

# 10W Anti-Clipping Mono Class D Audio Amplifier

## 9W Mono Class AB Audio Amplifier

### FEATURE

- Anti-Clipping Function (ACF)
- Filter-less Modulation, Eliminating Output Filter
- Output Power
  - 10W (Class D,  $V_{DD}=8.5V$ ,  $R_L=4\Omega$ , THD+N=10%)
  - 9W (Class AB,  $V_{DD}=8.5V$ ,  $R_L=4\Omega$ , THD+N=10%)
- Over Current Protection, Thermal Protection, Low voltage malfunction prevention function included
- Pb-Free Packages, SOP8L-PP

### APPLICATIONS

- |                            |                     |
|----------------------------|---------------------|
| • Bluetooth Speakers       | • Portable Speakers |
| • 2.1 Channel Speakers     | • Megaphone         |
| • iPhone/iPod/iPod docking | • LCD TV/Monitor    |
| • Tablet PC/Note Book      | • Portable Gamers   |
| • Outdoor Speakers         | • MP4/GPS           |

### GENERAL DESCRIPTION

HT8693 is a filter-less Mono audio power amplifier IC with choice of Class D or Class AB mode. Operating in Class D mode, HT8693 can provide maximum output power of 10W at  $V_{DD} = 8.5V$ , THD+N = 10%,  $R_L = 4\Omega$ . Operating in Class

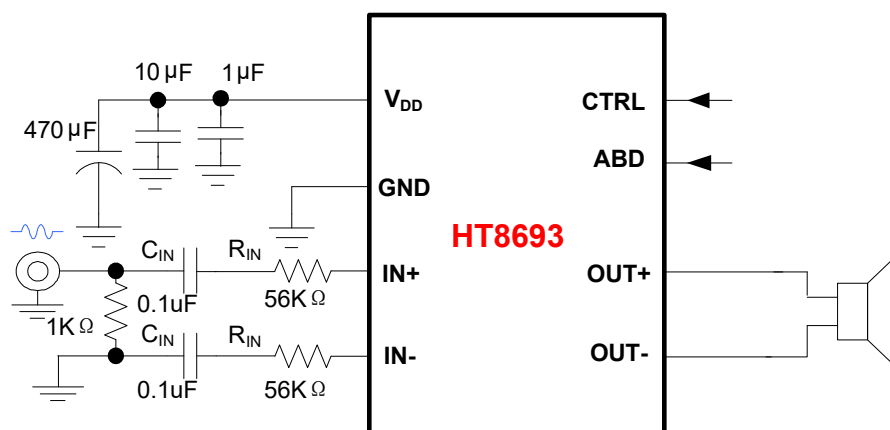
AB mode, HT8693 can provide maximum output power of 9W at  $V_{DD} = 8.5V$ , THD+N = 10%,  $R_L = 4\Omega$ .

HT8693 features Anti-Clipping Function (ACF) which detects output signal clip due to the over input signal and suppresses the output signal clip automatically. Also the ACF function can adapt the output clip caused by power supply voltage down with battery. It can significantly improve the sound quality, creating a very comfortable musical enjoyment, and to protect the speakers from overload damage. It also supplies ACF OFF mode.

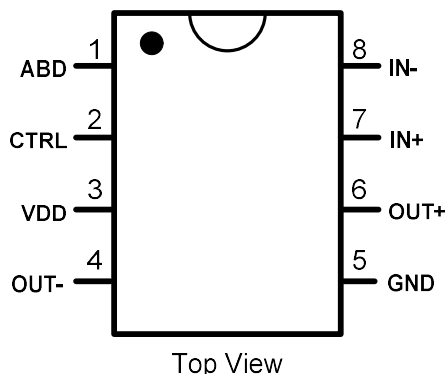
HT8693 has a filter-less modulation circuit which directly drives speakers while realizing low distortion and low noise characteristics. Thanks to filter-less, circuit design with fewer external parts can be made in portable applications.

HT8693 has the independent Shutdown function which can minimize the power consumption at standby function. As for protection function, over current protection function for speaker output terminals, over temperature protection function, and low supply voltage malfunction preventing function are also prepared.

### TYPICAL APPLICATION



■ **TERMINAL CONFIGURATION**



■ **TERMINAL FUNCTION \*1**

SOP Terminal No.	Name	I/O	Function
1	ABD	I	Class AB / D control mode
2	CTRL	I	Shutdown and ACF control terminal
3	VDD	Power	Power supply
4	OUT-	O	Negative output terminal (BTL-)
5	GND	Ground	Ground
6	OUT+	O	Positive output terminal (BTL+)
7	IN+	A	Positive input terminal (differential +)
8	IN-	A	Negative input terminal (differential -)

\*1 I: Input terminal O: Output terminal A: Analog terminal

■ **ORDERING INFORMATION**

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Package type

Part Number	Package Type	Marking	Operating Temperature Range	MOQ/Shipping Package
HT8693SP	SOP16L-PP	HT8693 <sup>SP</sup> UVWXYZ *2	-40°C ~ 85°C	Tape 100 PCS

\*2: "WXYZ/UVWXYZ" is production track code.

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