



1 Watt Audio Power Amplifier

PT2301

DESCRIPTION

The PT2301 is an integration audio power amplifier IC utilizing advanced CMOS technology. Supports 2 mono MIC input and 2 stereo line input, input gain of each amp can be set individually to meet customers' needs. Built-in digital controlled volumes have 49 steps from +15dB ~ -90dB and all the functions can be controlled via I²C bus. In the output section, the PT2301 is equipped with both stereo headphone driver and mono speaker amp maximum output up to 1 watt. The PT2301 also equipped "Energy Save" power management systems; user can turn off the unused portion to minimize total power consumption for extended battery endurance. For different applications, the headphone section of the PT2301 has two mode types for different purposes, A-type (Output Capacitor-less) or B-type (Output with Capacitor).

FEATURES

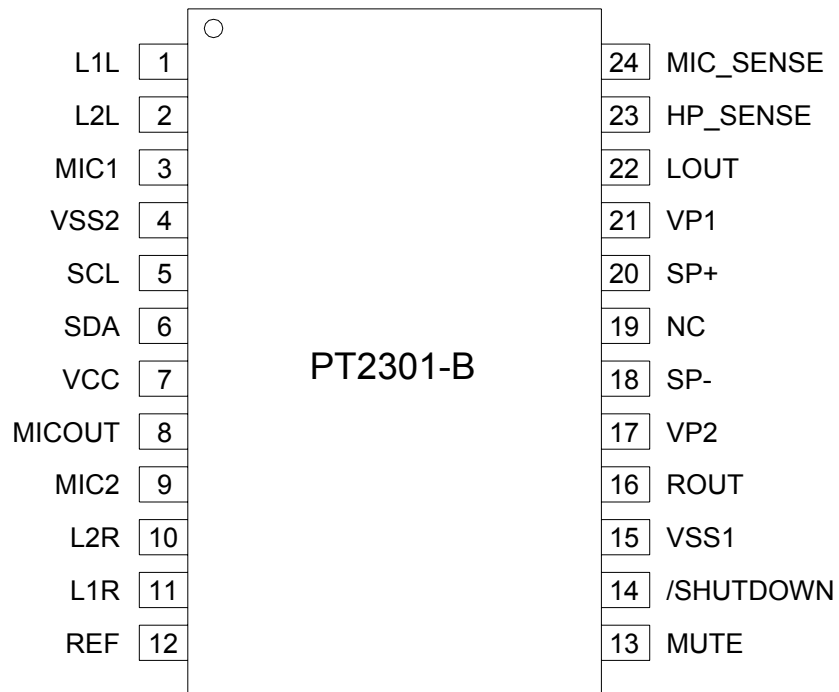
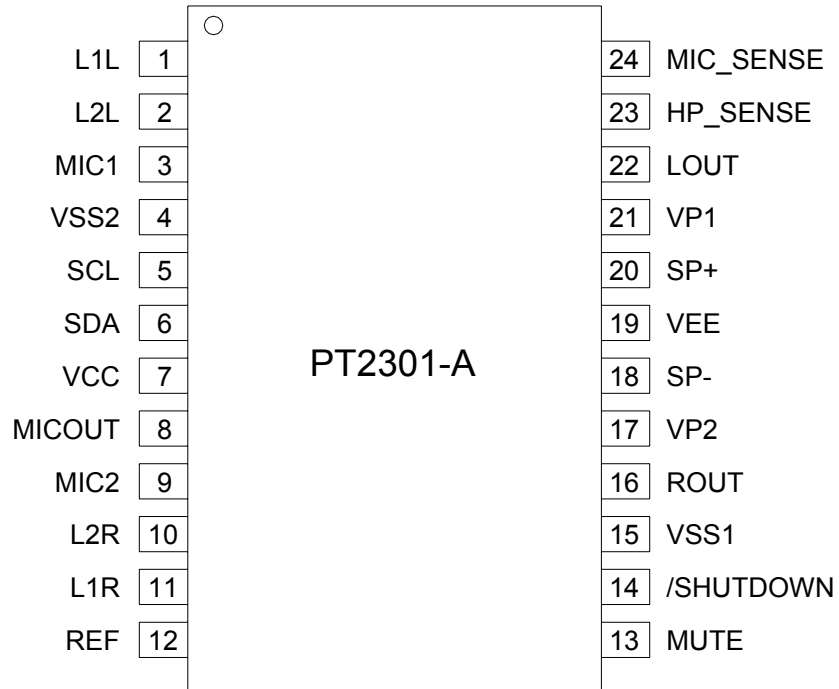
- 1W (8 Ω) mono channel speaker driver + stereo headphone driver
- Digital controlled volume (49 steps /+15dB ~ -90dB)
- 2 mono microphone inputs, 1 microphone output
- 2 stereo line input
- Input gain can be setting individually in each input port.
- Eliminate DC block capacitor in the headphone driver output (Only PT2301-A supported)
- Standby mode and Mute function
- Thermal shutdown protection circuit
- Energy Save function
- Very low "POP" noise during function changed.
- Wide operation voltage range: 2.7V ~ 5.5V
- Low Distortion: earphone output < 0.05%, speaker output < 0.04%
- Available in 24 Pin, space saving TSSOP Package

