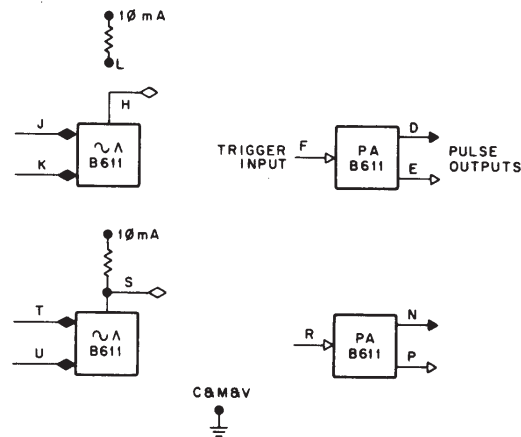


B611 PULSE AMPLIFIER

Standard Size FLIP CHIP Module, 18 Pins



The B611 contains two independent 10 MHz 35 ns pulse amplifiers for power gain and pulse standardization. Two 2-input diode gates increase the logic flexibility.

INPUTS: Gate Inputs - Input load is 2 mA shared by the grounded inputs of each gate. Load at -3 V is less than 1 μ A.

Trigger Inputs - The input to each pulse amplifier is a diode gate which is a 1 mA load at ground and no load at -3 V. The PA is triggered by positive-going pulses or level transitions (-3 V to ground) which are 25 ns or wider at the -1.5 V point at the PA input. The PA produces output pulses for any spacing of input pulses above a minimum of 100 ns provided that the input is at -3 V for at least 50 ns before going to ground. The PA may be driven by any circuit which meets the above requirements. Gates may be collector ORed at the PA input provided that the wiring is kept short, stray capacitance is minimized and the above rules are followed. Up to four PA inputs may be driven from one diode gate collector.

OUTPUTS: Gate Outputs - The diode gate output at pin S has a 10 mA clamped load connected internally and therefore can supply 16 mA drive at ground and -8 mA at -3 V. The diode gate output at pin H has no internal clamped load and therefore can supply 26 mA at ground and no current at -3 V. A 10 mA clamped load is available at pin L. These diode gates are suitable for driving the B611 PA input.

Pulse Outputs - The PA output is from the secondary of a transformer so that positive or negative pulses are available by grounding the appropriate pin. The PA output is capable of driving eighteen 2-mA diode gate loads if careful consideration is given to the wiring and termination. In general, a 100-Ω termination at the last gate in the line provides the proper termination but each case should be examined to see if that is adequate. See the wiring guidelines in Chapter 11 for details. For a negative pulse output (pin E or P grounded), the pulse width is 30 to 40 ns measured at the -1.5 V point, the output amplitude is -3 V, delay from PA input to output is 20 ns or less, and the transformer backswing is +4 V, all of which are measured at the PA output. Corresponding values apply to a positive pulse output. There is approximately 1 ns additional delay through the PA for each diode gate collector that is ORed at the PA input.

NOTE

Transistors with low BV_{cbo} should not be driven by negative pulses from the B611. The +4 V backswing from a negative pulse may cause breakdown.

POWER:

Pin	Voltage	Margin Range	Current
A	+10 V	0 V to 20 V	0.66 mA
B	-15 V	-10 V to -20 V	134 mA
C, M, V	ground		

Pins C, M, and V must all be grounded. One side of each pulse transformer output used must be grounded (D or E, N or P).