

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 4 Ω 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).

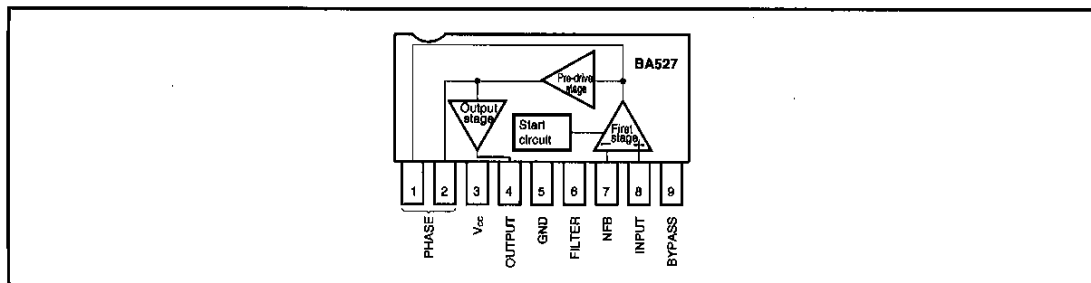
● Applications

Portable cassette recorders and radio cassette recorders

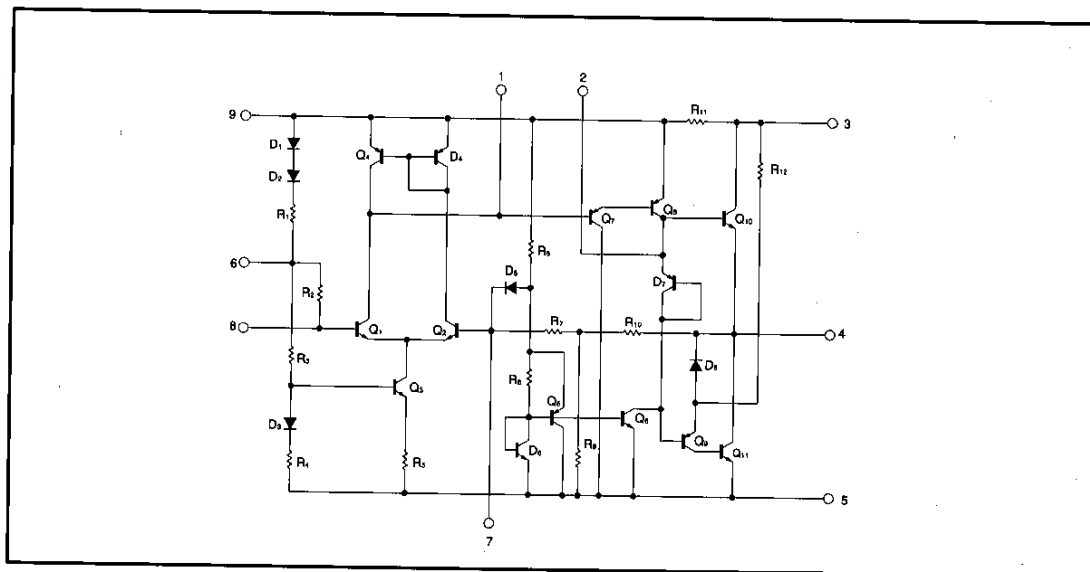
● Features

- 1) Rated power output is 800mW ($V_{CC} = 6V$ and a 4 Ω 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 diagram



● Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	V _{CC}	9	V
Power dissipation	P _d	950*	mW
Operating temperature	T _{opr}	-10~65	°C
Storage temperature	T _{stg}	-30~125	°C

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

● Electrical characteristics (unless otherwise specified Ta = 25°C, V_{CC} = 6V, R_L = 4 Ω, f = 1kHz and R_{NF} = 220 Ω)

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

Power amplifiers

Low-frequency amplifiers

● Measurement circuit

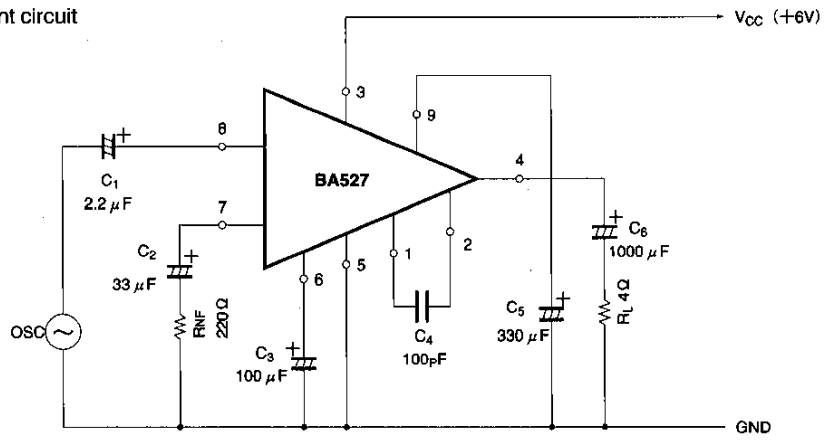


Fig. 1

● Application example

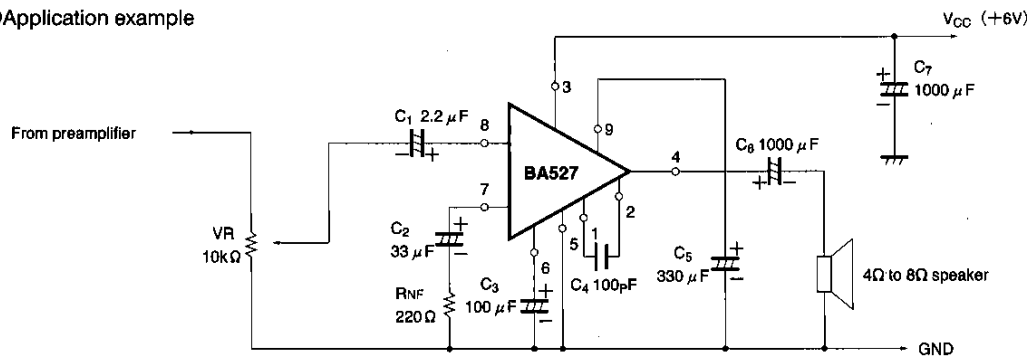


Fig. 2

● External dimensions (Unit: mm)

