

# MFC8000 thru MFC8002

## HIGH-FREQUENCY CIRCUITS

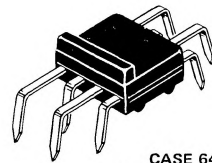
### MONOLITHIC DUAL STEREO AMPLIFIER

... designed for the input stage of stereo power amplifiers.

- Excellent Channel Separation – 60 dB minimum
- High Gain –  $h_{FE} = 75$  minimum
- Satisfies Both Channel Requirements with One Compact Package
- Selection of Breakdown Voltages to Meet the Particular Applications

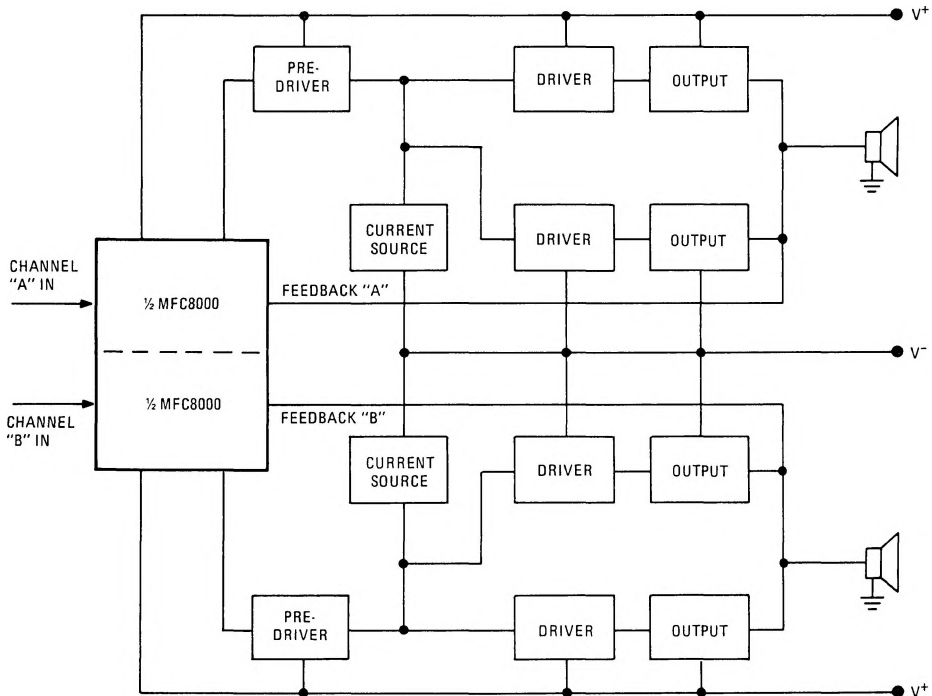
### DUAL DIFFERENTIAL AMPLIFIER (Stereo Input Amplifier)

SILICON MONOLITHIC  
CONSUMER CIRCUIT



CASE 644A  
PLASTIC PACKAGE

### TYPICAL APPLICATION



MFC8000, MFC8001, MFC8002 (continued)

MAXIMUM RATINGS ( $T_A = 25^{\circ}\text{C}$  unless otherwise noted)

Rating	Symbol	Value	Unit
Maximum Supply Voltage – MFC8000 MFC8001 MFC8002	$V^+$	40 50 60	Vdc
Power Dissipation (Package Limitation) (Soldered on a circuit board) Derate above $T_A = 25^{\circ}\text{C}$	$P_D$	1.0 10	Watt mW/ $^{\circ}\text{C}$
Operating Temperature Range	$T_A$	-10 to +75	$^{\circ}\text{C}$

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

Characteristic	Symbol	Min	Typ	Max	Unit
Collector-Emitter Breakdown Voltage ( $I_C = 1.0 \text{ mAdc}$ , $I_B = 0$ ) MFC8000 MFC8001 MFC8002	$BV_{CEO}$	40 50 60	– – –	– – –	Vdc
DC Current Gain ( $V_{CE} = 20 \text{ Vdc}$ , $I_C = 1.0 \text{ mAdc}$ )	$h_{FE}$	75	100	–	–
Base Differential Voltage ( $V_{CE} = 20 \text{ Vdc}$ , $I_C = 1.0 \text{ mAdc}$ )	$ \Delta V_{BE3} - \Delta V_{BE2} $ $ \Delta V_{BE8} - \Delta V_{BE7} $	–	–	15	mVdc
Base Differential Current ( $V_{CE} = 20 \text{ Vdc}$ , $I_C = 1.0 \text{ mAdc}$ )	$ \Delta I_{B3} - \Delta I_{B2} $ $ \Delta I_{B8} - \Delta I_{B7} $	–	–	1.0	$\mu\text{Adc}$
Channel Separation (Pins 2,3,8 grounded, signal at pin 7, $e_{out1}$ at pin 6, $e_{out2}$ at pin 4)	$e_{out1}$ $e_{out2}$	60	–	–	dB

CIRCUIT SCHEMATIC

