Audio ICs

6V / 800mW single-channel power amplifier BA527

The BA527 is a monolithic power amplifier designed for portable cassette players and radio cassette players. With a 6V power supply, it has a rated output of 800mW into a 4Ω load (THD = 10%). It is a high-grade design that generates almost no audible switching noise, and is ideal for high-end compact cassette players (including those with radio).

Applications

Portable cassette recorders and radio cassette recorders

Features

- 1) Rated power output is 800mW (V_{cc} = 6V and a 4Ω load (THD = 10%). Maximum output is 1300mW.
- 2) Pin compatible with the Rohm BA526 power amplifier, and can be interchanged to suit the application.
- Compact 9-pin SIP package that does not require a heatsink. Allows more compact set designs, and is

easy to mount.

- High ripple rejection ratio (55dB) and generates almost no "pop" noise.
- Excellent low voltage characteristics (starts operating at SV < 2.8V).

Block diagram



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Internal circuit configuration



•Absolute maximum ratings (Ta = 25° C)

Parameter	Symbol	Limits	Unit
Power supply voltage	Vcc	9	V
Power dissipation	Pd	950*	mW
Operating temperature	Topr	-10~+65	°C
Storage temperature	Tstg	-30~+125	C

* Reduced by 9.5mW for each increase in Ta of 1°C over 25°C.

•Electrical characteristics (unless otherwise noted, Ta = 25° C, Vcc = 6V, RL = 4 Ω , f= 1kHz and RNF = 220Ω)

Parameter	Symbol	Min	Тур.	Max.	Unit	Conditions	Measurement circuit
Quiescent current	lα	_	16	25	mA	VIN=0Vrms	Fig.1
Closed loop voltage gain	Gvc	43	46	49	dB	Vo=0.45Vrms	Fig.1
Maximum output power	Ром	900	1300	—	mW	-	Fig.1
Rated output power	Роит	700	800	—	mW	THD=10%	Fig.1
Output noise voltage	VNO	_	0.2	0.7	mVrms	Rg=0Ω	Fig.1
Total harmonic distortion	THD	_	0.45	1.8	%	Po=50mW, 1kHz	Fig.1
Input resistance	RıN	—	47	_	kΩ	Po=50mW	Fig.1



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Measurement circuit











Fig. 2