

# SENSE AMPLIFIERS

## **MC1441F,L,P (0 to +75°C) MC1541F,L (-55 to +125°C)**

... consisting of a dual-channel gated sense amplifier with separate wideband differential input amplifiers. Either can be gated on from saturated logic levels. The sense amplifier features adjustable threshold, saturated logic output levels, and a strobe input that accommodates saturated logic levels. Designed to detect bipolar signals from either of two sense lines. Operates with core memory cycle times less than 0.5  $\mu$ s.

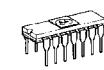
- Nominal Threshold — 17 mV
- Input Offset Voltage — 1.0 mV typical
- Propagation Delay
  - Input to Gate-Output — 20 ns
  - Input to Amplifier-Output — 10 ns
  - Gate Response Time — 15 ns
  - Strobe Response Time — 15 ns
- Common Mode Input Range — 1.5 Volts
- Differential Mode Input Range
  - With Gate On — 600 mV
  - With Gate Off — 1.5 Volts
- Power Dissipation — 140 mW typical

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

RATING	SYMBOL	VALUE	UNIT
Power Supply Voltage	$V_+$ $V_-$	+10 -10	Vdc Vdc
Differential Input Signal	$V_{in}$	-5	Vdc
Common Mode Input Voltage	$CMV_{in}$	-5	Vdc
Load Current	$I_L$	25	mA
Power Dissipation (Package Limitation)	$P_d$		
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		415	mW
Derate above 25°C		3.3	mW/°C
Operating Temperature Range	$T_A$	-55 to +125	°C
MC1541F, MC1541L		0 to +75	
MC1441F, MC1441L, MC1441P			
Storage Temperature Range	$T_{stg}$	-65 to +150	°C
Ceramic Packages		-55 to +125	
Plastic Package			

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

TYPE	$V_+$ (Vdc)	$V_-$ (Vdc)	$V_{th}$ (mV)	$A_v$ (V/V)	$V_{OH}$ (Vdc)	$V_{OL}$ (mVdc)	$t_{pd}$ (ns)	$t_r$ (ns)	$CMV_{in}$ (Vpk)
MC1541	+5.0	-5.0	17	75	4.9	350	20	30	±5.0
MC1441	+5.0	-5.0	17	75	4.9	350	20	30	±5.0



**F SUFFIX**

CASE 607

(Formerly Case 83)

TO-86

**L SUFFIX**

CERAMIC PACKAGE

CASE 605C

TO-116

**P SUFFIX**

PLASTIC PACKAGE

CASE 605

(Formerly Case 93)

TO-116

