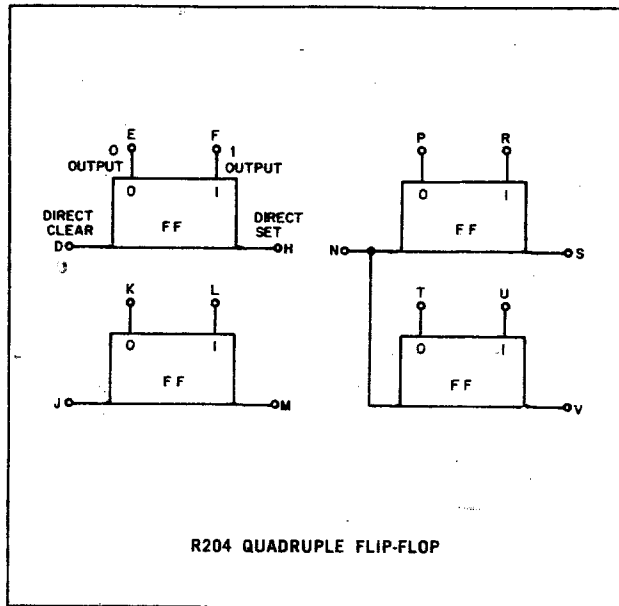


QUADRUPLE FLIP-FLOP TYPE R204

**R
SERIES**



The R204 Quadruple Flip-Flop contains four flip-flops. Each has direct set and direct clear inputs. Two of the flip-flops share a common direct clear input. The R204 is used in general control applications. A set input makes the 1 output $-3v$ and the 0 output ground; a clear input makes the 0 output $-3v$ and the 1 output ground.

INPUT: Direct Set and Clear — A standard 100-nsec pulse or a ground level of 100 nsec minimum duration activates the input; the load at ground is 1 ma per flip-flop. When not in use, the direct set and clear terminals must be at $-3v$. If both inputs are held at ground, both outputs will be at $-3v$. **Collector Triggering** — The flip-flop can also be set or cleared through its outputs by a diode gate circuit or a diode network. The triggering circuit load is the external load on the terminal being driven by the circuit

plus the internal load on that terminal. The internal load is 4 ma for each terminal.

OUTPUT: Standard levels of $-3v$ and ground. Each terminal can drive 17 ma of external load at ground, and has an internal load of 4 ma. If more than 18 in. of wire is attached to an output, additional clamped loads (see the W002, W005) should be connected to decrease the output fall time. The load is sufficient if the positive transition at the opposite terminal reaches $-1v$ within 80 nsec after the flip-flop is pulsed.

Note: Additional driving capability at $-3v$ is required by some circuits outside the R series. Auxiliary clamped loads W002 and W005 are available for this purpose.

POWER: $+10 v(A)/0.9 ma$, $-15 v(B)/42 ma$.