82S90 | PRESETTABLE HIGH SPEED DECADE/BINARY COUNTER

82S91 | ADVANCED INFORMATION
DIGITAL 8000 SERIES SCHOTTKY TTL/MSI

DESCRIPTION

The 82S90 Decade Counter and 82S91 Binary Counter are high speed devices providing a wide variety of counter/storage register applications with a minimum number of packages.

The 82S91 Binary Counter may be connected as a divide-by-two; four, eight, or sixteen counter.

Both devices have strobed parallel-entry capability so that the counter may be set to any desired output state. A "1" or "0" at a data input will be transferred to the associated output when the strobe input is put at the "0" level. For additional flexibility, both units are provided with a reset input which is common to all four bits. A "0" on the reset lines produces "0" at all four outputs.

FEATURES

- SCHOTTKY-CLAMPED TTL STRUCTURE
- PNP INPUTS
- CLOCK FREQUENCY = 100 MHz (Typ)
- PARALLEL LOAD CAPABILITY
- ASYNCHRONOUS RESET

ELECTRICAL CHARACTERISTICS

Clock Frequency	100 MHz (Typ)
Strobe/Reset Hold Time	10ns (Typ)
Output Current (Min)	
I_{out}"0"	20mA @ 0.5V
I_{out}"1"	1mA @ 2.7V

LOGIC DIAGRAMS AND TRUTH TABLES

82S90

Bi-Quinary (5-2)				
Input	A_0	B_0	C_0	D_0
0	0	0	0	0
1	0	1	0	0
2	0	0	1	0
3	0	1	1	0
4	0	0	0	1
5	1	0	0	0
6	1	1	0	0
7	1	0	1	0
8	1	1	1	0
9	1	0	0	1

Decade (BCD)				
Input	A_0	B_0	C_0	D_0
0	0	0	0	0
1	1	0	0	0
2	0	1	0	0
3	1	1	0	0
4	0	0	1	0
5	1	0	1	0
6	0	1	1	0
7	1	1	1	0
8	0	0	0	1
9	1	0	0	1

V_{CC} = (14)
GND = (7)
( ) = Denotes Pin Numbers

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Binary				
Input	A_0	B_0	C_0	D_0
0	0	0	0	0
1	1	0	0	0
2	0	1	0	0
3	1	1	0	0
4	0	0	1	0
5	1	0	1	0
6	0	1	1	0
7	1	1	1	0
8	0	0	0	1
9	1	0	0	1
10	0	1	0	1
11	1	1	0	1
12	0	0	1	1
13	1	0	1	1
14	0	1	1	1
15	1	1	1	1

V_{CC} = (14)
GND = (7)
( ) = Denotes Pin Numbers