

SENSE AMPLIFIERS

MC1710CF, G, L, P (0 to +75°C)

MC1710F, G, L (-55 to +125°C)

... the MC1710 and MC1710C are identical circuits specified over different temperature ranges. These devices are differential voltage comparators for use in level detection, low-level sensing, and memory applications. Features:

- Differential Input Characteristics:
Input Offset Voltage = 1 mV
Offset Voltage Drift = $3 \mu\text{V}/^\circ\text{C}$
- Fast Response Time — 40 ns
- Low Output Impedance — 200 ohms
- Output Compatible with All Saturating Logic Forms —
+3.2 V to -0.5 V typical



F SUFFIX
CASE 606
(Formerly Case 72)
TO-91



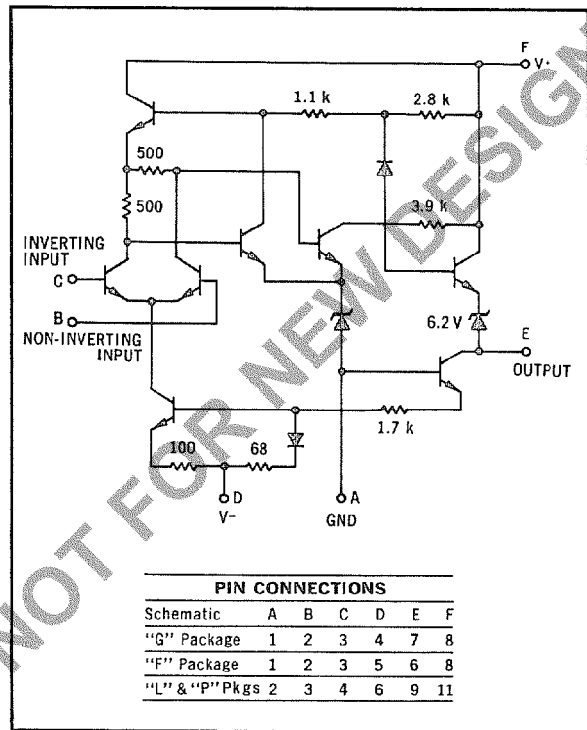
G SUFFIX
CASE 601
(Formerly Case 96)
TO-99



L SUFFIX
CERAMIC PACKAGE
CASE 605C
TO-116



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



MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)

RATING	SYMBOL	VALUE	UNIT
Power Supply Voltage	V+, V-	+14 -7.0	Vdc Vdc
Differential Input Signal	V _{in}	±5.0	Volts
Common Mode Input Swing	CMV _{in}	±7.0	Volts
Peak Load Current	I _L	10	mA
Power Dissipation (Package Limitation)	P _D		
Metal Can		680	mW
Derate above 25°C		4.6	mW/°C
Flat Package		500	mW
Derate above 25°C		3.3	mW/°C
Ceramic Dual In-Line Package		600	mW
Derate above 25°C		4.8	mW/°C
Plastic Package		400	mW
Derate above 25°C		3.3	mW/°C
Operating Temperature Range MC1710C MC1710	T _A	0 to +75 -55 to +125	°C
Storage Temperature Range G, F, & L Pkgs. P Pkg.	T _{stg}	-65 to +150 -65 to +125	°C

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$)

TYPE	V+ (Vdc)	V- (Vdc)	V _{io} (mV)	A _{VOL} (V/V)	V _{OH} (Vdc)	V _{OL} (Vdc)	t _r (ns)	CMV _{in} (Vdc)	TCV _{io} ($\mu\text{V}/^\circ\text{C}$)
MC1710	+12	-6.0	1.0	1700	3.2	-0.5	40	±5.0	3.0
MC1710C	+12	-6.0	1.5	1500	3.2	-0.5	40	±5.0	5.0