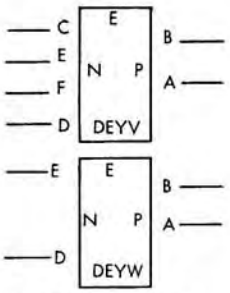
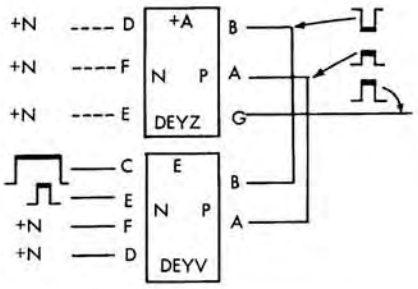
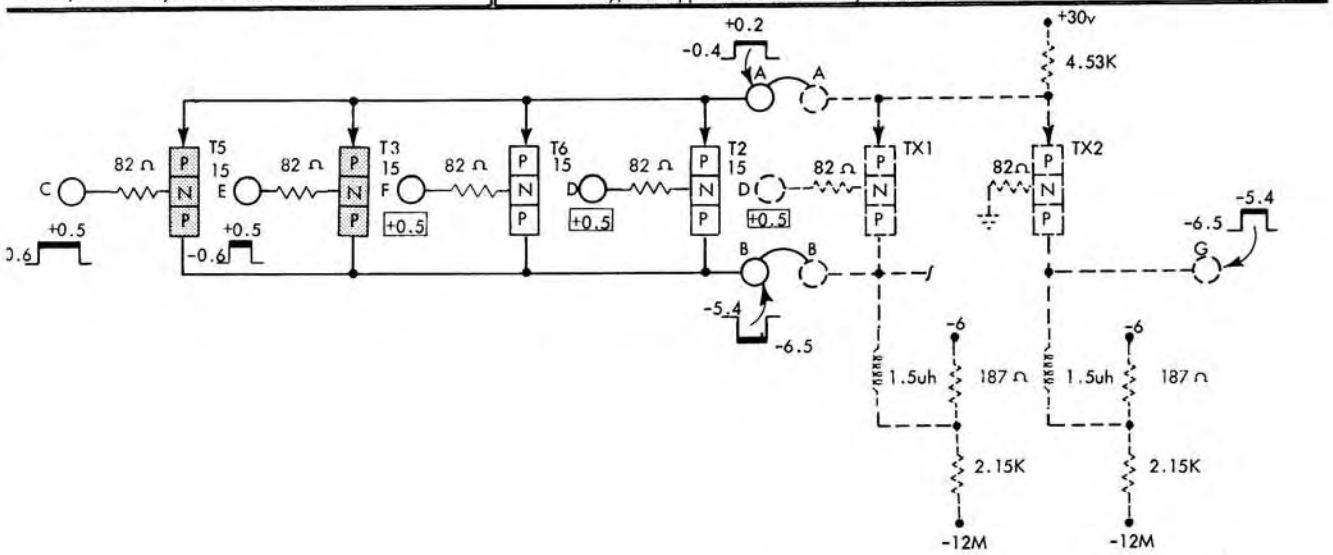


2-Way and 4-Way AND-Block Extenders



Typical Application of a 4-Way Extender



Card Code	Part No 37----	No of Inputs	Circuit Used as	Input Levels Min.	Input Levels Max.	In Ø Output Min.	In Ø Output Max.	Out Ø Output Min.	Out Ø Output Max.
DEYV	1318	4	AND-Block Extender	+0.4 -0.4	See driver for max output Levels	-5.6 -6.4	-5.2 -6.5	-5.6 -6.4	-5.1 -6.5
DEYW	1325	2							

ma. Output	In Ø	Out Ø	musec Block Delay Turn On	musec Block Delay Turn Off
Min.	5.97	6.04	8	4
Nom.	6.56	6.69	15	9
Max.	7.14	7.34	24	15

iffused Junction Two-Way and Four-Way AND Block Extenders

his type of extender card is used in combination with an ND circuit to increase the number of input legs to the AND. s shown above, a 3-way AND is increased to a 7-way AND / using the four-way extender DEYV. Had the two-way :tender DEYW been used, the three-way AND would be creased to a five-way AND. In logic, the circuit above orks as a seven-way AND, which means that the +AND inction is satisfied only when all seven inputs are positive. s in any +AND circuit, the in-phase output (G) follows ıe sign of the function and is positive when all inputs are ɔsitive. If the —OR function is desired, the in-phase out-ıt is negative for any negative input.

ircuit Description

The extender increases the number of inputs by con-ɛcting, in parallel with the input transistors of the AND rcuit, additional input transistors. For example, in the rcuit above, back panel wiring A-A and B-B connects T5, 3, T6 and T2 in parallel with TX1 of the AND circuit card DEYZ. Any —N input (see input C and E) forward-biases an input transistor and the emitter line clamps within 0.2v to the input potential. With the emitter at 0.4v as shown, TX2 is reverse-biased and output G is at a —P level of —6.5v because of divider current through its coupling network; output B is at a +P level of —5.4v because of current flow (6.7ma.) out of its coupling network through T5 and T3 to +30v.

When all inputs are positive, the emitter of TX2 attempts to rise above ground, but in so doing it becomes forward-biased and clamps to its base potential. In this state all input transistors are cut off, so that output B falls to a —P level and output G rises to a +P level because TX2 is conducting.

Application

Extenders are used as +A block extenders or —OR block extenders.