



Card Code	Part No. 37----	Circuit Used as	Input Levels		Output Levels		musec Block Delay (Note 1)			Input Current Driven by	Min. Pulse Width
			Min.	Max.	Min.	Max.	Turn On	Turn Off			
DMYP	1350	DP	-5.1	-4.3	-5.6	-4.5	Min.	15	13	Type A Block, In $\emptyset$ Output	50 musec
			-6.7	-6.9	-6.4	-6.7	Nom.	31	21	Type A Block, Out $\emptyset$ Output (Only When DP Input Clamp Ckt is Used)	
							Max.	45	31	Type B Block, Either Output	

Note 1: Delays are measured from input terminal A of the power driver to the output of a logic block driven by the driver.

**Diffused Junction P-to-P Power Driver (4-10 Bases)**

This power driver is used when it is required to drive from four to ten bases (logic circuits of the type shown in the above application). It provides an in-phase P line output for a P line input. This driver is not designed to drive widely separated circuits. Because of the driving requirements of this circuit, a special coupling network is built into its input. This network converts an input current into the P line signal levels required.

*Circuit Description*

In the state shown, tx1 is cut off and the input current to the power driver is zero. Divider current through the coupling network (392 ohms, 3.65K, 5.23K) establishes a -P input level of -6.8v. T2 is forward-biased because its emitter is tied to a -6 return through a 221 ohm resistor. Current flows from -12v through T2 and 221 ohms to -6v. The emitter of T2 clamps to the -6.8v input

potential and output C is at a -P level of -6.6v. Back currents for a maximum of ten tx3's also flow through T2.

When the input to the converter falls, tx1 is forward-biased and 6.7ma flows out of the coupling network through tx1 to +30v. The input level rises to -4.7v which cuts off T2 and forward-biases T6. Current through T6 flows from -6v through the 221 ohm resistor, which causes the emitter level of T6 to rise and clamp to its base potential. When the emitter potential of T6 rises above -6v, forward base current for a maximum of ten tx3's flows from -36v, emitter-base diodes of tx3's, through T6 to ground.

The input network peaking coil compensates for line capacitance so that optimum square wave response is realized. The 33 ohm output resistance is an oscillation suppressor which is necessary because of the inductive coupling network used.