

# 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).

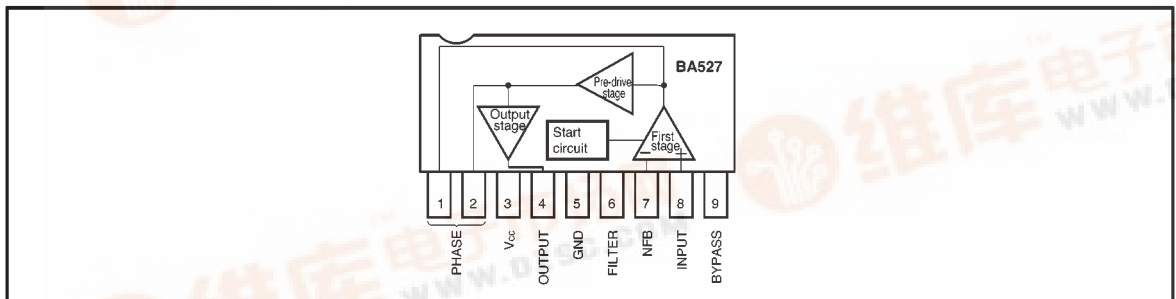
### ●Applications

Portable cassette recorders and radio cassette recorders

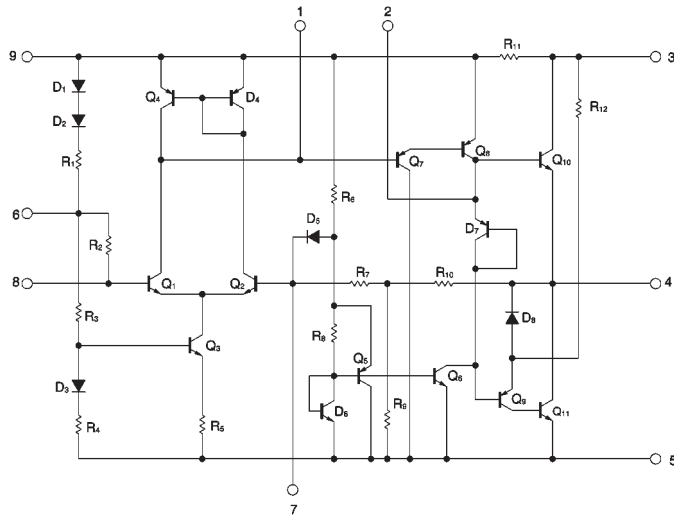
### ●Features

- 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.
- 3) Compact 9-pin SIP package that does not require a heatsink. Allows more compact set designs, and is easy to mount.
- 4) High ripple rejection ratio (55dB) and generates almost no "pop" noise.
- 5) Excellent low voltage characteristics (starts operating at  $SV < 2.8V$ ).

### ●Block diagram



● Internal circuit configuration



● Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Power supply voltage	V <sub>CC</sub>	9	V
Power dissipation	P <sub>d</sub>	950*	mW
Operating temperature	T <sub>opr</sub>	-10~+65	°C
Storage temperature	T <sub>stg</sub>	-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, V<sub>CC</sub> = 6V, R<sub>L</sub> = 4Ω, f = 1kHz and R<sub>NF</sub> = 220Ω)

Parameter	Symbol	Min	Typ.	Max.	Unit	Conditions	Measurement circuit
Quiescent current	I <sub>Q</sub>	—	16	25	mA	V <sub>IN</sub> =0V <sub>rms</sub>	Fig.1
Closed loop voltage gain	G <sub>VC</sub>	43	46	49	dB	V <sub>O</sub> =0.45V <sub>rms</sub>	Fig.1
Maximum output power	P <sub>OM</sub>	900	1300	—	mW	—	Fig.1
Rated output power	P <sub>OUT</sub>	700	800	—	mW	THD=10%	Fig.1
Output noise voltage	V <sub>NO</sub>	—	0.2	0.7	mV <sub>rms</sub>	R <sub>g</sub> =0Ω	Fig.1
Total harmonic distortion	THD	—	0.45	1.8	%	P <sub>O</sub> =50mW, 1kHz	Fig.1
Input resistance	R <sub>IN</sub>	—	47	—	kΩ	P <sub>O</sub> =50mW	Fig.1

● Measurement circuit

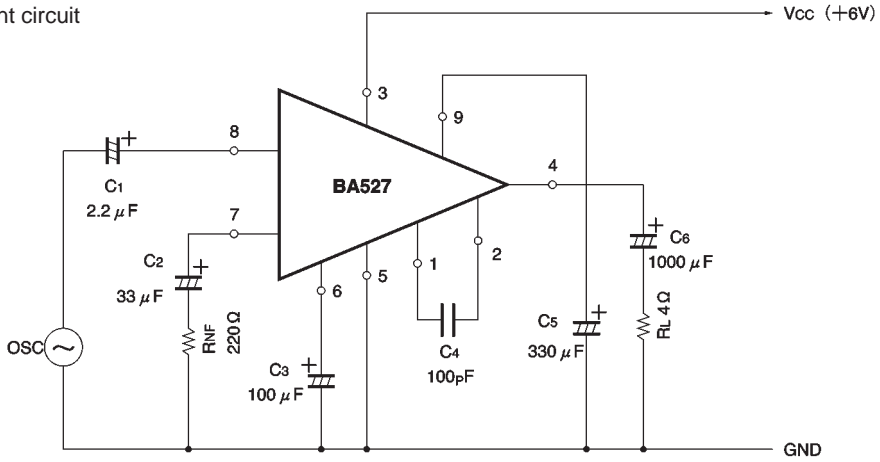


Fig. 1

● Application example

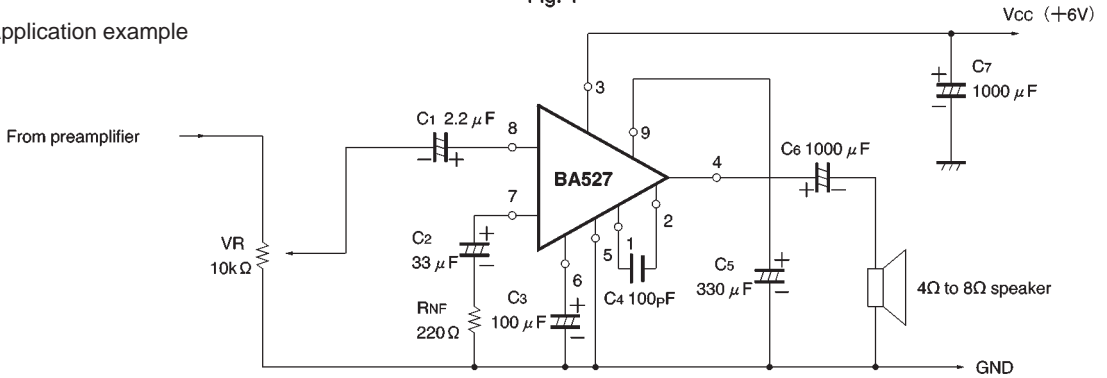


Fig. 2

● External dimensions (Units: mm)

