

9507 QUAD AND/NAND

95H10 MSI BCD DECADE COUNTER

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DESCRIPTION The 9507 is a Temperature Compensated Quad ECL AND gate using series gating and collector and emitter dotting to achieve the logical functions within approximately one gate delay.

The uses are for any logical AND or 8 input NAND function with higher speed than similar logic implemented with standard gates. This element is designed to increase speed and reduce package count in high performance processors and controllers.

- HIGH SPEED . . . 2.6 ns PER GATE
- 8 INPUT LOGIC NAND IN ONE GATE DELAY
- SEPARATE NON-STANDARD ECL LOGIC FUNCTIONS -4 DUAL AND GATES
- HIGHER SYSTEM RELIABILITY AND LOWER COST BY ELIMINATING COMPLEX WIRING OF OR/NOR GATES
- SEPARATE CURRENT SWITCH & EMITTER FOLLOWER V_{CC} PINS
- TEMPERATURE COMPENSATION
- INTERNAL PULLDOWN RESISTORS
- LOW CROSSTALK AND NOISE GENERATION
- WIRE OR CAPABILITY
- 50 Ω LINE DRIVING CAPABILITY
- SINGLE -5.2V POWER SUPPLY
- HERMETIC CERAMIC 16 PIN DIP

DESCRIPTION The 95H10 is a high speed synchronously presettable 8421 BCD decade counter. It is a synchronously presettable, multi-function MSI building block useful for a large number of counting, digital integration, and conversion applications. Up to 9 decades can be cascaded with no speed degradation using the standard 9500 gates. With 95H00 gates a multidecade synchronous load counter to over 150 MHz can be built. Typical counter frequency is over 180 MHz or easy frequency increase to over 250 MHz with the 95H29 JK Flip Flop.

Features include assertion inputs and outputs on each of the 4 master slave counting flip flop. Terminal count is generated internally in a manner that allows synchronous loading at nearly the speed of the basic counter. When the parallel load feature is not needed, the CE input may be used as a clock gate regardless of clock input level. Availability of all these features on one chip significantly improves the reliability, performance and power consumption of high speed systems.

- HIGH SPEED COUNT . . . 180 MHz TYPICAL COUNT FREQUENCY
- HIGH SPEED SYNCHRONOUSLY LOAD . . . OVER 150 MHz SYNCHRONOUS LOAD FREQUENCY
- INTERNAL COUNT ENABLE
- EXPANDABLE TO OVER 250 MHz WITH THE 95H29
- ASYNCHRONOUS MASTER RESET
- 50 Ω OR FANOUT OF 10 ON EACH OUTPUT
- WIRE OR CAPABILITY
- SEPARATE CURRENT SWITCH EMITTER FOLLOWER V_{CC} PINS - ELIMINATE NOISE COUPLING
- TEMPERATURE COMPENSATION
- INTERNAL PULLDOWN FOR DIRECT LOW COST WIRING
- SINGLE -5.2 VOLT POWER SUPPLY
- HERMETIC CERAMIC 16 PIN DIP
- COMPLEX MULTI-GATE CHIP REDUCES PACKAGE COUNT AND POWER

