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).

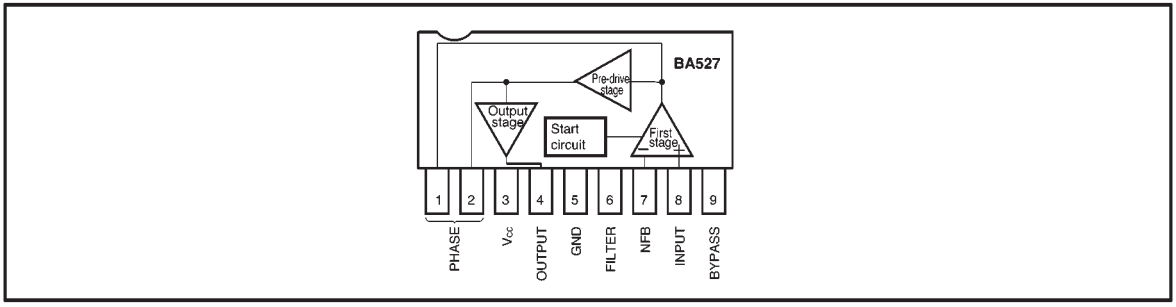
●Applications

Portable cassette recorders and radio cassette recorders

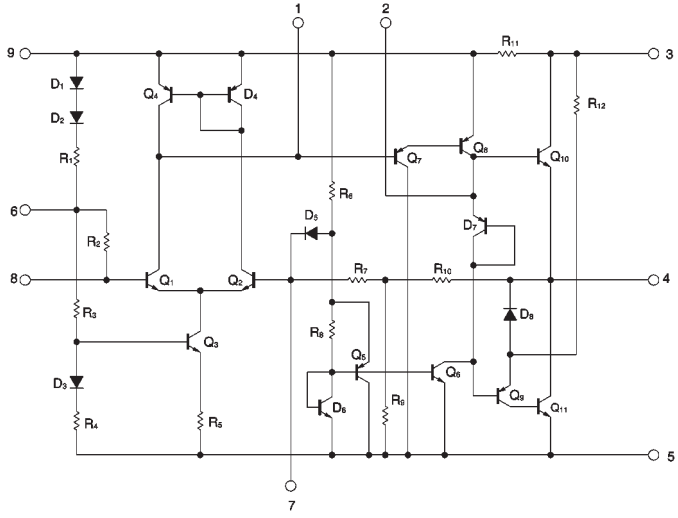
●Features

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_{CC}	9	V
Power dissipation	Pd	950*	mW
Operating temperature	Topr	−10～+65	℃
Storage temperature	Tstg	−30～+125	℃

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

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

Parameter	Symbol	Min	Typ.	Max.	Unit	Conditions	Measurement circuit
Quiescent current	I_Q	−	16	25	mA	V_{IN}=0V_{rms}	Fig.1
Closed loop 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=0Ω	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

●Measurement circuit

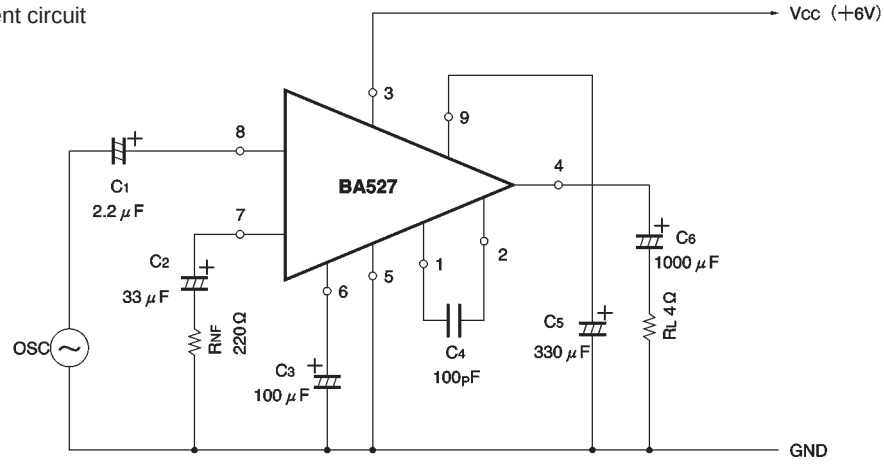


Fig. 1

●Application example

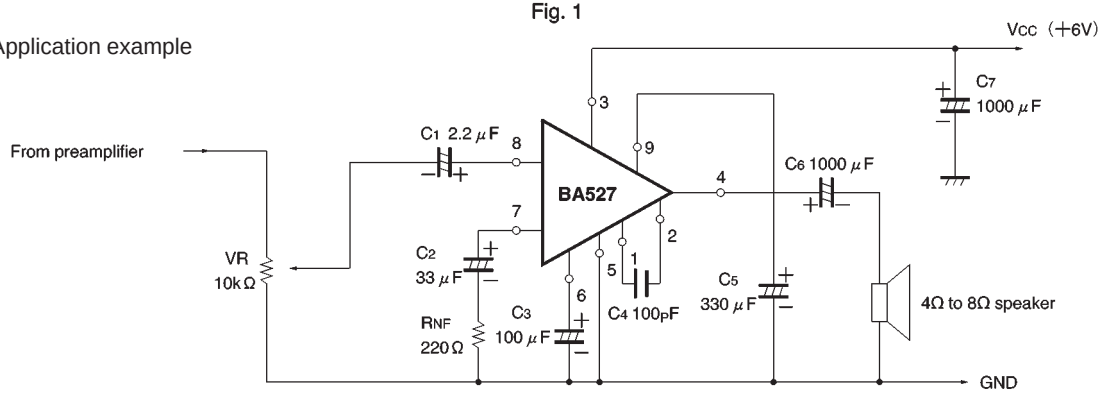


Fig. 2

●External dimensions (Units: mm)