

MFC4000B

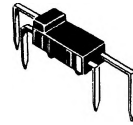
AUDIO AMPLIFIER

1/4-WATT AUDIO AMPLIFIER

... designed for the output stage of battery-powered portable radios.

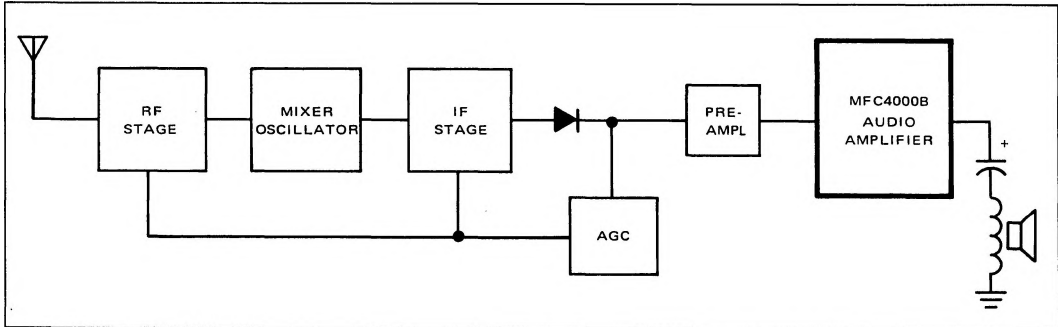
- 250 mW of Audio Output Power
- Low Standby Current – 3.5 mA typical
- Low Harmonic Distortion
- Reduces Component Count in Portable Radios by Two Transformers and Two Transistors
- Eliminates Costly Component Matching Requirements

1/4-WATT AUDIO AMPLIFIER SILICON MONOLITHIC FUNCTIONAL CIRCUIT



PLASTIC PACKAGE
CASE 206A

TYPICAL APPLICATION



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

Rating	Symbol	Value	Unit
Power Supply Voltage	V^+	12	Vdc
Power Dissipation (Package Limitation) (Soldered on a circuit board and held in free air) Derate above $T_A = 25^\circ\text{C}$	P_D	1.0	Watt
		10	mW/ $^\circ\text{C}$
Operating Temperature Range	T_A	-10 to +75	$^\circ\text{C}$

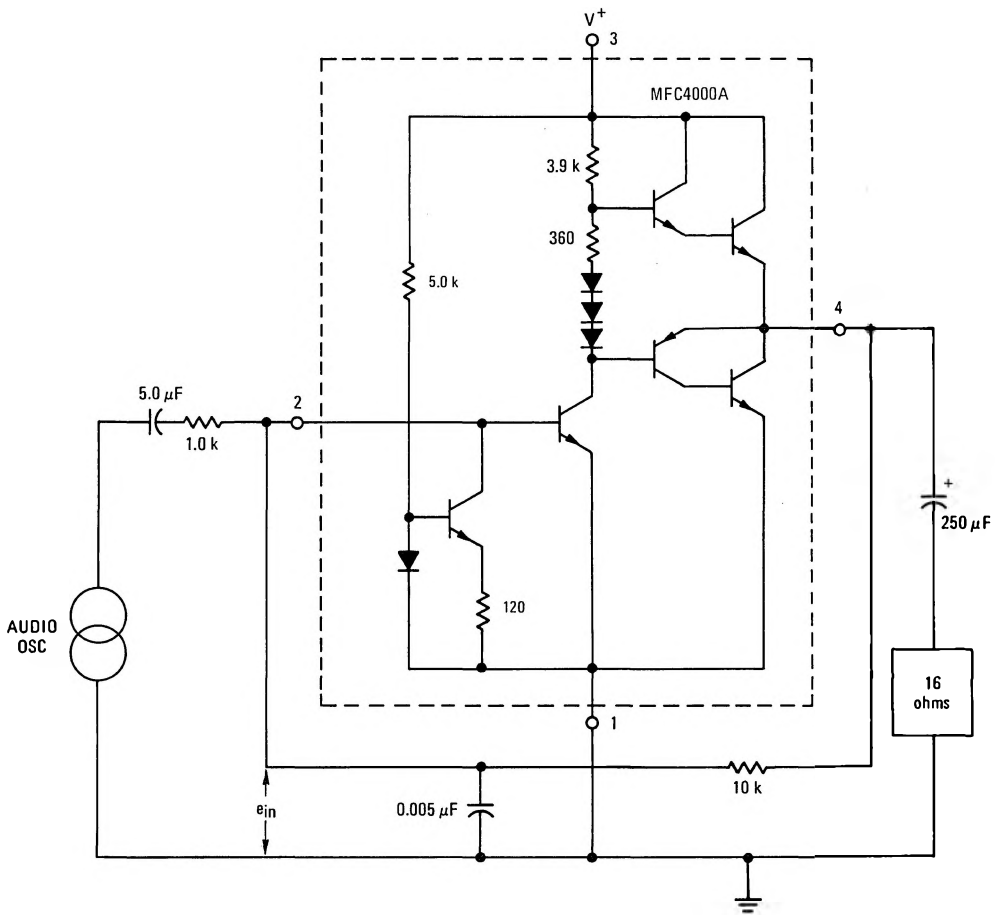
MFC4000B (continued)

