

20W单声道D类音频功放

20W Mono Class D Amplifier

■ FEATURES

- Power supply: 3.6V – 12.8V
 - Output power
 - 19W (VDD=12V, RL=4Ω, THD+N=10%)
 - 15W (VDD=12V, RL=4Ω, THD+N=1%)
 - 23W (VDD=12V, RL=2Ω, THD+N=1%)
 - Efficiency > 90%
 - Differential / Single-ended Analog Input
 - Integrated Self-protection Circuits Including Overvoltage, Undervoltage, Overtemperature, DC-detect, and Overcurrent
 - Packages: Pb-free Packages, ESSOP10
- 电源供电: 3.6V – 12.8V;
 - 输出功率
 - 19W (VDD=12V, RL=4Ω, THD+N=10%)
 - 15W (VDD=12V, RL=4Ω, THD+N=1%)
 - 23W (VDD=12V, RL=2Ω, THD+N=1%)
 - 超过90%效率, 无需散热器
 - 模拟差分/单端输入
 - 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, ESSOP10

■ APPLICATIONS

- Bluetooth/Wi-Fi Speakers
- Portable Speakers
- Smart speakers
- Smart Home
- Sound Bars
- TV/Monitor
- 蓝牙/ Wi-Fi音箱
- 智能音箱
- 声霸
- 便携式音箱
- 智能家居
- TV/监视器

DESCRIPTION

HT313 is a mono efficient, Class-D audio amplifier for driving speakers up to 23W/2 Ω, THD+N=1% at PVDD = 12V.

Advanced EMI Suppression with Spread Spectrum Control enables the use of inexpensive ferrite bead filters while meeting EMC requirements for system cost reduction.

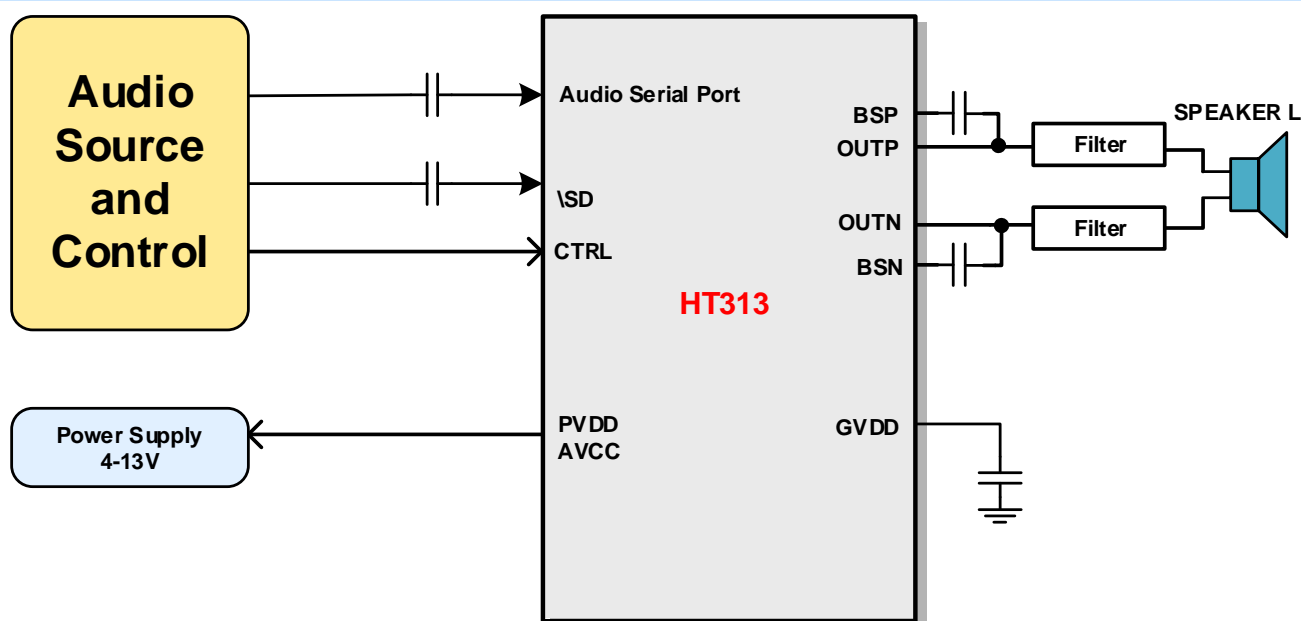
The built-in shutdown function of HT313 minimizes the standby current. HT313 is fully protected against faults with Overvoltage, Undervoltage, Overtemperature, DC-detect, and Overcurrent protection..

