SENSE AMPLIFIERS

MC1440F,G,L,P (0 to +75°C) MC1540F,G,L (-55 to +125°C)

... consisting of a wideband differential amplifier, a dc restoration circuit which also incorporates facilities to externally adjust the threshold, and an output gate which is strobed from saturated logic. It is designed to detect bipolar differential signals derived by a core memory with cycle times as low as 0.5 μ s. MC1440 and MC1540 are identical circuits specified over different temperature ranges.

- Differential Threshold Characteristics: Adjustable Threshold 10-25 mV Nominal Threshold 17 mV @ V_6 = -6 V Input Offset Voltage 1 mV Threshold Drift +10 V/°C
- Fast Response Time 20 ns
- Short Recovery Time

50 ns @ $e_{in} = 1.8$ V Common Mode 50 ns @ $e_{in} = 400$ mV Differential Mode

MAXIMUM RATINGS (TA = 25°C UNLESS OTHERWISE NOTED)

RATING	SYMBOL	VALUE	UNIT
Power Supply Voltage	V+ V-	+10 -10	Vdc Vdc
Differential Input Signal	Vin	±5.0	Volts
Common Mode Input Swing	CMVin	±5.0	Volts
Peak Load Current	l.	25	mA
Power Dissipation (Package Limitation) Metal Can Derate above 25°C Flat Package Derate above 25°C Ceramic Dual In-Line Pkg. Derate above 25°C Plastic Package Derate above 25°C	Po	680 4.6 500 3.3 625 5.0 415 3.3	mW mW/°C mW mW/°C mW/°C mW
Operating Temperature MC1440G, F, P, L Range MC1540F MC1540G, L	Ta	0 to +75 -55 to +100 -55 to +125	°C
Storage Temperature Range	Tstg	-65 to +150	°C

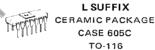
ELECTRICAL CHARACTERISTICS (TA = 25°C)

TYPE	V+ (Vdc)	V- (Vdc)	V+h* (mV)	Åv (V/V)	V _{OH} (Vdc)	Vol.	t _{ed} (ns)	t _R (ns)	CMV _{in} (Vpk)	TCV _{th} (μV/°C)
MC1540	+6.0	-6.0	17	85	5.9	0.35	10	20	±5.0	10
MC1440	+6.0	-6.0	17	85	5.8	0.4	10	20	±5.0	10

^{*}Input Offset Voltage = 1.0 mV; V_{III} is adjustable.

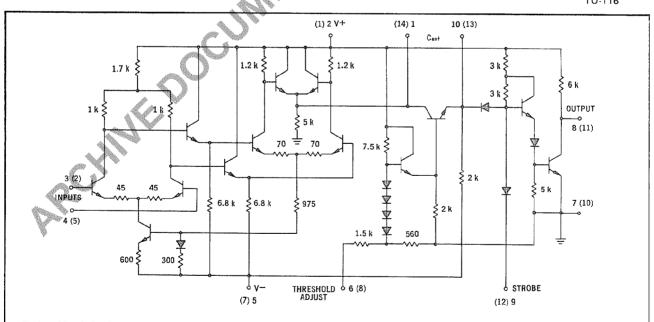








P SUFFIX
PLASTIC PACKAGE
CASE 605
(Formerly Case 93)
TO-116



Number at terminal end represents pin number for devices in flat package and metal can. Number in parenthesis represents pin number for dual in-line ceramic and plastic packages.