

80% Lower Power Consumption

MIC860/1/2/3 op amps are ideal for all portable applications. They provide the ultimate in low power and small packaging. All feature rail-to-rail outputs and have input common-mode to ground.

With a supply current of 33µA per channel, the MIC860/862 provide gain-bandwidth product of 4MHz and 3MHz, respectively. For lower power consumption, the MIC861/863 operate with 4.6µA per channel. These devices consume 5x less power than the industry leading alternatives, and as much as 100x less power than other op amps.

Packaging is equally impressive. The single MIC860/861 op amps come in Teeny™ SC70-5 packaging. The dual MIC862/863 op amps are available in a SOT23-8 package. The best performing alternatives typically offer singles in SOT23-5 (or larger) packaging, and duals in

MSOP-8 or SOIC-8. By comparison, the packages used for these new devices are at least 40% smaller.

MIC86x op amps operate from 5V down to 2V power supply. Their low power consumption and size make them ideal for battery-powered handheld devices such as PDAs, cell phones, micro-portable laptops and medical instruments.

Features

- ◆ Very Low Power
- ◆ Small Packaging
- ◆ Rail-to-Rail output

Benefits

- ◆ Extended Battery Life
- ◆ Smaller Solutions

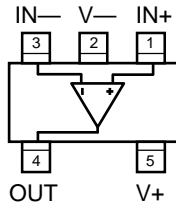


Micrel vs. Competition

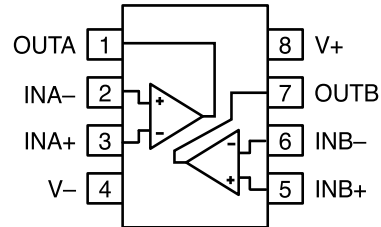
	MIC860	MIC861	OPA348	OPA336	MAX4230
Supply Current (µA)	33	4.6	45	20	1100
Gain Bandwidth (MHz)	4	0.4	1	0.1	10
Slew Rate (V/µs)	3	0.12	0.5	0.03	10
Rail-to-Rail Input	No	No	Yes	No	Yes
Rail-to-Rail Output	Yes	Yes	Yes	Yes	Yes
Package	SC70-5	SC70-5	SC70-5	SOT23-5	SC70-5

	MIC860	MIC861	MIC862	MIC863
Gain-bandwidth	4MHz	400kHz	3MHz	450kHz
Slew rate	3V/μs	0.12V/μs	2V/μs	0.2V/μs
Supply current*	33μA	4.6μA	31μA	4.2μA
Package	SC70-5	SC70-5	SOT23-8	SOT23-8
Dual/Single	Single	Single	Dual	Dual

*per op amp



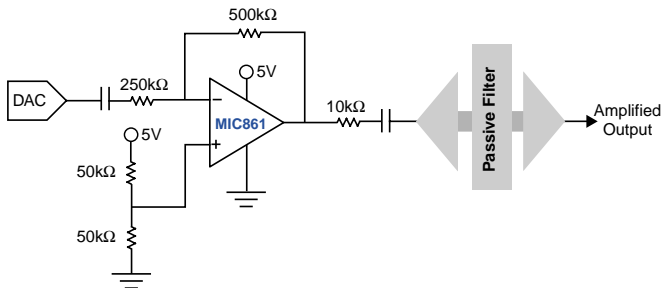
SC70-5



SOT23-8

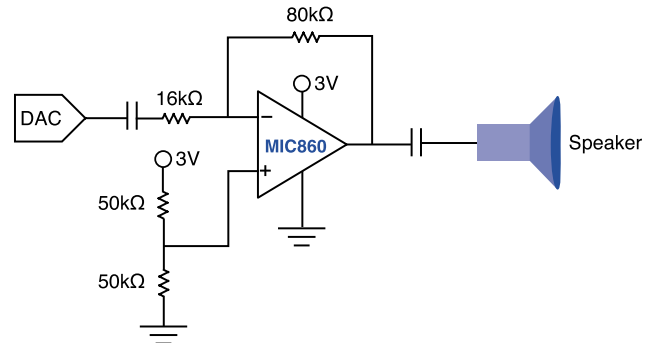
Sample Applications

MIC86x Driving High Capacitance Loads



MIC86x op amps are able to drive high-capacitance loads (0.01μF). When driving a large capacitance load, it is recommended that a 500Ω resistor is connected between the op amp output and the capacitive load to avoid oscillation.

MIC86x as Speaker Preamplifier



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