

6V/430mW single-channel power amplifier

BA526

The BA526 is a high-output monolithic power amplifier with excellent audio quality. With a 6V power supply, it has a rated output of 430mW into an 8 Ω load (THD = 10%), and a maximum output of 700mW. It comes in a compact 9-pin SIP package.

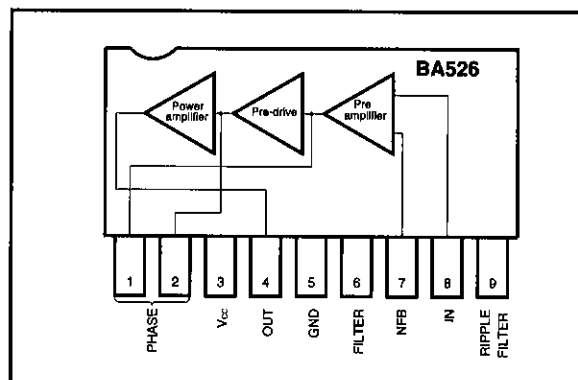
●Applications

Portable radios,
TV sets,
cassette recorders,
interphones,
and wireless trancivers

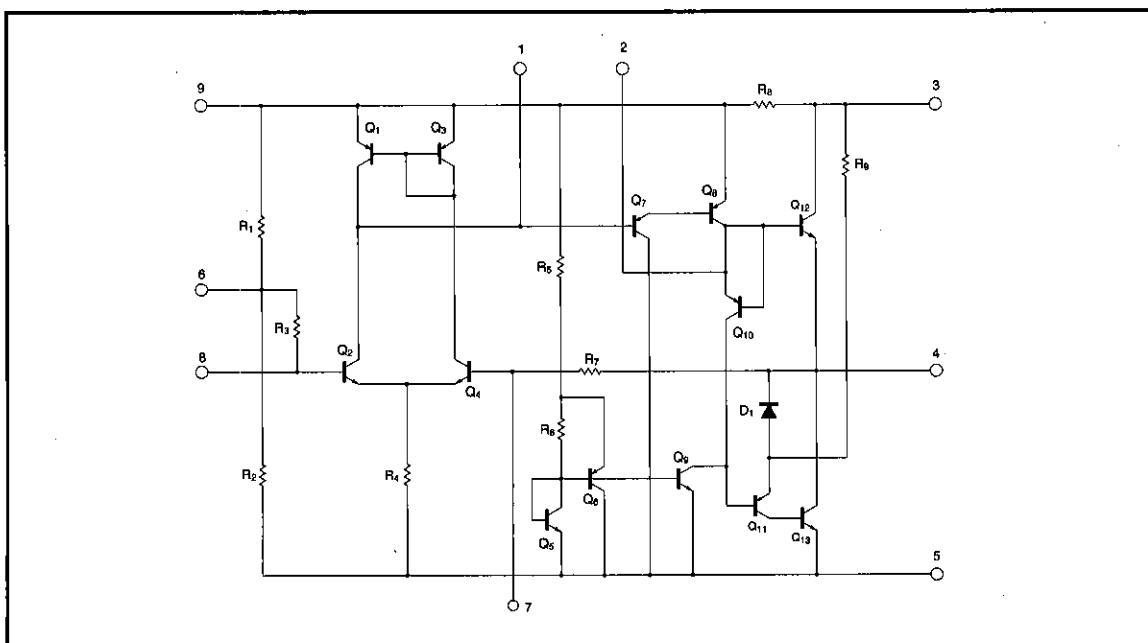
●Features

- 1) High output. $P_{OUT} = 430\text{mW}$ ($V_{CC} = 6\text{V}$ and an 8 Ω load (THD = 10%).
- 2) Good low voltage characteristics. Begins operating at 2V.
- 3) Easy-to-mount 9-pin SIP package.
- 4) Extremely low high-frequency distortion with small signals. Uses soft clipping for good audio quality.
- 5) Power-on "pop" noise is suppressed.
- 6) Low noise.

