

### General Descriptions :

The AP1088 is a differential input and differential output mono headphone amplifier. It is capable of delivering 40mW average power into 8Ω BTL loads with 0.08% THD+N. The device operates from 2.5V to 5V.

The active noise cancellation is designed to reduce the far-field ambient noise from the headphones. Up to 25dB of far-field ambient noise can be reduced with a properly configured and +/-0.5dB matched microphones.

The AP1088 consumes only 1.8mA of supply current during operation. It provides superior power saving over DSP solutions which typically consume five times more power.

### Key Specifications :

- Far Field Noise Suppression (Electrical) 35dB (typ)
- Supply current 1.8mA (typ)
- Standby current 0.1uA (typ)
- Signal to Noise Ratio (20Hz to 20kHz) 66dB (typ)
- Total Harmonic Distortion + Noise (Vin=100mVpp) 0.08% (typ)
- High PSRR @ 217Hz (headphone) 75dB (typ)

(microphone) 95dB (typ)

### Features :

- Active noise cancellation up to 35dB
- Ultra low power consumption
- Space-saving package (5mmx5mm 28 QFN)
- Low external component count and costs
- High audio quality
- Excellent RF immunity
- Differential inputs and outputs
- Adjustable 3dB to 39dB microphone gain
- Selectable microphone mute and headphone mute
- Power-saving shutdown mode
- Amplify ambient audio signal selection

### Applications :

- High-end headphones and headsets
- Multi drivers headsets
- Consumer devices headphones and earphones
- Multimedia players
- Ear-aid devices

