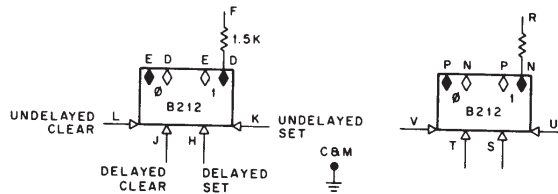


## B212 DELAYED FLIP-FLOP

Standard Size FLIP CHIP Module, 18 Pins



The B212 standard size FLIP CHIP module contains two clear-set flip-flops with buffered outputs and individual delayed and undelayed set and clear inputs.

**INPUTS: Undelayed** – Undelayed inputs must be driven from the collector of a diode gate and require an external clamped load. A total of five B212 undelayed inputs may be driven from one 2 mA diode gate collector if a 5 mA clamped load is used. For driving four or less B212 direct inputs a 10 mA clamped load may be used. Undelayed inputs require 5.5 mA at ground and 0 mA at -3 V. The B212 will operate at 10 MHz; therefore, undelayed input pulses may occur at a 5 MHz repetition rate. The input to the 2 mA diode gate driving the B212 undelayed input should be a standard 40 ns or longer negative pulse. The state of the flip-flop after the simultaneous application of set and clear pulses is undefined.

**Delayed** – Delayed inputs contain an internal 2 mA clamped load and must be driven from the collector of a diode gate. Two delayed inputs may be driven from the collector of one 2-mA diode gate. The B212 delayed input requires 14 mA at ground for a 35 ns or 40 ns pulse and 2 mA at -3 V. A longer pulse or level is loaded with 22 mA at ground. Maximum repetition rate for any delayed input is 5 MHz. The input to the diode gate driving the delayed input of the B212 must be a standard 35 ns or longer pulse. Output delay time is 40 ns minimum and 60 ns maximum measured from the input of the diode gate driving the delayed input.

**OUTPUTS: Logic** – Standard ground and -3 V levels. Each output can drive 40 mA of external load at ground and -7 mA at -3V (-6 mA at pin D, N when the indicator output is used). A total of twenty 2-mA diode gates may be driven at 10 MHz provided that the wiring is kept very short.

Indicator Drive - Pins F and R apply the "1-low" output through a 1.5 K $\Omega$  resistor to an indicator driver such as the W012-W250 or W020-4902.

POWER:

Pin	Voltage	Margin Range	Current
A	+10 V	2.5 V to 17.5 V	50 mA
B	-15 V	-10 V to -20 V	120 mA
C, M	ground		

Pins C and M must both be grounded.

CAUTION

The B212 flip-flop may be damaged if its outputs are grounded when one or more of its inputs is at ground. To manually set or clear the flip-flop ground the input.