●Block diagram



● Internal circuit diagram



● Absolute maximum ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Limits	Unit
Supply voltage	V_{CC}	9	V
Power dissipation	P_d	950*	mW
Operating temperature	T_{opr}	$-10 \sim 65$	$^\circ\text{C}$
Storage temperature	T_{stg}	$-30 \sim 125$	$^\circ\text{C}$

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

● Electrical characteristics (unless otherwise specified $T_a = 25^\circ\text{C}$, $V_{CC} = 6\text{V}$, $R_L = 8\ \Omega$ and $f = 1\text{kHz}$)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Condition	Measurement Circuit
Quiescent circuit current	I_Q	—	12	24	mA	$V_{IN} = 0\text{V}_{rms}$	Fig.1
Closed-circuit voltage gain	G_{VC}	48	52	54	dB	$R_{NF} = 47\ \Omega$, $V_{IN} = 2.5\text{mV}_{rms}$	Fig.1
Maximum output power	P_{OM}	600	700	—	mW	$V_{IN} = 25\text{mV}_{rms}$	Fig.1
Rated output power	P_{OUT}	350	430	—	mW	THD=10%	Fig.1
Output noise voltage	V_{NO}	—	0.25	0.7	mV_{rms}	$R_0 = 0\ \Omega$	Fig.1
Total harmonic distortion	THD	—	0.4	2	%	$P_O = 50\text{mW}$	Fig.1
Input resistance	R_{IN}	—	22	—	$\text{k}\Omega$	$P_O = 50\text{mW}$	Fig.1

●Measurement circuit

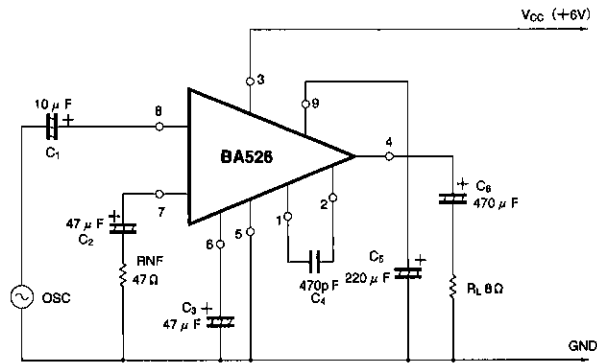


Fig. 1

●Application example

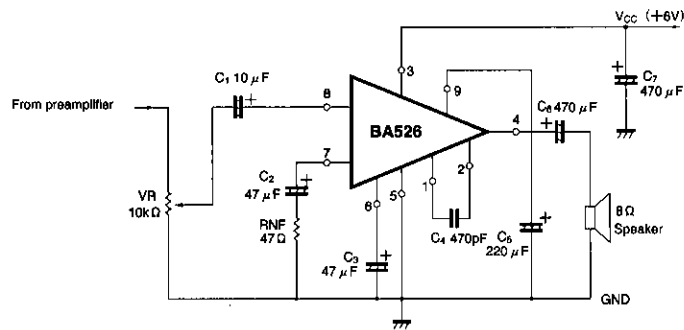
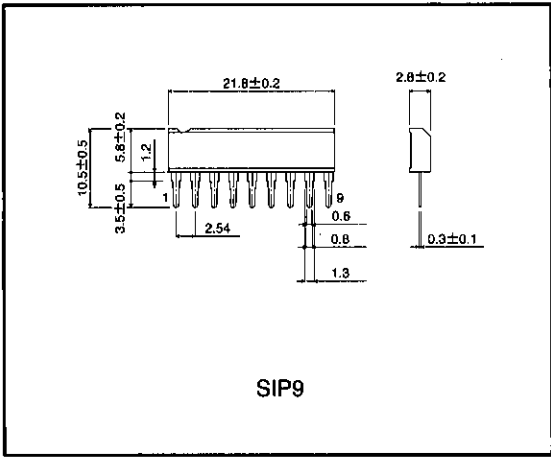


Fig. 2

●External dimensions (Unit: mm)



SIP9

Power amplifiers

Low-frequency amplifiers