



Similar outputs may share a common load and perform the DOT functions (e.g., Pin H back panel wired to Pin A)

CPWU 371257

*Function of capacitive loading and number of CTDL blocks driven.

Input Level		Output Level		Delays*	(usec)			Circuit Use
Min.	Max.	Min.	Max.		Load	1 CTDL Block	10 CTDL Blocks	
+1.44 -5.46	+6.24 -6.24	-5.2 -7.4	-0.8 -9.2	Turn Off	Min.	.17	.20	C
					Max.	.52	.53	CA
				Turn On	Min.	.14	.25	-TC
					Max.	.26	.56	-TCO

CTDL T to U Converter

The CPWU card consists of four one-way PNP emitter follower circuits designed for current amplification. Each circuit translates a T input to a U in-phase output and provides the current amplification required to drive branching circuits.

Circuit Description

The input voltage divider network sets the base voltage of T4 so that it is always in conduction. When the input is up, the base level of T4 is near -3.3v. T4 is forward-biased on and clamps the output at pin A to -3.0v. The small drop (0.3v) exists between the base and the emitter of the conducting transistor. Decreasing the input to -5.8v causes the base voltage to drop to -8.7v. Conduction through T4 increases and the output at pin A becomes -8.4v. Capacitive loading and the number of blocks driven affect the circuit delays given in the chart.

Application

The logical functions performed by these circuits are indicated by the symbols listed in the chart labeled Circuit Use. These circuits normally provide current amplification to negative-going signals. They are also used as buffer devices, to match impedances, or to provide isolation without inversion.

Additional flexibility is provided on the card for performing the NOR functions. With the emitters of circuits 3 and 4 returned to terminal pins, connections for sharing a common emitter load are easily made by back-panel wiring. In the circuit illustrated above the CA function is performed if pin H is wired to pin A. Considering positive logic, a +T level is required at both pins D and E to obtain a +U output level, and to perform the CA function. Circuits 3 and 4 also function as standard convert circuits by back-panel wiring to their respective emitter resistors.