ELECTRICAL CHARACTERISTICS* ($V^+ = 9.0 \text{ Vdc}$, $R_L = 16 \text{ Ohms}$, $T_A = 25^\circ\text{C}$ unless otherwise noted)

Characteristic	Symbol	Min	Typ	Max	Unit
Zero Signal Current Drain	I_D	–	3.5	6.0	mAdc
Sensitivity $P_{out} = 50 \text{ mW(rms)}$	e_{in}	–	–	15	mV(rms)
Output Power Total Harmonic Distortion $\leq 10\%$	P_{out}	250	350	–	mW(rms)
Total Harmonic Distortion $P_{out} = 50 \text{ mW(rms)}$ $P_{out} = 50 \text{ mW(rms)}$, $V^+ = 6.0 \text{ Vdc}$	THD	–	0.7 4.5	–	%

*As measured in test circuit shown in Figure 1.

FIGURE 1 – TEST CIRCUIT



MFC4000B (continued)

TOTAL HARMONIC DISTORTION versus OUTPUT POWER

FIGURE 2 – $V^+ = 9.0$ Vdc

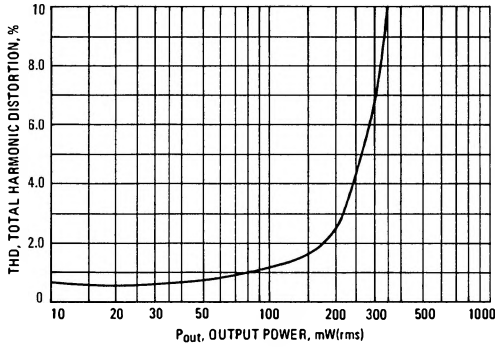


FIGURE 3 – $V^+ = 6.0$ Vdc

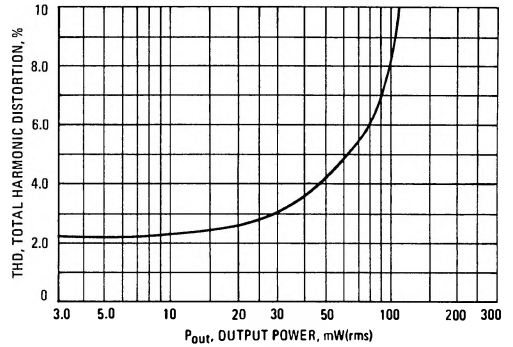


FIGURE 4 – CURRENT DRAIN versus OUTPUT POWER

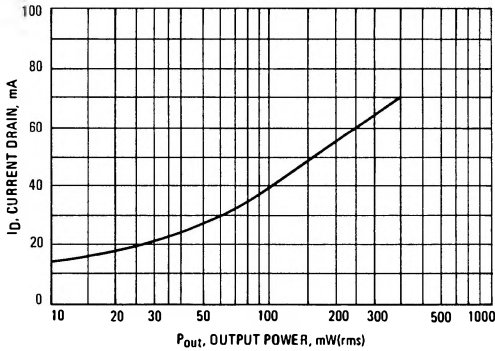


FIGURE 5 – TOTAL HARMONIC DISTORTION versus SUPPLY VOLTAGE

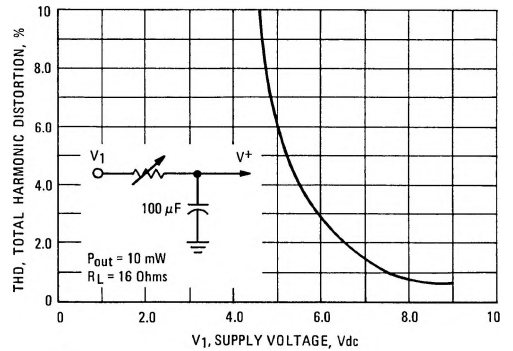


FIGURE 6 – TYPICAL CIRCUIT APPLICATION