APPLICATIONS

- Electronic dictionary
- Translator
- PDA
- DSC (Digital Still Camera)
- GPS

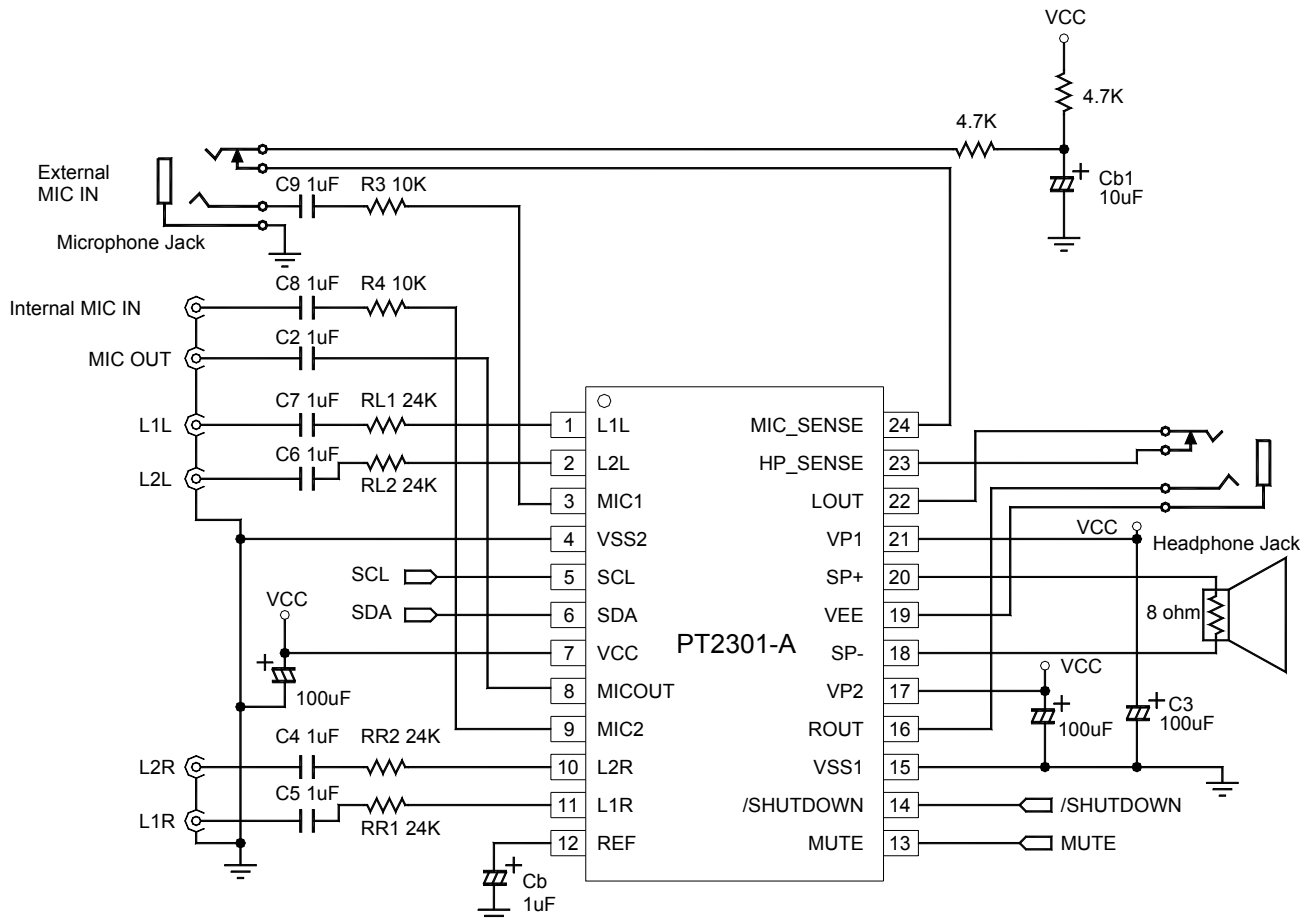


PIN CONFIGURATION





APPLICATION CIRCUIT I (PT2301-A)

