

## Integrated Circuits—74 Series

### DESCRIPTION

Series 74 integrated circuits are designed and characterised for high-speed, general-purpose digital applications where high DC noise margin, and relatively low power dissipation are important system considerations. This logic series includes the basic gates, flip-flop elements, and complex logic and storage elements needed to perform all functions of general-purpose digital systems. Series 74 are completely compatible with series 74H, 74S, 74L and 74C TTL logic families. Compatibility of these five TTL families permits improved systems design as the logician is permitted the flexibility of selecting component switching speed or circuit power dissipation with respect to system requirements. Series 74H or 74S high-speed TTL circuits can be selectively used to perform those functions requiring minimal propagation delay times. Series 74L and 74C TTL circuits can be used to reduce total power

requirements. All four TTL families are designed to operate at the same supply voltages and compatible logic levels. In addition, high DC noise margins characteristic of TTL circuits are maintained.

### FAN-OUT TABLE

(at the high logic level—logical '1').

Series	Number of loads				
	74	74H	74S	74L	74C*
74	10	8	8	40	∞
74H	12	10	10	100	∞
74S	24	20	20	200	∞
74L	2	1	1	10	∞
74C	0	0	0	2	∞

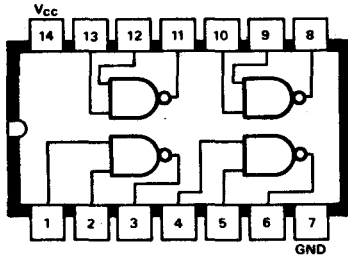
\*Note: Fan-out to 74C series is limited only by the capacitance of the fan-in 74C package plus any interconnect capacitance.

**74 Series TTL** See outline drawings Nos. 109, 111 or 114 (as applicable for 14 pin, 16 pin package etc.) for physical dimensions.

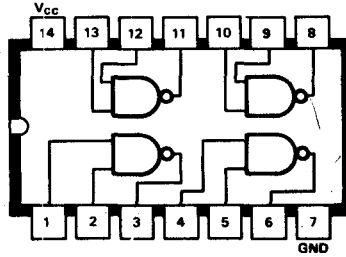
REFERENCE TABLE Code	Function	Stock No.	Connection Diagram No.
DM7400N	Quad 2 NAND Gate	19595B	B1
DM7401N	Quad 2 NAND Gate (Open Collector)	19596X	B2
DM7402N	Quad 2 NOR Gate	19597R	B3
DM7403N	Quad 2 NAND Gate (Open Collector)	19598G	B4
DM7404N	HEX Inverter	19599E	B5
DM7405N	HEX Inverter (Open Collector)	19600G	B6
DM7406N	30V 40MA Hex Inverter (Open Collector)	30999R	B7
DM7407N	30V 40MA Hex Buffer (Open Collector)	29549D	B8
DM7408N	Quad 2 AND Gate	29388F	B9
DM7409N	Quad 2 AND Gate (Open Collector)	29346D	B10
DM7410N	Triple 3 NAND Gate	19601E	B11
DM7411N	Triple 3 AND Gate	29389D	B12
DM7413N	Dual Schmitt Trigger	29358G	B14
DM7414N	Hex Schmitt Trigger	34372D	B155
DM7416N	15V 40MA Hex Inverter (Open Collector)	31001G	B16
DM7417N	15V 40MA Hex Buffer (Open Collector)	31002E	B17
DM7420N	Dual 4 NAND Gate	19602C	B19
DM7423N	Exp Dual-4 NOR Gate	34371F	B154
DM7425N	Dual 4 NOR Gate	33004B	B22
DM7426N	Quad 2 NAND Hi Volt Gate (Open Collector)	30615G	B23

PLEASE QUOTE STOCK NO. AND MANUFACTURER'S CODE WHEN ORDERING

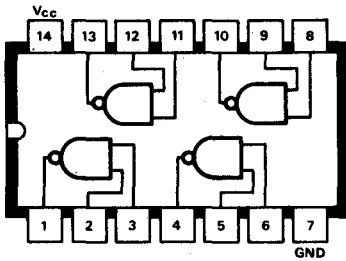
**B1 SN7400N/AN**  
**SN74H00N/SN74S00N**  
**SN74L00N/SN74C00N**  
 Quad 2-input NAND gate



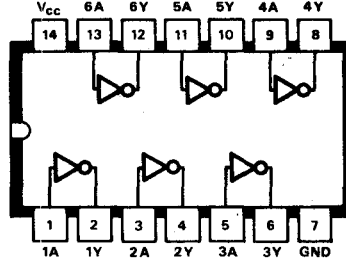
**B4 SN7403N/AN**  
**SN74S03N/SN74L03N**  
 Quad 2-input NAND gate  
 with open collector output



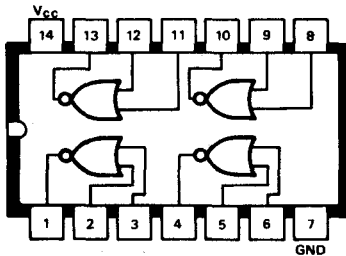
**B2 SN7401N/AN**  
**SN74H01N**  
 Quad 2-input NAND gate  
 with open collector output



**B5 SN7404N**  
**SN74H04N/SN74S04N**  
**SN74L04N/SN74C04N**  
 Hex Inverter



**B3 SN7402N**  
**SN74L02N/SN74C02N**  
 Quad 2-input NOR gate



**B6 SN7405N/AN**  
**SN74H05N/SN74S05N**  
 Hex Inverter  
 with open collector output

