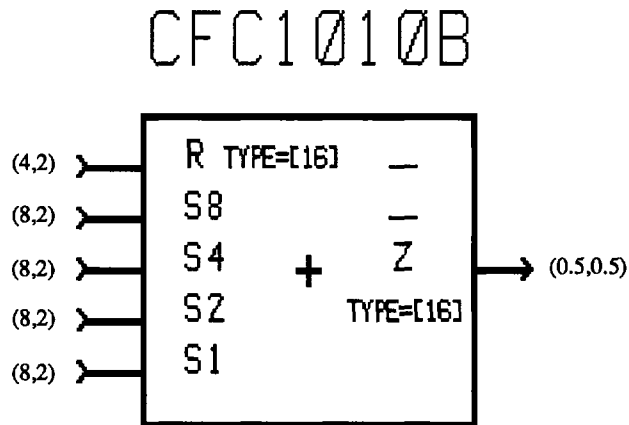


GENERAL DESCRIPTION: 16-BIT BARREL SHIFTER

CFC1010B performs a 16-bit end-around shift, or what is commonly known as a barrel shift. There are 4 control lines (S8, S4, S2 and S1) to determine how many places to the left the 16-bit inputs (R15:0) will be shifted at the outputs (Z15:0). All outputs are in-phase with the inputs.

PIN CONNECTION DIAGRAM:**FEATURES:**

- 16-bit data encoded select lines
- in-phase outputs

EQUIVALENT USED GATES: 124 GATES
(for rough area estimates)

THIS MEGAFUNCTION CONSISTS OF :
124 soft-coded gates.

POWER: NOT AVAILABLE.

FAULT COVERAGE(%): 100%

PIN DESCRIPTION:

R15:0	DATA INPUT
S8, S4, S2, S1	ENCODED SELECT LINES
Z15:0	DATA OUTPUT

TRUTH TABLE:

S8	S4	S2	S1	Z15	Z14	Z13	Z12	Z11	Z10	Z9	Z8	Z7	Z6	Z5	Z4	Z3	Z2	Z1	Z0
0	0	0	0	R15	R14	R13	R12	R11	R10	R9	R8	R7	R6	R5	R4	R3	R2	R1	R0
0	0	0	1	R14	R13	R12	R11	R10	R9	R8	R7	R6	R5	R4	R3	R2	R1	R0	R15
0	0	1	0	R13	R12	R11	R10	R9	R8	R7	R6	R5	R4	R3	R2	R1	R0	R15	R14
0	0	1	1	R12	R11	R10	R9	R8	R7	R6	R5	R4	R3	R2	R1	R0	R15	R14	R13
0	1	0	0	R11	R10	R9	R8	R7	R6	R5	R4	R3	R2	R1	R0	R15	R14	R13	R12
0	1	0	1	R10	R9	R8	R7	R6	R5	R4	R3	R2	R1	R0	R15	R14	R13	R12	R11
0	1	1	0	R9	R8	R7	R6	R5	R4	R3	R2	R1	R0	R15	R14	R13	R12	R11	R10
0	1	1	1	R8	R7	R6	R5	R4	R3	R2	R1	R0	R15	R14	R13	R12	R11	R10	R9
1	0	0	0	R7	R6	R5	R4	R3	R2	R1	R0	R15	R14	R13	R12	R11	R10	R9	R8
1	0	0	1	R6	R5	R4	R3	R2	R1	R0	R15	R14	R13	R12	R11	R10	R9	R8	R7
1	0	1	0	R5	R4	R3	R2	R1	R0	R15	R14	R13	R12	R11	R10	R9	R8	R7	R6
1	0	1	1	R4	R3	R2	R1	R0	R15	R14	R13	R12	R11	R10	R9	R8	R7	R6	R5
1	1	0	0	R3	R2	R1	R0	R15	R14	R13	R12	R11	R10	R9	R8	R7	R6	R5	R4
1	1	0	1	R2	R1	R0	R15	R14	R13	R12	R11	R10	R9	R8	R7	R6	R5	R4	R3
1	1	1	0	R1	R0	R15	R14	R13	R12	R11	R10	R9	R8	R7	R6	R5	R4	R3	R2
1	1	1	1	R0	R15	R14	R13	R12	R11	R10	R9	R8	R7	R6	R5	R4	R3	R2	R1

AC CHARACTERISTICS:

(Nominal case, output loading is 2, delay predicted by LPACE)

PATH	10K DELAY TYP. ns	LCA100K DELAY TYP. ns
R(I) TO OUTPUT Z(I)	4.9	3.9
S(I) TO OUTPUT Z(I)	6.0	4.8