

## SPECIAL CIRCUITS (continued)

### Bipolar Timing Circuits

#### Monostables

MC1555G,U ( $T_A = -55$  to  $+125^\circ\text{C}$ )

MC1455G, P1,U ( $T_A = 0$  to  $+70^\circ\text{C}$ )

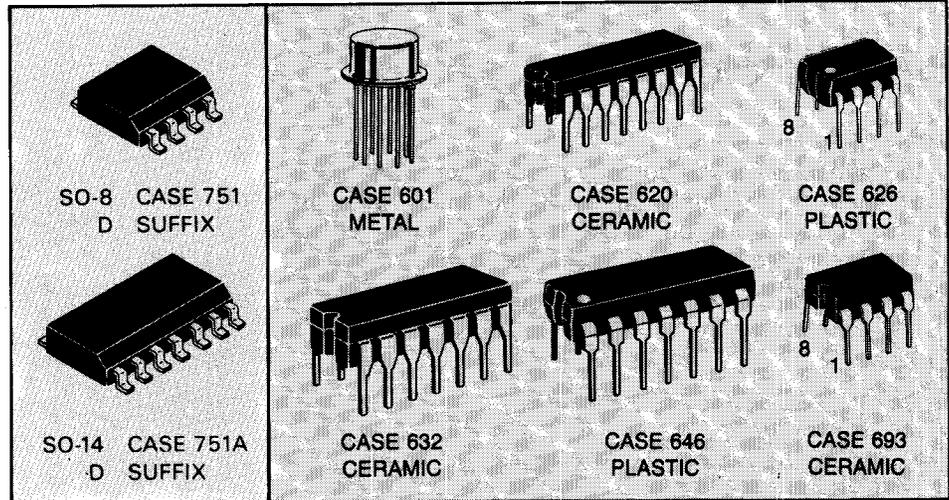
Case 601, Case 626, Case 693, Case 751

#### Monostables

MC3556L ( $T_A = -55$  to  $+125^\circ\text{C}$ )

MC3456L,P ( $T_A = 0$  to  $+70^\circ\text{C}$ )

Case 632, Case 646, Case 751A



These highly stable timers are capable of producing accurate time delays or oscillation. In the time delay mode of operation, the time delay is precisely controlled by one external resistor and capacitor. For astable operation as an oscillator, the free running frequency and the duty cycle are both accurately controlled with two external resistors and one capacitor. The output structure can source or sink up to 20 mA or drive TTL circuits. Timing intervals from microseconds through hours can be obtained. The typical timing error for the MC1555 is 0.5%, for the MC1455, 1.0%.

### Multipliers

MC1594L ( $T_A = -55$  to  $+125^\circ\text{C}$ )

MC1494L ( $T_A = 0$  to  $+70^\circ\text{C}$ )

Case 620

MC1595L ( $T_A = -55$  to  $+125^\circ\text{C}$ )

MC1495L ( $T_A = 0$  to  $+70^\circ\text{C}$ )

Case 632

The MC1594/MC1494 is a Variable Transconductance Multiplier with internal level-shift circuitry and voltage regulator. The gain factor, input offsets and output offset are completely adjustable with the use of four external potentiometers. Two complementary regulated voltages are provided to simplify offset adjustment and improve power-supply rejection.

This device is designed for use where the output voltage is a linear product of two input voltages. Typical applications include: multiply, divide, square root, mean square, phase detector, frequency doubler, balanced modulator/demodulator, electronic gain control.

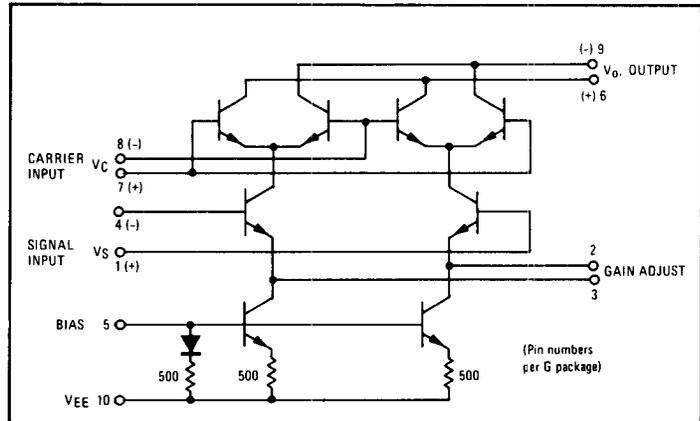
The MC1595L/1495L is similar to the above, but without internal level shift and voltage regulator circuits.

### Balanced Modulator-Demodulator

MC1596G,L ( $T_A = -55$  to  $+125^\circ\text{C}$ )

MC1496G,L,P ( $T_A = 0$  to  $+70^\circ\text{C}$ )

Case 603, Case 632, Case 646



Designed for use where the output voltage is a product of an input voltage (signal) and a switching function (carrier). Typical applications include suppressed carrier and amplitude modulation, synchronous detection, FM detection, phase detection and chopper application.

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