



Card Code	Pt. No	Input Levels		Max. Output Current	Max. Load Back Current (I_{bo} 's) Allowed	Input Current Levels (ma)			usec Delay Per		
		Min.	Max.			Min.	Nom.	Max.	C Block and DE Block	100uu Load	Driven Base
AEWY	1238	-1	See driver for max. Output Levels	5ma to drive 20 bases	2.5ma	Min.	4.82	.05	.01	.012	
						Nom.	7.6	.1	.01	.015	
						Max.	10.8	.16	.01	.018	

Current Mode N-Line Complemented Emitter Follower

This complemented emitter follower is designed to receive an N line input and to provide an in-phase N line output to drive large branching circuits. Although it can drive into twenty local logic blocks, it is not designed to drive large capacitive loads. Such loads are normally driven by line drivers. The circuit shown has a special input coupling network which converts a current input into the signal levels necessary to drive the complemented transistor configuration used. Because complemented transistors are used, the output signal has about equal rise and fall characteristics.

Circuit Description

As shown, tx2 is cut off and input current to C is 7.6 ma. This current seeks a plus return through 1.8K to +6v.

This input current cannot all flow through the 1.8K because this would drop the input level to -7.6v. When the input falls below -1.3v, D21 becomes forward-biased, and some input current flows through it and 120 ohms to ground. This combination sets the input level at -2v which forward biases T4 because its emitter looks at the emitter level of tx3 which is about 0v. T4 conducts and supplies input current for a maximum of 20 tx3's.

When the input to rx1 falls below -6v it cuts off and the input current to C falls to zero. Input C attempts to rise to +6v but never reaches this level because D24 becomes forward-biased and clamps the input to +1.7v. As input C rises above zero, T4 is cut off and T5 is forward-biased.

T5 provides a low impedance for discharging line capacity and as a return for the back current of 20 rx3's.