

# Design High-Performance Class-D Audio Amplifiers with GaN FETs

*The EPC9192 Class-D audio reference design enables high power and high efficiency in a modular design for customization and high performance.*

EL SEGUNDO, CA, UNITED STATES, April 9, 2024 /EINPresswire.com/ -- [EPC](#) is pleased to announce the launch of the [EPC9192](#), reference design enabling powerful, compact, and efficient Class-D audio amplifiers. The EPC9192 showcases the capabilities of EPC's 200 V, [EPC2307](#), eGaN FETs in a ground-referenced, split dual supply Single-Ended (SE) design, delivering an impressive 700 W per channel into a 4  $\Omega$  load.

The EPC9192 features a modular design that allows for scalability and expandability. The motherboard hosts two PWM modulators and two half bridge power stage daughterboards, implementing a two-channel amplifier with housekeeping supplies and protections. This design flexibility enables users to customize the PWM modulator and power stage, facilitating the evaluation and comparison of different devices and modulation techniques.

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The EPC9192 is a powerful tool for audio amplifier designers looking to leverage the benefits of GaN technology,”

*Alex Lidow, CEO of EPC*

Key features of the EPC9192 include:

- 700 W Class-D power stage in a compact size of 4 in3 including output filter and heatsink
- Single regulated 12 V power supply input for housekeeping
- Dual split supply input, unregulated,  $\pm 42$  V to  $\pm 85$  V for

power stage

- Analog inputs balanced (XLR) or unbalanced (RCA)



**High Fidelity Sound and Lower Power Consumption with GaN for Class-D Audio**

**EPC9192**  
2 x 700 W/4  $\Omega$   
Class-D Amplifier

**EPC**  
EFFICIENT POWER CONVERSION

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The advertisement features a central image of the EPC9192 Class-D audio reference design, a green printed circuit board (PCB) with various components. To the right, two people are shown in dynamic, energetic poses, suggesting high-quality audio performance. The background is a mix of yellow and blue, with green light effects emanating from the PCB. The EPC logo is prominently displayed in the bottom right corner.

- Configurable for two independent SE channels or single channel BTL mode
- Undervoltage, Overvoltage, Overcurrent, and Overtemperature protections
- > 600 kHz switching frequency

Key performance measurements of the EPC9192 include:

- 700 W @ 2  $\Omega$  - 4  $\Omega$  / 350 W @ 8  $\Omega$  / channel
- BTL capable (1400 W @ 4  $\Omega$  - 8  $\Omega$ )
- < 0.005% THD+N, > 120 dB SNR
- Noise floor: 40  $\mu$ V
- Frequency response: 5 Hz - 20 kHz +/- 0.5 dB, regardless of load

"The EPC9192 is a powerful tool for audio amplifier designers looking to leverage the benefits of GaN technology," said Alex Lidow, CEO of EPC. "With high-power density and scalability, it enables rapid prototyping of compact, high-performance Class-D amplifiers."

#### Price and Availability

The EPC9192 evaluation boards are priced at \$948.48.

The EPC2307 is priced at \$3.28/ea in 3Ku reels.

Reference design boards and devices are available for immediate delivery from Digi-Key at <https://www.digikey.com/en/supplier-centers/epc>

#### About EPC

EPC is the leader in enhancement mode gallium nitride (eGaN<sup>®</sup>) based power management. eGaN FETs and integrated circuits provide performance many times greater than the best silicon power MOSFETs in applications such as DC-DC converters, remote sensing technology (lidar), motor drives for eMobility, robotics, and drones, and low-cost satellites.

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