NEL CRYSTAL CLOCK OSCILLATORS

APPLICATION NOTE
HK-2900 300/400MHz Clock for Digital Equipment Corporation
DEC chip 21064-AA/BA (Alpha Microprocessor)

NEL's HK-2900 crystal clock oscillator provides a low cost frequency source for Digital Equipment Corporation's Alpha microprocessor. The HK-2900 is a pseudo-ECL oscillator capable of operating with a +5V supply. The differential outputs of the HK-2900 will meet all Alpha μp requirements when terminated per DEC's recommendations. An enable/disable feature is standard on the HK-2900 to ease board level testing. The HK-2900 supplies the Alpha microprocessor with the proper signal characteristics as follows:

  * Differential system clock signals
  * 600 mVolts peak to peak minimum, 3.0 Volts peak to peak maximum
  * Duty cycle of 55/45% maximum

Both outputs of the HK-2900 should be pulled up to +5V with 100 ohm resistors and pulled down to ground with 150 ohm resistor as recommended by Digital Equipment Corporation. These biased signals must then be AC coupled through approximately 220pf capacitors prior to application to the Alpha microprocessor.

Other frequencies from 50 up to 600MHz are available to serve customer applications.