



12W+12W, Filterless, Spread-Spectrum, Stereo, Class D Amplifier

MAX9741

General Description

The MAX9741 stereo Class D audio power amplifier provides Class AB amplifier performance with Class D efficiency, conserving board space and eliminating the need for a bulky heatsink. Using a Class D architecture, it delivers 12W continuous output power into 8Ω loads. Proprietary and patent-protected modulation and switching schemes render the traditional Class D EMI suppression output filter unnecessary.

The MAX9741 offers two modulation schemes: a fixed-frequency mode (FFM), and a spread-spectrum mode (SSM) that reduces EMI-radiated emissions due to the modulation frequency. The device utilizes a fully differential architecture, a full bridged output, and offers comprehensive click-and-pop suppression.

The MAX9741 features high 80dB PSRR, low 0.07% THD+N, and SNR in excess of 100dB. Short-circuit and thermal-overload protection prevent the device from being damaged during a fault condition. The MAX9741 is available in a 56-pin TQFN (8mm x 8mm x 0.8mm) package. The MAX9741 is specified over the extended -40°C to +85°C temperature range.

Applications

- | | |
|----------------|----------------|
| LCD TVs | Hands-Free Car |
| LCD Monitors | Phone Adaptors |
| Desktop PCs | Automotive |
| LCD Projectors | |

Features

- ◆ Filterless Class D Amplifier
- ◆ Unique Spread-Spectrum Mode Offers 5dB Emissions Improvement Over Conventional Methods
- ◆ Up to 88% Efficient into 16Ω
- ◆ 12W+12W Continuous Output Power into 8Ω
- ◆ 15W+15W Continuous Output Power into 16Ω
- ◆ Low 0.07% THD+N
- ◆ High PSRR (80dB at 1kHz)
- ◆ 10V to 25V Single-Supply Operation
- ◆ Differential Inputs Minimize Common-Mode Noise
- ◆ Pin-Selectable Gain Reduces Component Count
- ◆ Industry-Leading Click-and-Pop Suppression
- ◆ Low Quiescent Current (24mA)
- ◆ Low-Power Shutdown Mode (0.2μA)
- ◆ Short-Circuit and Thermal-Overload Protection
- ◆ Available in Thermally Efficient, Space-Saving 56-Pin TQFN (8mm x 8mm x 0.8mm) Package

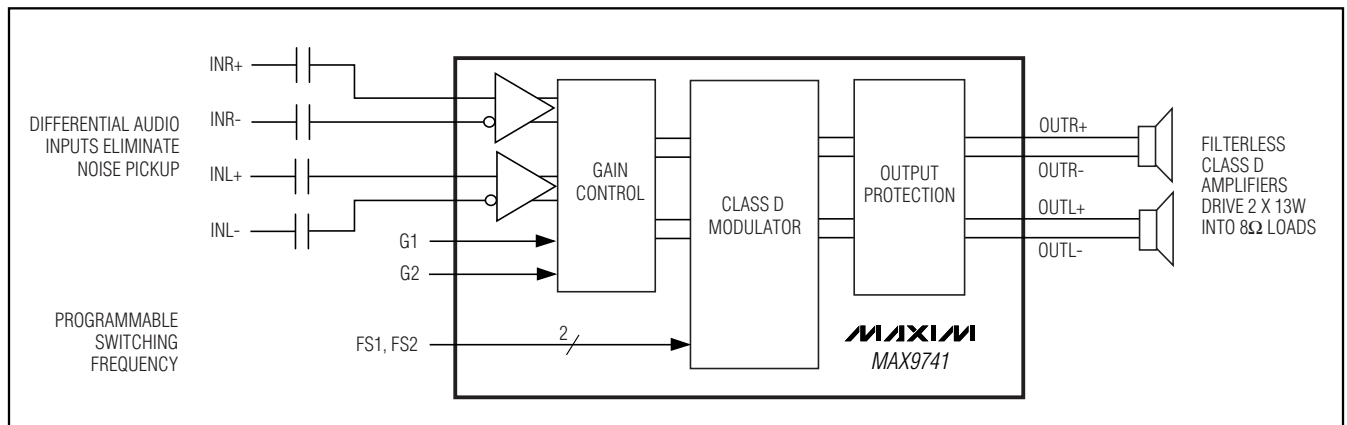
Ordering Information

PART	TEMP RANGE	PIN-PACKAGE	PKG CODE
MAX9741ETN+	-40°C to +85°C	56 TQFN-EP*	T5688-3

+ Denotes lead-free package.

*EP = Exposed paddle.

Simplified Block Diagram



Pin Configurations appear at end of data sheet.



For pricing, delivery, and ordering information, please contact Maxim/Dallas Direct! at 1-888-629-4642, or visit Maxim's website at www.maxim-ic.com.