

## 2W Stereo Audio Amplifier with DC Volume Control and Selectable Gain

### Features

- 0dB ~-78dB Internal DC Volume Gain Setting Embedded
- Depop Circuitry Integrated
- Output Power at 1% THD+N, VDD=5V  
--2.0W/CH (typical) into a 4Ω Load  
--1.2W/CH (typical) into a 8Ω Load
- Bridge-Tied Load (BTL), Single-Ended (SE)
- PC-Beep Input
- Selectable Internal/External Gain Setting
- Shutdown Control Available
- Thermal Shutdown Protection
- Surface-Mount Power Package  
28-Pin TSSOP-P / 28pin TQFN Available

### Applications

- Stereo Power Amplifiers for Notebooks or Desktop Computers
- Multimedia Monitors
- Stereo Power Amplifiers for Portable Audio Systems

### General Description

The G1438 is a stereo audio power amplifier in both 28pin TSSOP and TQFN thermal pad package. It can deliver 2.0W continuous RMS power into 4Ω load per channel in Bridge-Tied Load (BTL) mode at 5V supply voltage. Its THD is smaller than 1% under the above operation condition. To simplify the audio system design in the notebook application, G1438 supports the Bridge-Tied Load (BTL) mode for driving the speakers, Single-End (SE) mode for driving the headphone. For the low current consumption applications, the Shutdown mode is supported to disable the G1438 when it is idle. The current consumption can be reduced below 2μA.

The internal DC volume gain setting is ranged from 0dB to -78dB. We can activate the internal DC volume control by setting the Mode pin high, and setting the Vol value to get the expected DC volume gain.

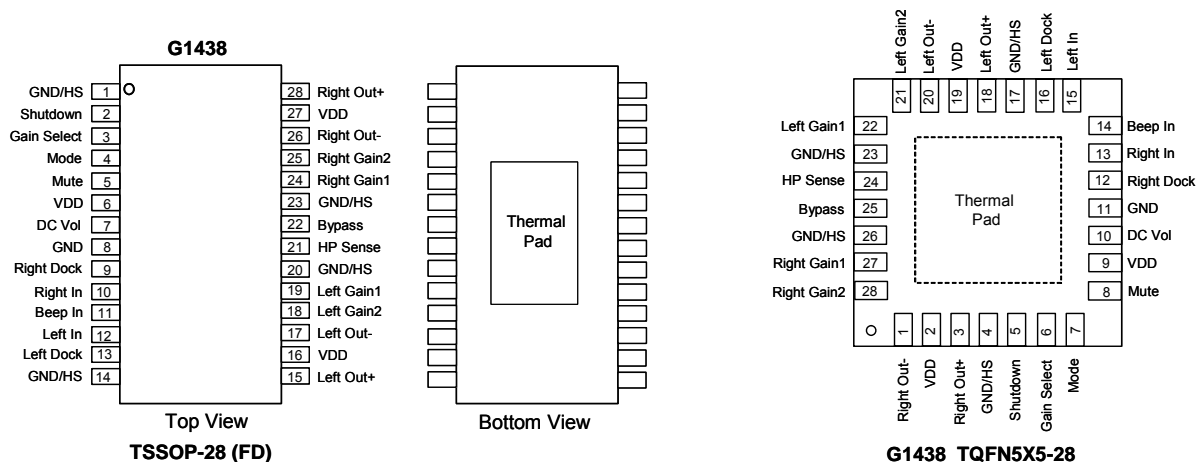
The G1438 is with the flexible for the user to select the internal embedded gain setting or external gains through the gain\_sel pin. Setting the gain\_sel pin low is to activate the internal gain settings, setting high for external gains.

### Ordering Information

ORDER NUMBER	MARKING	TEMP. RANGE	PACKAGE (Pb free)
G1438F4U	G1438	-40°C to +85°C	TSSOP-28 (FD)
G1438R6U	1438	-40°C to +85°C	TQFN5X5-28

Note: F4: TSSOP-28 (FD)      R6 : TQFN5X5-28  
U: Tape & Reel

### Pin Configuration



Note: Recommend connecting the Thermal Pad to the GND for excellent power dissipation.