



Dual 2.2W Audio Amplifier Plus Stereo Headphone Function

General Description

The MC4863 is a dual bridge-connected audio power amplifier which, when connected to a 5V supply, will deliver 2.2W to a 4Ω load(Note 1) or 2.5W to a 3Ω load(Note 2) with less than 1.0% THD+N. In addition, the headphone input pin allows the amplifiers to operate in single-ended mode to drive stereo headphones.

Boomer audio power amplifiers were designed specifically to provide high quality output power from a surface mount package while requiring few external components, to simplify audio system design, it combines dual bridge speaker amplifiers and stereo headphone amplifiers on one chip.

The MC4863 features an externally controlled, low-power consumption shutdown mode, a stereo headphone amplifier mode, and thermal shutdown protection. It also utilizes circuitry to reduce “clicks and pops” during device turn-on.

Features

- P_o at 1% THD+N
 - into 3Ω 2.5W(typ)
 - into 4Ω 2.2W(typ)
 - Into 8Ω 1.1W(typ)
- Single-ended mode - THD+N 0.5%(max)
at 75mW into 32Ω
- Shutdown current 0.7μA(typ)
- Stereo headphone amplifier mode
- “Click and pop” suppression circuitry
- Unity-gain stable
- Thermal shutdown protection circuitry
- The available in a SOP16 package and TSSOP16-EP, TSSOP20 and TSSOP20-EP packages

Applications

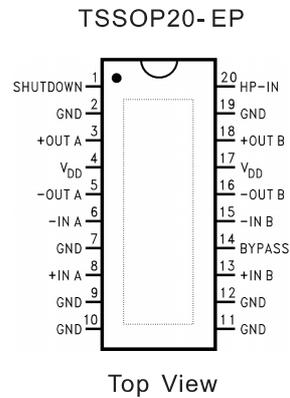
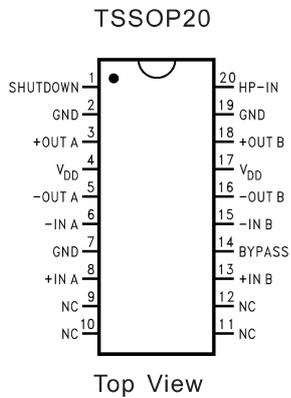
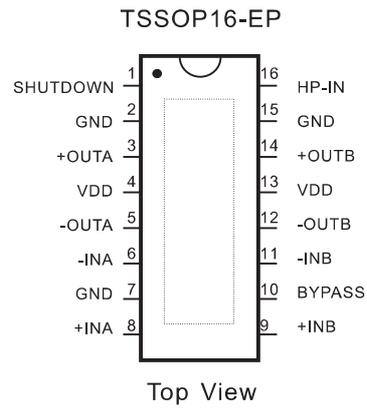
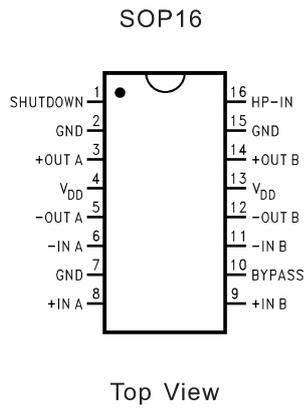
- Multimedia monitors
- Portable and desktop computers
- Portable televisions

Note 1: An MC4863 which has been properly mounted to the circuit board will deliver 2.2W into 4Ω. The other package options for the MC4863 will deliver 1.1W into 8Ω. See the Application Information section for MC4863 usage information.

Note 2: An MC4863 which has been properly mounted to the circuit board and forced-air cooled will deliver 2.5W into 3Ω.

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Pin Configuration



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Typical Application

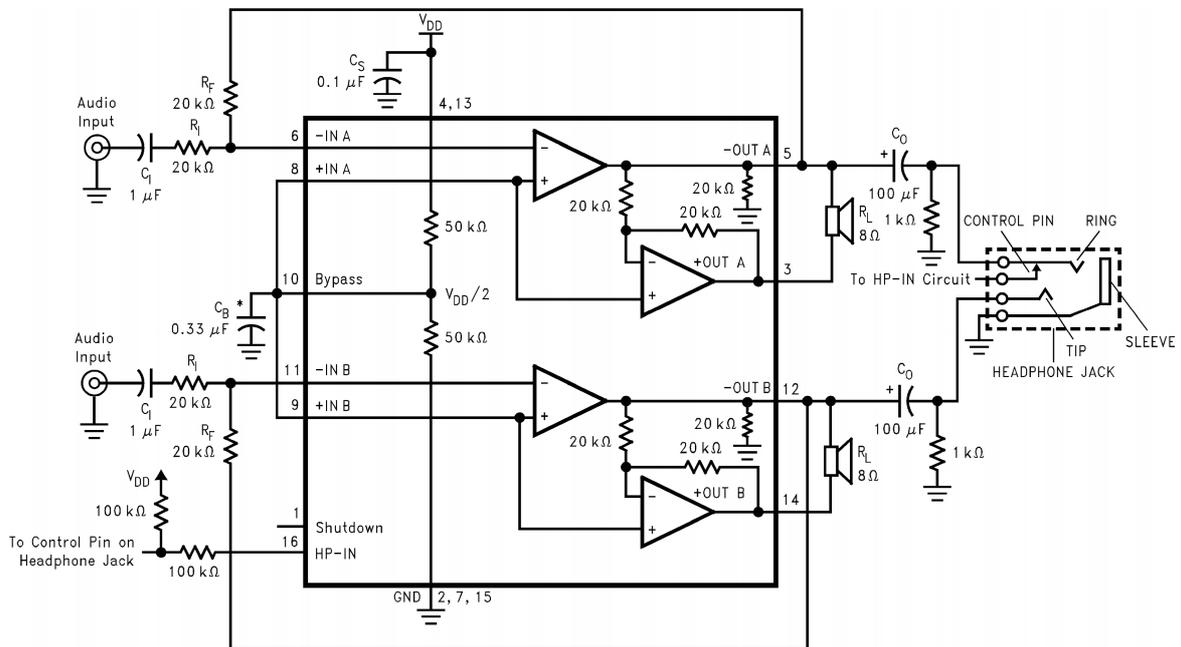


Figure 1. Typical Audio Amplifier Application Circuit