logic 1 (V_{OH})	I_O=600µA	V_{DD}-0.2V	-----
Logic 0 (I_{OL}sink)	V_O=0.2V	-----	600µA
Logic 1 (I_{OH}source)	V_O=V_{DD}-0.2V	-----	600µA
Rise & fall time (t_r,t_f)	10-90% V_O		
	<40MHz	-----	8 ns
	≥40MHz	------	6 ns
T_{pz} (Enable/Disable to High or Low)	-----	-----	25ns
Enable/Disable Logic High Voltage	-----	3.5V	-----
Enable/Disable Logic Low Voltage	-----	-----	1.5V

Footnote:
(1) Tighter tolerances available upon request.





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.