HT313是一款高效D类音频功率放大器。在12V供电的单声道模式下，THD+N = 1%，能够持续提供23W/2 Ω功率输出。

HT313具有先进的扩频功能来抑制EMI，使用价格低廉且小体积铁氧体磁珠可满足EMC要求。

此外，HT313内置关断功能使待机电流最小化，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。

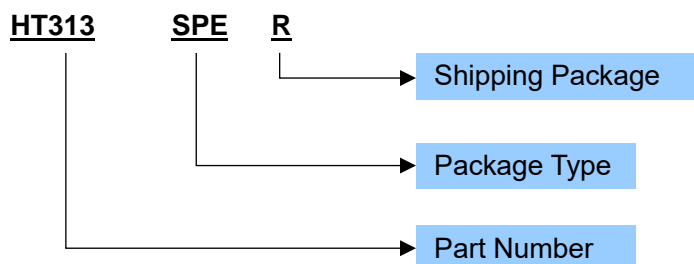
TYPICAL APPLICATION



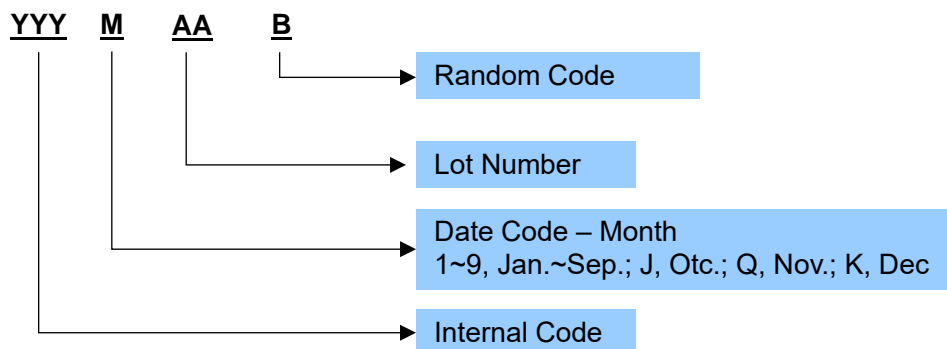
ORDERING INFORMATION

Ordering Number	Package Type	Marking	Operating Temperature Range	Shipping Package / MOQ
HT313SPER	ESSOP10 (SPE)	HT313 YYYMAAB ¹	-25°C ~ 85°C	Tape and Reel (R) / 2500pcs
HT313SPET	ESSOP10 (SPE)	HT313 YYYMAAB	-25°C ~ 85°C	Tube (T) /100pcs

Ordering Number

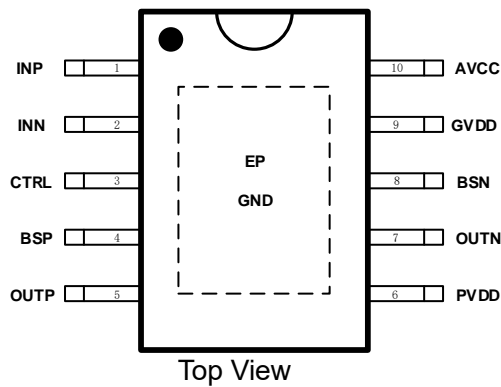


Production Tracking Code



¹ YYYMAAB is production tracking code

■ TERMINAL CONFIGURATION



■ TERMINAL FUNCTION

Terminal No.	Name	I/O ¹	Description
1	INP	I	Positive input terminal. 输入正端
2	INN	I	Negative input terminal. 输入负端
3	CTRL	I	SD, ACF, FAULT, multifunction pin. 功能控制引脚
4	BSP	BST	Connection point for the OUTP bootstrap capacitor, which is used to create a power supply for the high-side gate drive for OUTP. 与OUTP间加自举电容
5	OUTP	O	Positive pin for differential speaker amplifier output. 声道输出正端.
6	PVDD	P	Power Supply for internal power circuitry. 功率电源
7	OUTN	O	Negative pin for differential speaker amplifier output. 声道输出负端.
8	BSN	BST	Connection point for the OUTN bootstrap capacitor, which is used to create a power supply for the high-side gate drive for OUTN. 与OUTN间加自举电容
9	GVDD	O	Voltage regulator derived from PVDD supply, connect 1uF to GND. LDO输出, 接1uF电容到地。
10	AVCC	P	Power supply for internal analog circuitry. 模拟电源端
EP	GND	G	Provides both electrical and thermal connection from the device to the board. For proper electrical operation, this ground pad must be connected to the system ground. 既是地, 又是散热PAD

¹ I: Input; O: Output; G: Ground; P: Power; BST: BOOT Strap;

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