

GFS2010A

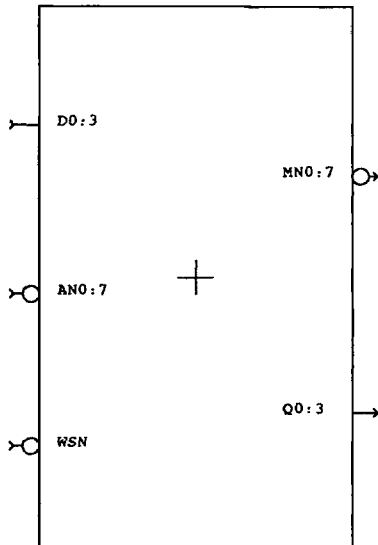
8 X 4 CAM WITHOUT MASK

GENERAL DESCRIPTION:

THE GFS2010A MEGAFUNCTION IS AN 8-WORD BY 4-BIT CONTENT ADDRESSABLE MEMORY (CAM). THIS MEGAFUNCTION IS FUNCTIONALLY IDENTICAL TO THE FAIRCHILD 100142 EXCEPT THAT IT HAS EIGHT WORDS INSTEAD OF FOUR AND IT HAS NO MASK FUNCTION. FOR A DETAILED FUNCTIONAL DESCRIPTION SEE THE FAIRCHILD DATA BOOK.

PIN DIAGRAM:

GFS2010A



- GATES USED - 290
- AREA USED - 307 GATE LOCATIONS
- LL7000 SERIES COMPATIBLE
- LSA2000 SERIES COMPATIBLE

INPUT LOADING: (LOADING IN TRANSISTOR PAIRS)

DO:3 - 4 AN0:7 - 2 WSN - 4

OUTPUT DRIVE: (DRIVE IN (#P,#N))

MN0:7 - (1,0.25) Q0:3 - (1,0.25)

NDL SYNTAX:

Z (MN0, MN1, MN2, MN3, MN4, MN5, MN6, MN7, Q0, Q1, Q2, Q3)
 -GFS2010A (D0, D1, D2, D3, AN0, AN1, AN2, AN3, AN4, AN5, AN6, AN7, WSN) \$

FUNCTIONAL INFORMATION:

EACH WORD LOCATION OF THE GFS2010A MEGAFUNCTION HAS ITS OWN ACTIVE-LOW ADDRESS SELECT LINE. IN THE READ MODE, DATA FROM THE ADDRESSED LOCATION APPEARS AT THE DATA OUTPUT (Q0:3). IN THE WRITE MODE, WHEN THE WRITE STROBE (WSN) IS LOW, DATA IS STORED IN THE SELECTED LOCATION. MATCH COMPARISONS ARE ALWAYS MADE BETWEEN INPUT DATA AND ALL THE WORDS IN THE CAM. NO CONTROL SIGNAL IS REQUIRED FOR THE MATCH FUNCTION. IF A MATCH COMPARE RESULTS IN A MATCH, THE MATCH OUTPUT (MN0:7) GOES LOW.

AC CHARACTERISTICS:

PROPAGATION DELAY*:

OUTPUT INPUT	Q0:3 NS	MN0:7 NS
AN0:7	6.0	12.2
D0:3	11.2	8.1
WSN	13.1	12.0

* 7K NOMINAL

SET-UP AND HOLD TIMES*:

FROM INPUT	SET-UP TIME NS	HOLD TIME NS
AN0:7	0.2	4.6
D0:3	1.5	1.8

* MINIMUM WSN WIDTH: 4.6 NS