

### General Description

The AS9890 is an audio power amplifier primarily designed for portable communication applications such as mobile phones and portable multimedia players (PMP). To an 8Ω BTL load, it can deliver 1 watt of continuous average power with less than 1% distortion (THD+N) from a 5VDC supply.

The AS9890 is pin-compatible to National Semi's LM4890 with a superior (THD+N). It does not require output coupling capacitors or bootstrap capacitors, and is ideal for mobile phone and other low voltage applications where minimal power consumption is a primary requirement.

The AS9890 features a low-power consumption shutdown mode, and an internal thermal shutdown protection mechanism.

Advanced pop & click circuitry is built in to eliminate noises that would otherwise occur during turn-on and turn-off transitions. The AS9890 is unity-gain stable and can be configured by external gain-setting resistors.

### Key Specifications

- PSRR at 217Hz, VDD = 5V (Fig. 1) 60dB(typ.)
- Power Output at 5.0V & 1% THD 1W(typ.)
- Power Output at 2.6V & 1% THD 250mW(typ.)
- Shutdown Current 0.1μA(typ.)

### Features

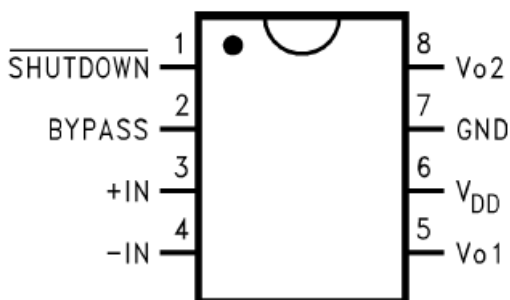
- Available in space-saving MSOP package
- Ultra low current shutdown mode
- BTL output driving capacitive loads
- Improved pop & click circuitry eliminating noises during turn-on and turn-off transitions
- 2.2 - 5.5V operation
- No output coupling capacitors, snubber networks or bootstrap capacitors required
- Thermal shutdown protection
- Unity-gain stable
- External gain configuration capability

### Applications

- Mobile Phones
- PDAs and PMPs
- Portable Electronic Devices

### Connection Diagram

Mini Small Outline (MSOP) Package



DFN-8 Package

