

## Product Overview

### NCP2990: Audio Power Amplifier, 1.3 W, with Fast Turn-On Time

For complete documentation, see the data sheet.

The NCP2990 is an audio power amplifier designed for portable communication device applications such as mobile phone applications. The NCP2990 is capable of delivering 1.3 W of continuous average power to an 8.0  $\Omega$  load from a 5.0 V power supply, and 1 W to a 4.0  $\Omega$  load from a 3.6 V power supply. The NCP2990 provides high quality audio while requiring few external components and minimal power consumption. It features a low-power consumption shutdown mode, which is achieved by driving the SHUTDOWN pin with logic low. In case of a single ended input, the NCP2990 contains circuitry to prevent from "pop and click" noise that would otherwise occur during turn-on and turn-off transitions. For maximum flexibility, the NCP2990 provides an externally controlled gain (with resistors), as well as an externally controlled turn-on time (with the bypass capacitor). When using a 1  $\mu$ F bypass capacitor, it offers 60ms wake up time. Due to its excellent PSRR, it can be directly connected to the battery, saving the use of an LDO. This device is available in the 9-Pin Flip-Chip CSP.

### Features

- External Turn-On time setting: 60 ms (1 $\mu$ F bypass capacitor)
- Zero Pop and Click Noise in case of a single ended audio input
- 1.3 W to an 8.0  $\Omega$  Load from a 5.0 V power supply
- Superior PSRR: Direct Connection to the Battery
- Ultra Low Current Shutdown Mode: 10 nA
- 2.2 - 5.5 V Operation
- Up to 1.0 nF Capacitive Load Driving Capability
- Thermal Overload Protection Circuitry

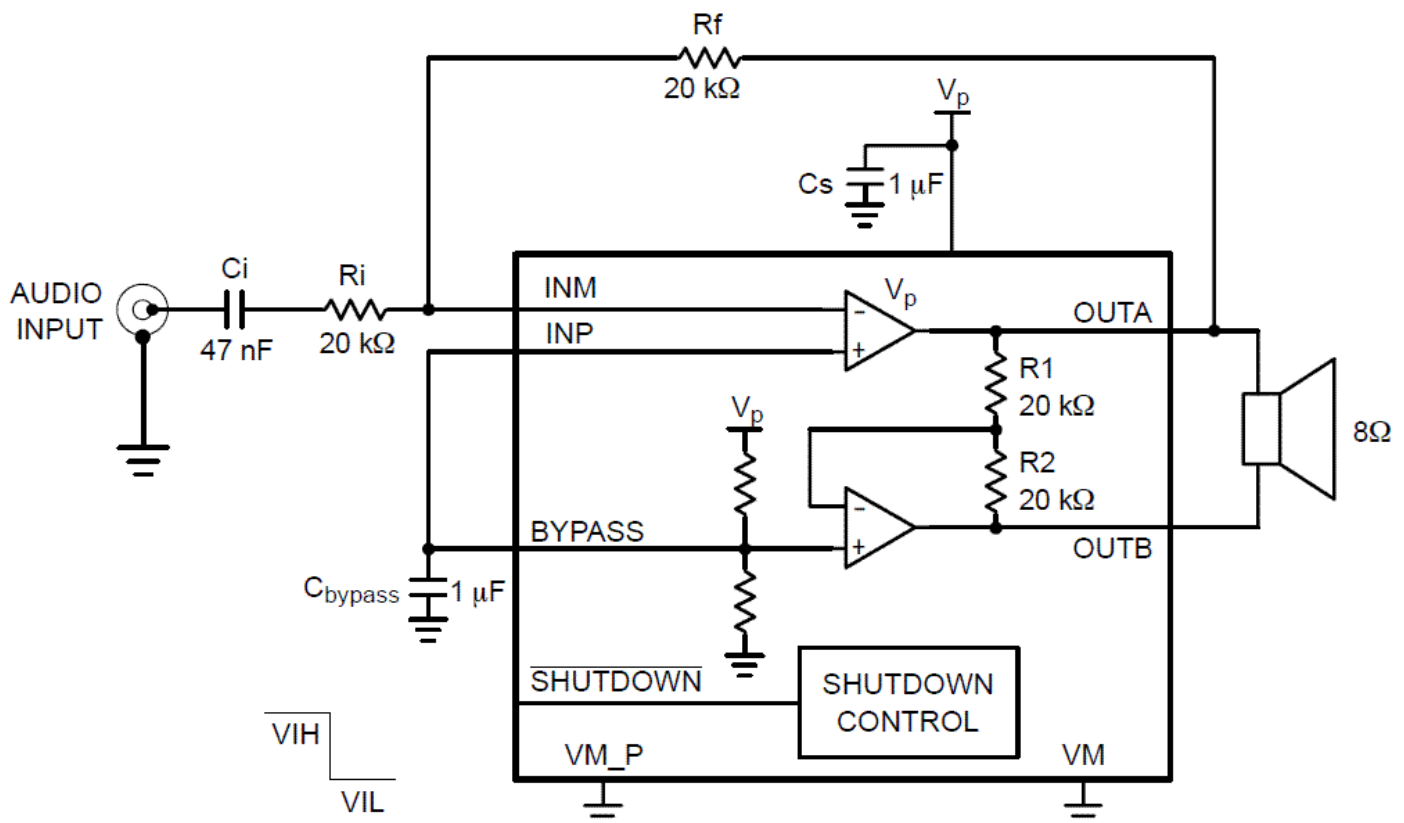
### Applications

- Audio Amplification

### End Products

- Mobile Phones
- PDAs

### Application Diagram



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