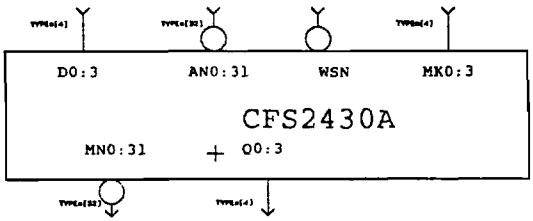
CFS2430A 32x4 CAM with Mask

DESCRIPTION: CFS2430A is a 32-word X 4-bit content addressable memory (CAM) which is functionally identical to the Fairchild 100142 except that it has 32 words instead of four. Each word has its own active-low, address select line. In the read mode, data from the addressed location appear at the data output (Q0:3). In the write mode, when the write strobe (WSN) is low, data are stored in the selected location. Match comparisons are always made between input data and all the words in the CAM. Each data input has its mask input. A high mask input on any bit blocks data input to that bit and forces a match of that bit. If a search compare results in a match, the match outputs (MN0:31) go low.

LOGIC SYMBOL:



INPUTS (LOADING IN TRANSISTOR PAIRS):
D0:3(4), AN0:31(2), WSN(4), MK0:3(6)

OUTPUTS (DRIVE IN (#P,#N)):
MN0:31(1,0.25), Q0:3(1,0.25)

GATE COUNT: GATES USED = 1827
AREA USED = 2272

PROPAGATION DELAY*:

OUTPUT / INPUT	Q0:3	MN0:31
AN0:31	6.4	10.9
D0:3	10.9	7.1
MK0:3	13	5.5
WSN	14.4	12.4

* 10K, NOMINAL CONDITIONS (IN NS)

SET-UP AND HOLD TIMES*:

FROM INPUT	SET-UP TIME NS	HOLD TIME NS
AN0:31	0	5.3
D0:3	0.3	2.1
MK0:3	0.1	6

* MINIMUM WSN WIDTH: 4.5 NS