

### DESCRIPTION


The **Dynamic Speaker Management (DSM™)** smart amplifier is an audio solution that combines high-performance current and voltage (IV) sense amplifiers with our patented DSM algorithm to create louder and richer sound from micro speakers. The DSM's tiny, ultra-efficient boosted audio amplifier is a great fit for compact products like smart home IoT, portable industrial/medical devices, and gaming. The DSM smart amplifier enables up to a 2.5x increase in loudness (sound pressure level) for micro speakers while significantly improving bass response while protecting them from overtemperature failures.



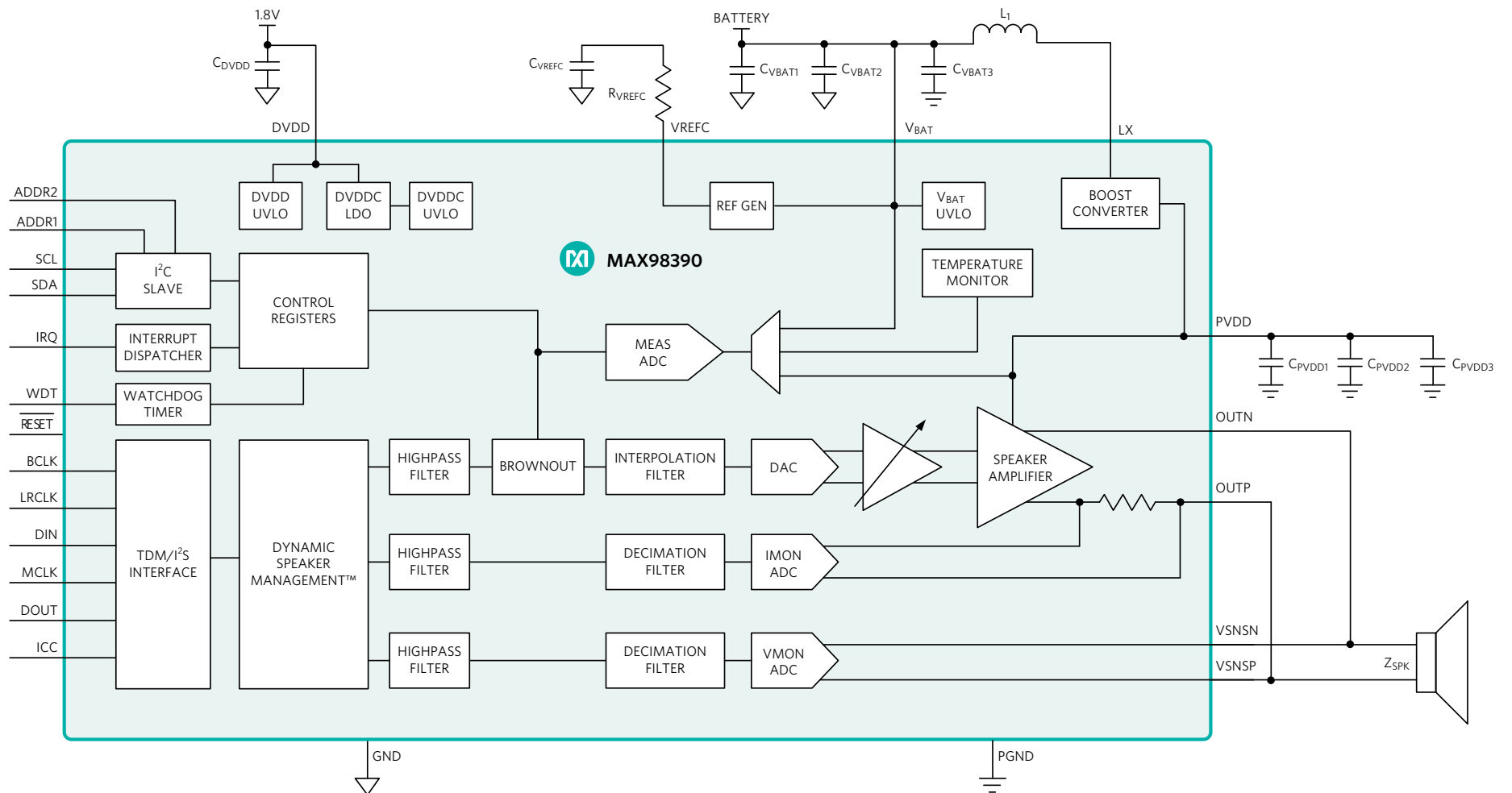
### KEY BENEFITS

- **Louder and Deeper Sound Quality:** Delivers up to 2.5x loudness and up to 2 octaves deeper bass vs. conventional 5V amplifiers in a small form factor.
- **Ease of Use:** Includes our brand-new DSM Sound Studio software GUI, which enables designers to clearly hear the DSM difference in minutes with the Quick Demo feature, and easily characterize and prototype with their own speakers, significantly reducing design time and work. The fixed-function DSP enables our DSM Sound Studio to design a complete register map without the need for any additional programming.
- **Industry-Leading Power Consumption:** Features lowest quiescent power in the market with ~24mW; offers peak efficiency of 86% with boosted Class D amplifier; and further improves efficiency by up to 25% with no loss in audio fidelity with Maxim's DSM PPR feature.
- **Designed for Manufacturability:** On-chip DC resistance (RDC) testing for quality assurance on the production line to ensure speakers are within impedance tolerance.

### FEATURED PRODUCT

Product	Speaker Amp. I <sub>CC</sub> (mA) (typ)	Description	Buy	EV Kit
<a href="#">MAX98390</a>	2.5	Digital 5W Boosted Amplifier with Integrated Dynamic Speaker Management		<a href="#">MAX98390EVSYS</a>

## MAX98390 Functional Diagram



## RELATED RESOURCES



MAX98390EVSY Evaluation System for the MAX98390

## LEARN MORE

For more information about the Dynamic Speaker Management (DSM), visit [www.maximintegrated.com/DSM](http://www.maximintegrated.com/DSM).