

10W Class D Audio Amplifier with Limiter Function

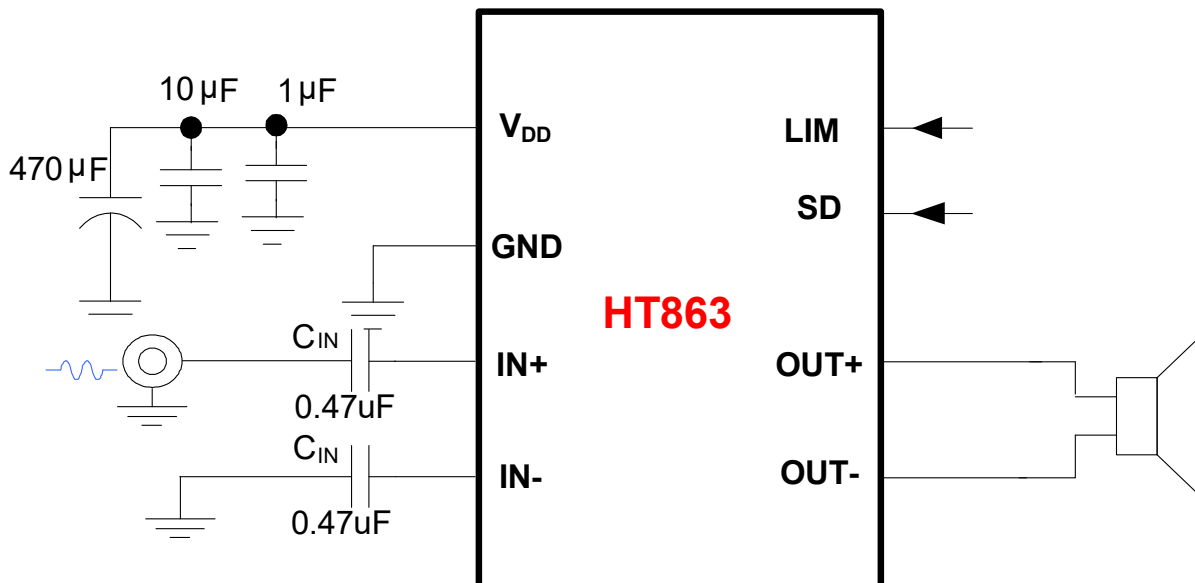
■ FEATURES

- Adjustable Limiter Function by outside resistor
A desirable THD+N can be set
- Integrated Thermal Foldback (TFB) Function
Significantly increase the peak audio power
- THD+N: 0.03% ($V_{DD} = 9.0V$, $R_L = 4\Omega + 22\mu H$, $f_{IN} = 1kHz$, $P_o = 2.0W$)
- Output Power ($f_{IN} = 1kHz$, THD+N = 10%)
10W ($V_{DD} = 9.0V$, $R_L = 4\Omega + 22\mu H$)
5.5W ($V_{DD} = 9.0V$, $R_L = 8\Omega + 33\mu H$)
- Power Supply V_{DD} : 2.5V~10V
- Gain: 25dB
- Filter-less Modulation
- Thermal/Low voltage malfunction prevention function with auto recovery
- Pb-free Packages, SOP8L-PP

■ APPLICATIONS

- Bluetooth/Wi-Fi Speakers • Portable Speakers
- 2.1Channel Speakers • Megaphone
- Portable Gamers • MP4, GPS
- LCD TV/Monitor • Tablet PC/Note Book

■ TYPICAL APPLICATION



■ DESCRIPTION

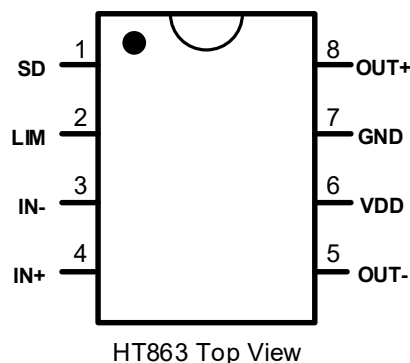
HT863 is a mono Class D audio amplifier, which can deliver 10W power at the condition of $V_{DD} = 9.0V$, THD+N=10%, 4Ω Load, 1kHz sine wave. Class AB is also available while purchasing in advance.

HT863 integrates adjustable Limiter Function, which can be set by a resistor at the LIM pin to ground, so that the output music can be limited below the preset power and THD+N.

The HT863 Thermal Foldback (TFB) is designed to protect the HT863 from excessive die temperature in case of the device being operated beyond the recommended temperature or power limit, or with a weaker thermal system than recommended. The TFB works by reducing the on-die power dissipation by reducing Gain if the temperature trig point is exceeded, so that the peak audio power is significantly increased.

HT863 has a filter-less modulation circuit which can directly drive speakers. HT863 can be shut down so that the power consumption can be minimized. As for protection function, over temperature protection function and low supply voltage malfunction preventing function are also prepared.

■ TERMINAL CONFIGURATION



■ TERMINAL FUNCTION*1

HT863 Terminal No.	NAME	I/O	Description
1	SD	I	Shutdown terminal, amplifier goes into shutdown mode when it is pulled low
2	LIM	I	Limiter Function Terminal
3	IN-	A	Negative input terminal (differential-)
4	IN+	A	Positive input terminal (differential+)
5	OUT-	O	Negative output terminal (BTL-)
6	VDD	Power	Power supply terminal
7	GND	Ground	Power ground
8	OUT+	O	Positive output terminal (BTL+)

*1 I: input O: output A: Analog terminal

■ ORDERING INFORMATION

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Package Type

Part Number	Package Type	Marking	Operating Temperature Range	MOQ/Shipping Package
HT863SPT	SOP8L-PP	HT863 ^{SP} UVWXYZ *2	-40°C ~ 85°C	100PCS / Tube
HT863SPR	SOP8L-PP	HT863 ^{SP} UVWXYZ *2	-40°C ~ 85°C	2500PCS / Tape and Reel

*2: WXYZ/UVWXYZ is production track code.

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嘉兴禾润电子科技有限公司**Jiaxing Heroic Electronic Technology Co., Ltd.**

地址：浙江省嘉兴市凌公塘路3339号JRC大厦A座三层

Add: A 3rd floor, JRC Building, No. 3339, LingGongTang Road, Jiaxing, Zhejiang Province

Sales: 0573-82585539, sales@heroic.com.cn

Support: 0573-82586151, support@heroic.com.cn

Fax: 0573-82585078

E-mail: support@heroic.com.cn

Website: www.heroic.com.cn; wap.heroic.com.cn

Wechat MP: HEROIC_JX

QQ: 75467400

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