

# 2×50W D类立体声音频功放

## 2x50W Class D Stereo Amplifier

### ■ FEATURES

- Output Power (BTL)  
2×40W (VDD=18V, RL=4Ω, THD+N=10%)  
2×50W (VDD=24V, RL=6Ω, THD+N=10%)  
2×40W (VDD=24V, RL=8Ω, THD+N=10%)
- Output Power (PBTL)  
80W (VDD=24V, RL=4Ω, THD+N=10%)  
100W (VDD=24V, RL=3Ω, THD+N=10%)
- Single Wide Voltage Supply: 4.5V-26V
- Efficiency > 90%
- Spread spectrum function
- MUTE function
- Differential / Single-ended Analog Input, BTL or PBTL Output
- Selectable Gain: 32dB or 26dB
- Integrated Self-protection Circuits Including Overvoltage, Undervoltage, Overtemperature, DC-detect, and Overcurrent with Error Reporting
- LF and HF Package of ETSSOP28

- 输出功率 (BTL)  
2×40W (VDD=18V, RL=4Ω, THD+N=10%)  
2×50W (VDD=24V, RL=6Ω, THD+N=10%)  
2×40W (VDD=24V, RL=8Ω, THD+N=10%)
- 输出功率 (PBTL模式)  
80W (VDD=24V, RL=4Ω, THD+N=10%)  
100W (VDD=24V, RL=3Ω, THD+N=10%)
- 单电源系统, 4.5V-26V宽电压输入范围
- 超过90%效率, 无需散热器
- 扩频功能
- MUTE功能
- 模拟差分/单端输入, 输出模式立体声/单声道可选
- 可选增益: 32dB/26dB
- 保护功能: 过压/过流/过热/欠压异常, 直流检测和短路保护
- 无铅无卤封装, ETSSOP28

### ■ APPLICATIONS

• Sound Bars	• Wireless Speakers	• 条形音箱	• 无线智能音箱
• Consumer Audio Applications	• TVs/Monitors	• 便携式音箱	• 消费类音频应用
		• 拉杆音箱	• LCD电视/监视器

### ■ DESCRIPTION

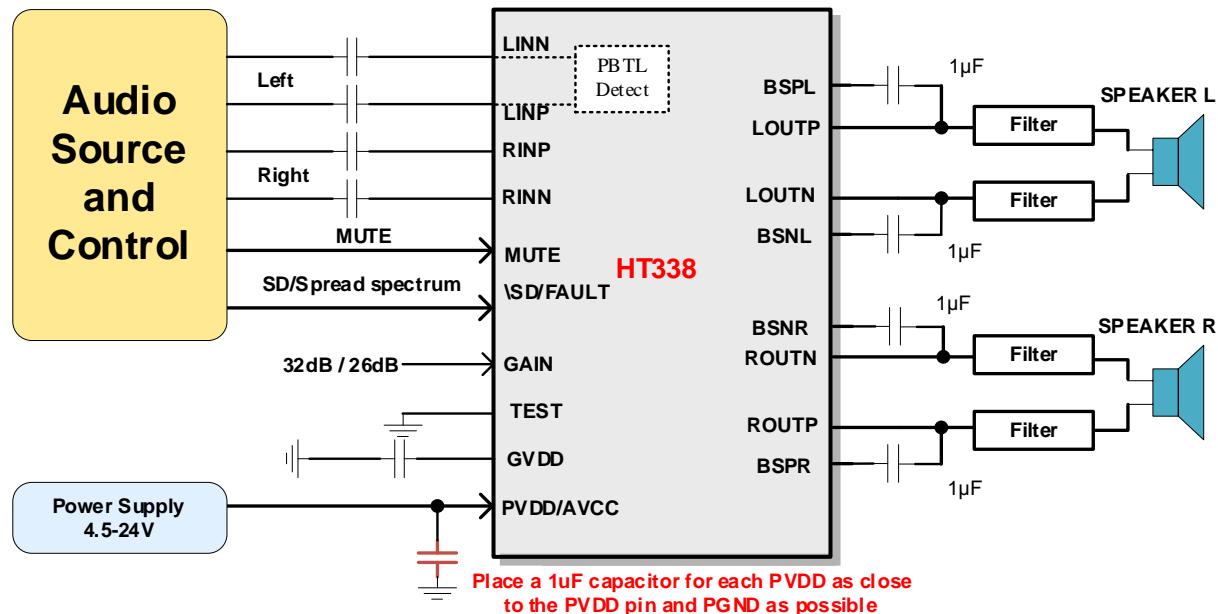
HT338 is a stereo efficient, Class-D audio amplifier for driving speakers up to 50W/6 Ω in stereo BTL. It can also deliver 100W/3Ω power in stereo PBTL.

Spread spectrum function is available to achieve advanced EMI Suppression.

The built-in shutdown function can minimize the standby current of HT338. The device also integrates MUTE function. HT338 is fully protected against faults with Overvoltage, Undervoltage, Overtemperature, DC-detect, and Overcurrent protection. Faults can be reported to the processor to prevent devices from being damaged.

