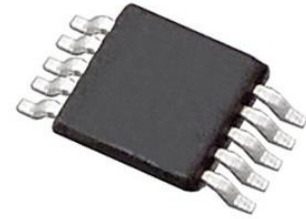


Audio Power Amplifier, 2.8 W, D, 1 Channel, 2.5V to 5.5V, MSOP, 8 Pins

Manufacturers	Analog Devices, Inc
Package/Case	MSOP-10
Product Type	Amplifier ICs
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for SSM2305RMZ-R2 or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The SSM2305 is a fully integrated, high efficiency, Class-D audio amplifier designed to maximize performance for mobilephone applications. The application circuit requires a minimum of external components and operates from a single 2.5 V to 5.5 V supply. It is capable of delivering 2.2 W of continuous output power with less than 1% THD + N driving a 4 Ω load from a 5.0 V supply. It has built-in thermal shutdown and output short-circuit protection.

The SSM2305 features a high efficiency, low noise modulation scheme that does not require external LC output filters. The modulation provides high efficiency even at low output power. The SSM2305 operates with 90% efficiency at 1.3 W into 8 Ω or 83% efficiency at 2.2 W into 4 Ω from a 5.0 V supply and has an SNR of >98 dB. Spread-spectrum pulse density modulation is used to provide lower EMI-radiated emissions compared with other Class-D architectures.

The SSM2305 has a micropower shutdown mode with a maximum shutdown current of 30 nA. Shutdown is enabled by applying a Logic 0 to the SD pin. The device also includes pop-and-click suppression circuitry. This minimizes voltage glitches at the output during turn-on and turn-off, thus reducing audible noise on activation and deactivation.

The fully differential input of the SSM2305 provides excellent rejection of common-mode noise on the input. Input coupling capacitors can be omitted if the dc input common-mode voltage is approximately $V_{DD}/2$.

The SSM2305 has excellent rejection of power supply noise, including noise caused by GSM transmission bursts and RF rectification. PSRR is typically 60 dB at 217 Hz. The default gain of the SSM2305 is 18 dB, but users can reduce the gain by using a pair of external resistors.

The SSM2305 is specified over the commercial temperature range (−40°C to +85°C). It is available in both an 8-lead, 3 mm × 3 mm lead frame chip scale package (LFCSP) and an 8-lead mini small outline package (MSOP).

Features

Filterless Class-D amplifier with Σ - Δ modulation

No sync necessary when using multiple Class-D amplifiers from Analog Devices, Inc.

2.8 W into 4 Ω load and 1.6 W into 8 Ω load at 5.0 V supply with <10% total harmonic distortion (THD)

89% efficiency at 5.0 V, 1.3 W into 8 Ω speaker

Single-supply operation from 2.5 V to 5.5 V

20 nA ultralow shutdown current

Short-circuit and thermal protection

Available in 8-lead, 3 mm \times 3 mm LFCSP and MSOP

Pop-and-click suppression

Built-in resistors reduce board component count

Fixed and user-adjustable gain configurations

Application

Mobile phones

MP3 players

Portable gaming

Portable electronics

Educational toys

Related Products



[SSM2143SZ](#)

Analog Devices, Inc
SOIC-8



[SSM2211SZ](#)

Analog Devices, Inc
SOP8



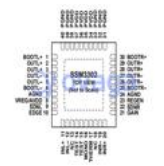
[SSM2164S](#)

Analog Devices, Inc
SOP-16



[SSM2135SZ](#)

Analog Devices, Inc
SOIC-8



[SSM3302ACPZ](#)

Analog Devices, Inc
LFCSP-40



[SSM2142PZ](#)

Analog Devices, Inc
DIP-8



[SSM2165-1S](#)

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SOP8



[SSM2135S](#)

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SOIC-8