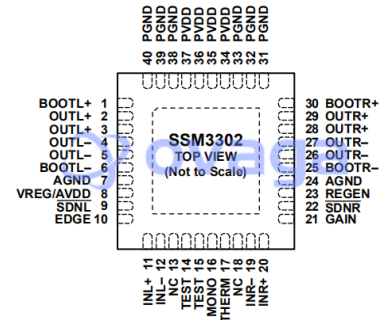


Audio Power Amplifier, 10 W, D, 2 Channel, 7V to 18V, LFCSP, 40 Pins

Manufacturers	Analog Devices, Inc
Package/Case	LFCSP-40
Product Type	Amplifier ICs
RoHS	Rohs
Lifecycle	



Images are for reference only

Please submit RFQ for SSM3302ACPZ or [Email to us: sales@ovaga.com](mailto:sales@ovaga.com) We will contact you in 12 hours.

[RFQ](#)

General Description

The SSM3302 features a high efficiency, low noise modulation scheme that requires no external LC output filters. This scheme continues to provide high efficiency even at low output power. The SSM3302 operates with 90% efficiency at 7 W into an 8 Ω load or with 82% efficiency at 10 W into 4 Ω from a 12 V supply, and it has an SNR of >98 dB.

Spread spectrum pulse density modulation (PDM) is used to provide lower EMI radiated emissions compared with other Class-D architectures. The SSM3302 includes an optional modulation select pin (ultralow EMI emission mode) that significantly reduces the radiated emissions at the Class-D outputs, particularly above 100 MHz. The SSM3302 can pass FCC Class-B emissions testing with an unshielded 20 inch cable using common-mode choke-based filtering.

The fully differential input of the SSM3302 provides excellent rejection of common-mode noise on the input. The device also includes a highly flexible gain select pin that only requires one series resistor to choose a gain between 9 dB and 24 dB, with no change to the input impedance. The benefit of this is to improve gain matching between multiple SSM3302 devices within a single application compared with using external resistors to set gain.

The SSM3302 includes an integrated voltage regulator that generates a 5 V rail.

The SSM3302 has a micropower shutdown mode with a typical shutdown current of 10 μA. Shutdown is enabled by applying a logic low to the SD pin. The device also includes pop-and-click suppression circuitry that minimizes voltage glitches at the output during turn on and turn off, reducing audible noise during activation and deactivation.

Other included features to simplify system level integration of the SSM3302 are input low-pass filtering to suppress out-of-band DAC noise interference to the pulse density modulator, fixed input impedance to simplify component selection across multiple platform production builds, and a thermal warning indicator pin.

The SSM3302 is specified over the commercial temperature range (−40°C to +85°C). It has built-in thermal shutdown and output short-circuit protection. It is available in a halide-free, 40-lead, 6 mm × 6 mm lead frame chip scale package (LFCSP).

Features

Filterless stereo Class-D amplifier with Σ - Δ modulation

2×10 W into 4Ω load and 2×8 W into 8Ω load at 12 V supply with $<1\%$ total harmonic distortion plus noise (THD + N)

91% efficiency at 12 V, 8 W into 8Ω speaker

98 dB signal-to-noise ratio (SNR)

Single-supply operation from 7 V to 18 V

Flexible gain adjustment pin from 9 dB to 24 dB

Fixed input impedance of $40 \text{ k}\Omega$

See data sheet for additional features

Application

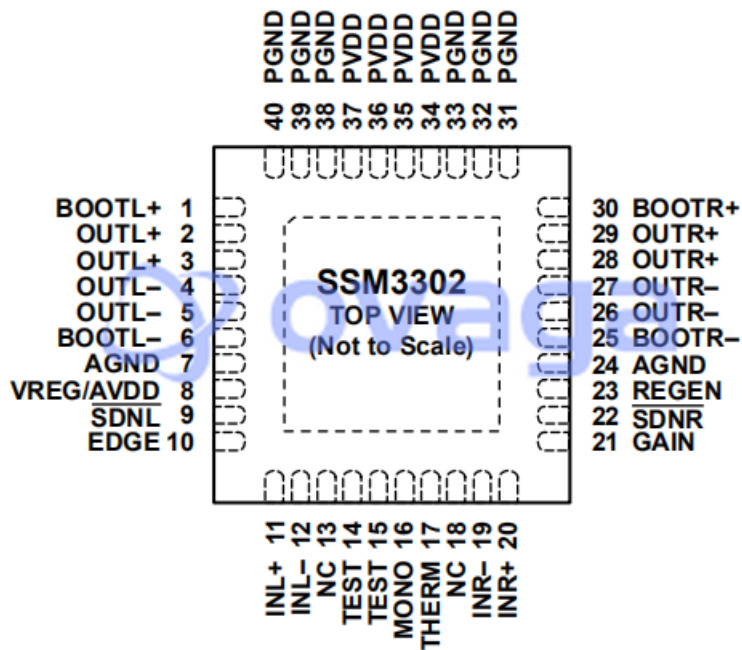
Mobile computing

Flat panel televisions

Media docking stations

Portable electronics

Sound bars



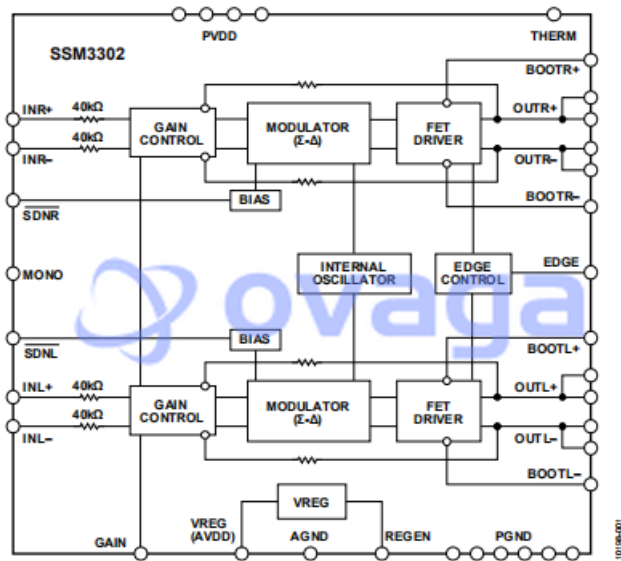


Figure 1.

Related Products



[SSM2143SZ](#)

Analog Devices, Inc
SOIC-8



[SSM2164S](#)

Analog Devices, Inc
SOP-16



[SSM2142PZ](#)

Analog Devices, Inc
DIP-8



[SSM2135S](#)

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[SSM2211SZ](#)

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[SSM2165-1S](#)

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[SSM2143P](#)

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DIP-8