



New Product Announcement

PAM8905

1.9W Class-D Audio Power Amplifier with Integrated Boost Converter and Battery Tracking AGC

The PAM8905 is a high-efficiency Class-D audio power amplifier with an integrated boost converter. It drives up to 1.9W (1% THD+N) into an 8 Ω speaker. With 85% typical efficiency, the PAM8905 helps extend battery life when playing audio.

The built-in boost converter generates the voltage rail for the output stage. This provides a louder audio output than a stand-alone amplifier connected directly to the battery. It also maintains a consistent loudness, regardless of battery voltage.

The PAM8905 features battery tracking AGC function which adjusts the Class-D gain to limit battery current at lower battery voltage.

The PAM8905 features DC input protection and all outputs are fully protected against output-to-output shorts. The PAM8905 is available in the tiny WCSP12 (1.5mm x 2.0mm) package.



The Diodes' Advantage

The PAM8905 provides a highly-integrated solution for low power speakers.

- **Integrated 5.75V Boost Circuit Directly Supplies the Audio Amplifier**
Maximizing the output power of the amplifier
- **Fully Synchronous Topology for the Boost Converter**
Lower external components and higher efficiency
- **Built in AGC Function**
Excellent sound reproduction over extended battery life
- **Built in Input DC Protection**
Protects the speaker when the input voltage is biased at a high DC level
- **Short Circuit Protection with Auto Recovery, UVLO and Over-Temperature Protection**
Full protection to provide a reliable solution

WCSP1520 Package

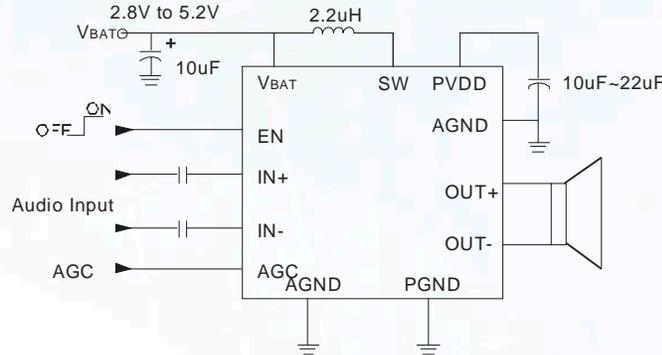
Low pin count and small size to save PCB space

Applications

- Smart Phones
- Portable Electronics
- PDA/GPS
- Speakers



Typical Application



Diodes Portable Power Class-D Audio Amplifier

Product	Description	VIN (V)	IQ (mA)	η	GAIN (dB)	SNR (dB)	PSR R (dB)	Packaging
PAM8301	1x1.5W with EN Control	2.5 - 5.5	4	88%	24	78	-50	SOT23-6
PAM8302L	1x2.5W Low VDD Class D Amplifier	2.0 - 5.5	4	88%	24	80	-50	DFN3*3-8 MSOP-8
PAM8303C	1x3W VDD Class D Amplifier with Differential Input	2.8 - 5.5	5	90%	300k ω /Ri	80	-65	WCSP-9
PAM8303D								MSOP-8
PAM8304	1x3W VDD Class D Amplifier with Differential Input	2.8 - 6.0	5	90%	300k ω /Ri	95	-70	DFN3*3-8 MSOP-8
PAM8407	2x3W Stereo Differential Input Class D Audio Amplifier with Up/Down Volume Control	2.5 - 6.0	8	87%	24	95	-70	SO-16
PAM8408	2x3W Stereo Differential Input Class D Audio Amplifier with Memory Up/Down Volume Control	2.5 - 6.0	8	87%	24	95	-70	SO-16
PAM8012	1x3W with PL & Anti-saturation	2.8 - 5.5	10	89%	18	90	-70	WCSP-9
PAM8905	1.9W Class-D Audio Amplifier with Integrated Boost Converter and Battery Tracking AGC	2.8 - 5.2	4	85%	20	95	-70	U-WLB1520-12

Ordering Information

Device	Packaging	Part Mark	Reel Size	Tape Width	Quantity
PAM8905PZR	U-WLB1520-12	FS	7"	8mm	3,000