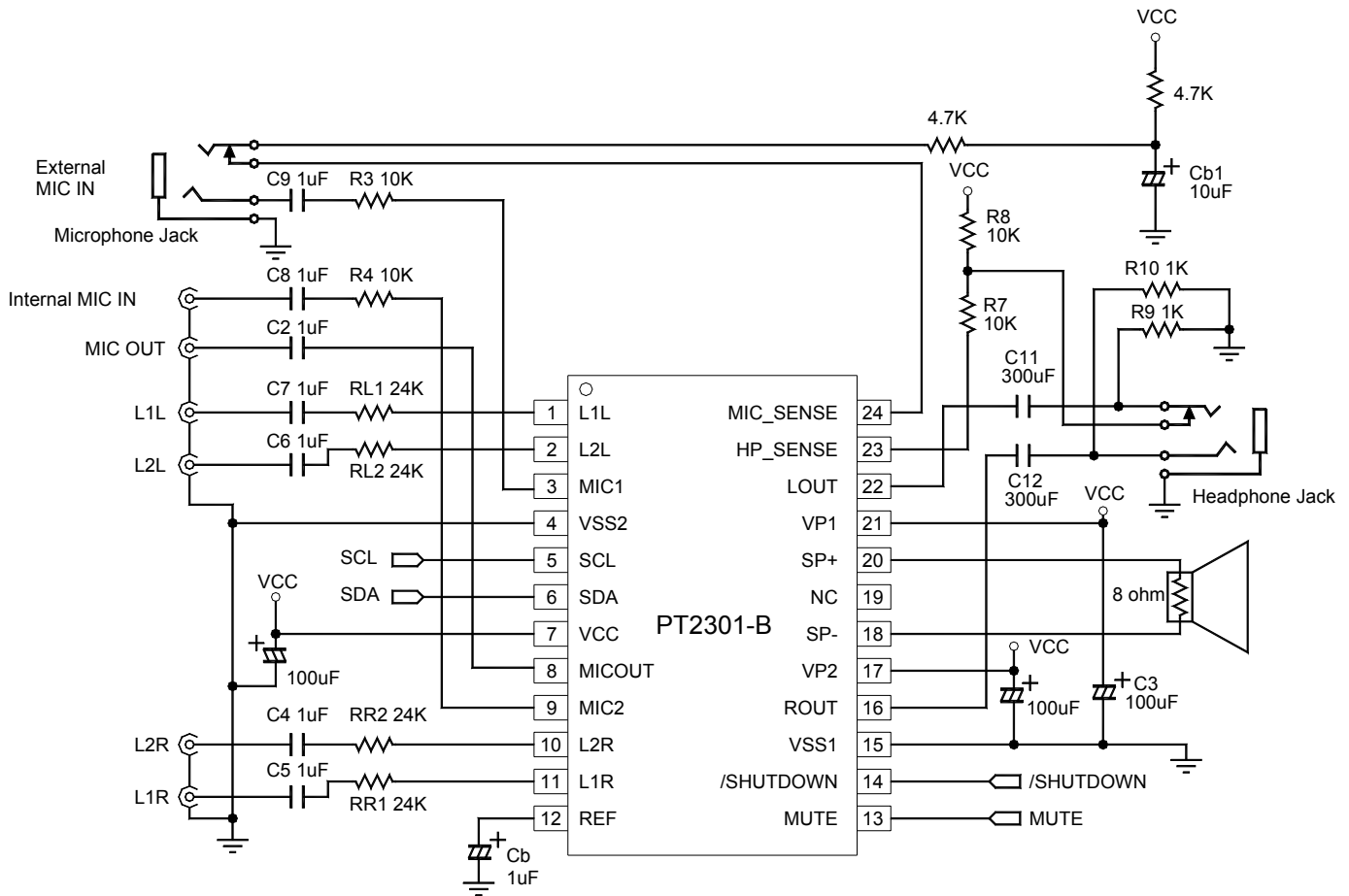


Notes

1. The (+) polarity of DC block capacitor installed in the I/O pin of the PT2301 should face towards the higher potential.
2. HP_SENSE (Pin 23) must be connected to Pin22 LOUT.
3. The gain setting resistors (R3、R4、RL1、RL2、RR1、RR2) should keep as close as possible with the PT2301 chip to prevent pick up noises.
4. **DO NOT CONNECT HEADPHONE COMMON (VEE) TO OTHER AUDIO EQUIPMENT! THIS MAY CAUSES IC DAMAGE.**



APPLICATION CIRCUIT II (PT2301-B)



Notes

1. The (+) polarity of DC block capacitor installed in the I/O pin of the PT2301 should face towards the higher potential.
2. The gain setting resistors (R3、R4、RL1、RL2、RR1、RR2) should be kept as close as possible with the PT2301 chip to prevent pick up noises.



ORDER INFORMATION

Valid Part Number	Package Type	Top Code
PT2301-A	24 Pins, TSSOP, 173mil	PT2301-A
PT2301-B	24 Pins, TSSOP, 173mil	PT2301-B