



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			
DMYQ	1349	DP	+0.7	+0.9	+0.4	+0.7	Min.	15	13	Type A Block, In \emptyset Output	50 musec
			-0.9	-1.7	-1.5	Max.	31	21	Type A Block, Out \emptyset Output (Only When DP Input Clamp Ckt is Used)		
						Min.	45	31	Type B Block, Either Output		
						Max.					

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, N-to-N Power Driver (4-10 Bases)

This power driver is used in order to drive from four to ten bases (logic circuits of the type shown in the above application). It provides an in-phase N line output for an N 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 N line signal levels required.

Circuit Description

In the state shown, tx2 is forward-biased and 6.5ma flows from -36v through tx2 into the coupling network to +6v and ground. Current flow into this coupling network establishes the input level at -1.3v. T5 is forward-biased because its emitter is tied to ground through the 221 ohm resistor. Current flows from -6v through T5 and 221 ohm to ground. The emitter clamps to its base potential and output C is at a -N level of -1v. Forward base

current for a minimum of 10 tx3's supplied from -6v through T5, 33 ohm, base-emitter diodes of tx3's to +30v.

When the input to the converter rises, tx2 is cut off and the input current to the driver falls to zero. Divider currents through the coupling network cause the input level to rise to +0.8v. When the input level rises above ground, T5 is cut off and T6 is forward-biased. Current flows from ground through 221 ohms and T6 to +6v, and the emitter clamps to the base potential. The output level is +0.6v which reverse-biases the tx3 load transistors. Back currents for the tx3 transistors flow out of their bases through T6 to +6v.

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 that is necessary because of the inductive coupling network used.