

FAIRCHILD DIGITAL

TTL

COUNTERS (Cont'd)

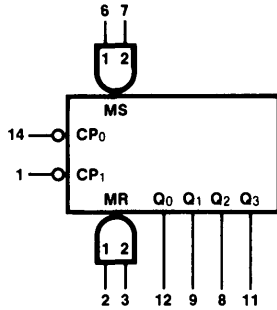
It m	Function	DEVICE NO.	Modulo	Parallel Load*	Clock Transition	Max Clock Rate MHz (Typ)	Clock to Q Output Delay-ns (Typ)	Power Dissipation mW (Typ)	Logic/Connection Diagram	Package(s)
1	Synchronous	93L16	16 Presettable	S	┘	23	26	85	D127	4L,7B,9B
2	Synchronous ✓	93S16	✓ 16 Presettable	S	┘	90	90	410	D127	4L,7B,9B
3	Synchronous	54/74160	10 Presettable	S	┘	32	17	315	D127	4L,7B,9B
4	Synchronous	54LS/74LS160	10 Presettable	S	┘	45	15	95	D127	4L,7B,9B
5	Synchronous	54/74161	16 Presettable	S	┘	32	17	315	D127	4L,7B,9B
6	Synchronous	54LS/74LS161	16 Presettable	S	┘	45	15	95	D127	4L,7B,9B
7	Synchronous	54/74162	10 Presettable	S	┘	32	17	315	D128	4L,7B,9B
8	Synchronous	54LS/74LS162	10 Presettable	S	┘	45	15	95	D128	4L,7B,9B
9	Synchronous	54/74163	16 Presettable	S	┘	32	17	315	D128	4L,7B,9B
10	Synchronous	54LS/74LS163	16 Presettable	S	┘	45	15	95	D128	4L,7B,9B
11	Up/Down	54LS/74LS168	10 Presettable	—	┘	32	15	100	D83	4L,6B,9B
12	Up/Down	54LS/74LS169	16 Presettable	—	┘	32	15	100	D83	4L,6B,9B
13	Up/Down	54/74192	10	A	┘	30	30	325	D129	4L,7B,9B
14	Up/Down	54LS/74LS192	10	A	┘	40	30	85	D129	4L,7B,9B
15	Up/Down	54/74193	16	A	┘	30	30	325	D129	4L,7B,9B
16	Up/Down	54LS/74LS193	16	A	┘	40	30	85	D129	4L,7B,9B
17	Up/Down	54/74190	10	A	┘	25	20	325	D130	4L,7B,9B
18	Up/Down	74LS190	10	A	┘	40	20	90	D130	7B,9B
19	Up/Down	54/74191	16	A	┘	25	20	325	D130	4L,7B,9B
20	Up/Down	74LS191	16	A	┘	40	20	90	D130	7B,9B

*A = asynchronous, S = synchronous

FAIRCHILD LOGIC/CONNECTION DIAGRAMS

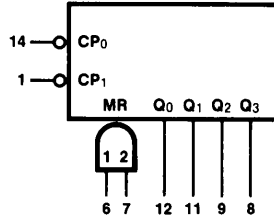
DIGITAL - TTL

D121
54/7490A, 54LS/74LS90



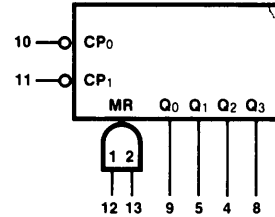
VCC = Pin 5
GND = Pin 10
NC = Pin 4, 13

D122
54/7492, 74LS92



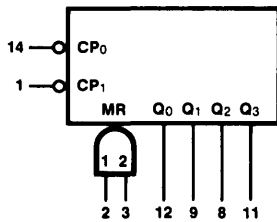
VCC = Pin 5
GND = Pin 10
NC = 2, 3, 4, 13

D123
54/74293, 54LS/74LS293



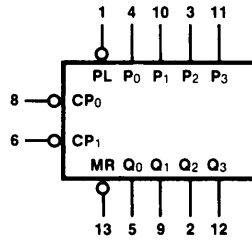
VCC = Pin 14
GND = Pin 7
NC = Pins 1, 2, 3, 6

D124
54/7493A, 54LS/74LS93



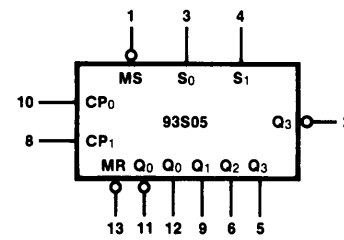
VCC Pin 5
GND = Pin 10
NC = Pins 4, 6, 7, 13

D125
54/74176, 54/74177,
54/74196, 54LS/74LS196,
54/74197, 54LS/74LS197



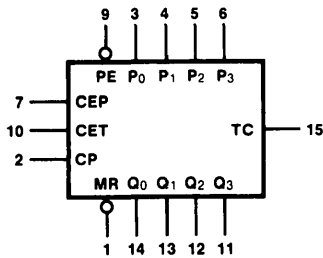
VCC = Pin 14
GND = Pin 7

D126
9305, 93S05



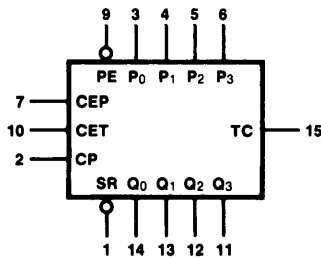
VCC = Pin 14
GND = Pin 7

D127
9310, 93L10, 93S10,
9316, 93L16, 93S16
54/74160, 54LS/74LS160,
54/74161, 54LS/74LS161



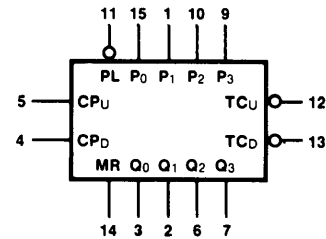
VCC = Pin 16
GND = Pin 8

D128
54/74162, 54LS/74LS162,
54/74163, 54LS/74LS163



VCC = Pin 16
GND = Pin 8

D129
54/74192, 54LS/74LS192,
54/74193, 54LS/74LS193



VCC = Pin 16
GND = Pin 8