HT338是一款高效D类音频功率放大器。在24V供电的立体声 (BTL)、THD+N=10%条件下,能够持续提供2\*40W/6Ω功率输出;在单声道 (PBTL)、模式、THD+N=10%条件下,能够持续提供100W/3Ω功率输出。

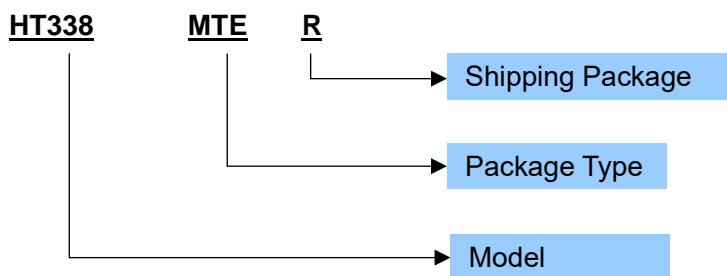
HT338具有先进的扩频功能来抑制EMI。此外, HT338内置关断功能使待机电流最小化,同时内置了MUTE功能,还集成了过压保护、直流保护、短路保护、热保护和电源欠压异常保护等功能,可全面防止出现故障。

**■ TYPICAL APPLICATION**


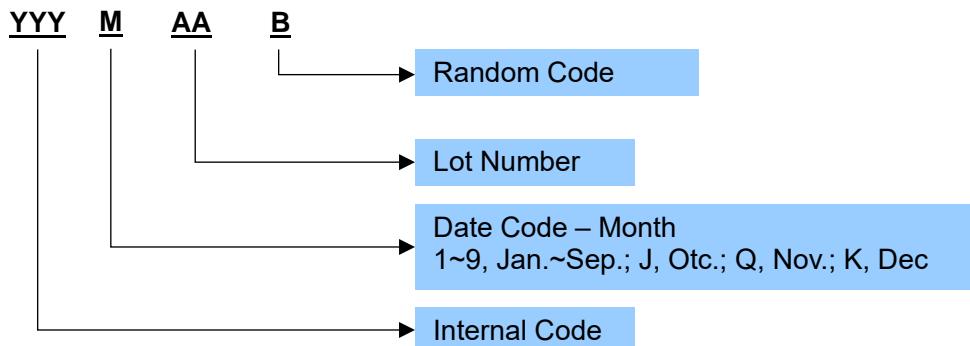
## ■ ORDERING INFORMATION

Part Number	Package Type	Marking	Operating Temperature Range	Shipping Package / MOQ
HT338MTER	ETSSOP28 (MTE)	HT338 YYYMAAB <sup>1</sup>	-40°C~85°C	Tape and Reel (R) / 3000pcs

### Part Number

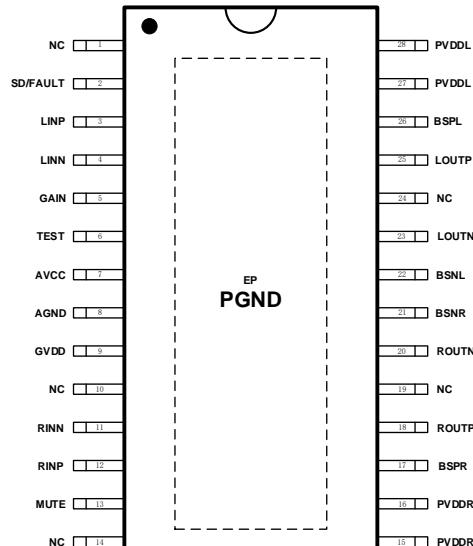


### Production Tracking Code



<sup>1</sup> YYYMAAB is production tracking code

## ■ TERMINAL CONFIGURATION



HT338 Top View

## ■ TERMINAL FUNCTION

Terminal No.	Name	I/O <sup>1</sup>	Description
2	\SD/FAULT	I	SD/FAULT, multi-function pin. When pulled down, place the speaker amplifier in shutdown mode. General fault reporting including Over-Temp, Over-Current, DC Detect.
3	LINP	I	Positive input terminal for L channel
4	LINN	I	Negative input terminal for L channel
5	GAIN	I	Gain select pin. Low = 26dB gain; High or floating = 32dB
6	TEST	I	Test mode select pin. Connect to GND
7	AVCC	P	Analog power supply.
8	AGND	G	Analog signal GND. Connect to PGND.
9	GVDD	O	Voltage regulator derived from AVDD supply, connect 1uF to GND
11	RINN	I	Negative input terminal for R channel
12	RINP	I	Positive input terminal for R channel
13	MUTE	I	When pulled high, place the speaker amplifier in MUTE mode. When pulled low or be floating, place the speaker amplifier in normal operation.
15/16	PVDDR	P	Power Supply for amplifier drivers of R channel
17	BSPR	BST	Connection point for the ROUTP bootstrap capacitor, which is used to create a power supply for the high-side gate drive for ROUTP
18	ROUTP	O	Positive pin for differential speaker amplifier output R
20	ROUTN	O	Negative pin for differential speaker amplifier output R
21	BSNR	BST	Connection point for the ROUTN bootstrap capacitor, which is used to create a power supply for the high-side gate drive for ROUTN
22	BSNL	BST	Connection point for the LOUTN bootstrap capacitor, which is used to create a power supply for the high-side gate drive for LOUTN
23	LOUTN	O	Negative pin for differential speaker amplifier output L
25	LOUTP	O	Positive pin for differential speaker amplifier output L
26	BSPL	BST	Connection point for the LOUTP bootstrap capacitor, which is used to create a power supply for the high-side gate drive for LOUTP
27/28	PVDDL	P	Power Supply for amplifier drivers of L channel
1/10/ 14/19/24	NC	-	NC, Connect to Ground for better thermal performance
EP	GND	G	Provides both <b>electrical and thermal connection</b> from the device to the board. <b>A matching ground pad must be provided on the PCB and the device connected to it via solder.</b> For proper electrical operation, this ground pad must be connected to the system ground. 既是地，又是散热PAD

<sup>1</sup> I: Input; O: Output; G: Ground; P: Power; BST: BOOT Strap;

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