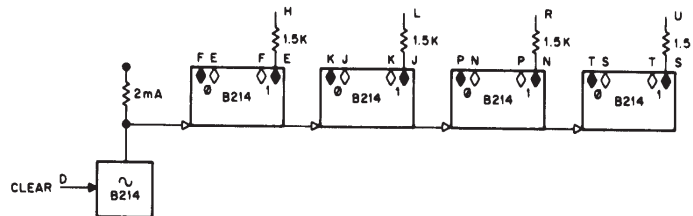


B214 FLIP-FLOPS

Standard Size FLIP CHIP Module, 18 Pins



The B214 contains four unbuffered flip-flops. The module is pin-compatible with the B204, but has improved noise rejection and a 2 mA diode inverter clear input.

INPUTS: Each flip-flop may be individually set or cleared by grounding the "1-high" or "0-high" output. The collector of a 2 mA diode gate driven by a 35 ns or longer pulse may be used to ground a flip-flop output. Diode gates such as B113, B115, B117, etc., may also be used, but due to their slower operation they must be conditioned "on" for at least 70 ns to provide adequate drive. When switching, the output of the negative-going side must reach -1.4 V to latch the flip-flop. The driving signal must be present until this occurs. A negative level at least 35 ns wide applied to the input of the inverter clears all four flip-flops. Clear input loading is 2 mA at ground. If the clear input of the B214 is allowed to fall, all flip-flops clear. Then if one stage is driven to the 1 state, it holds that state as long as the driving signal is present. However, when the driving signal is removed the flip-flop falls back to the 0 state if the clear signal is still present. If the clear input is not used, it must be grounded.

OUTPUTS: Each flip-flop output can drive 20 mA of external load at ground or -6 mA at -3 V (-5 mA when the indicator output is used). For flip-flops driven by 2 mA diode gates with 35 ns pulse inputs, each side of the flip-flop can be loaded with five 2-mA diode gates and 100 pF.

The 1500 Ω resistor outputs allow an indicator driver circuit such as the W012-W250 or W020-4902 to be used. The wire to the W012 or W020 should be short.

POWER:

Pin	Voltage	Margin Range	Current
A	+10 V	0 V to 20 V	0.6 mA
B	-15 V	-8 V to -20 V	50 mA
C,M,V	ground		

Pins C, M, and V must all be grounded.