

# 9V / 2.3W single-channel power amplifier

## BA534

The BA534 is a monolithic power amplifier designed for portable cassette players and radios. With a 9V power supply, it has a rated output of 2.3W into a 4Ω load (THD = 10%). It has high ripple rejection ratio, and the “pop” noise when power is applied has been suppressed to an absolute minimum.

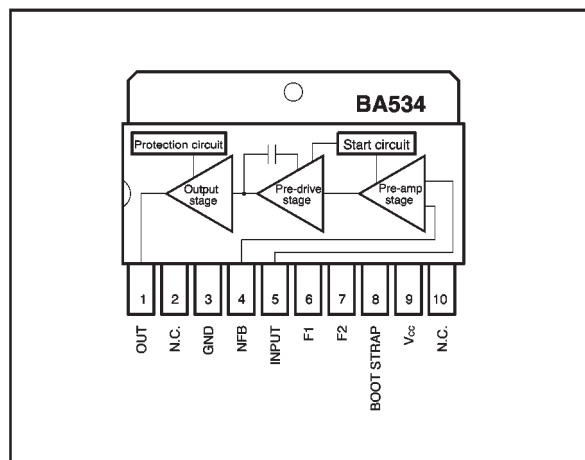
### ● Applications

Portable cassette recorders and radios.

### ● Features

- 1) High power output.  
When  $V_{CC} = 9V$ ,  $R_L = 4\Omega$  and THD = 10%:  $P_{OUT} = 2.3W$   
When  $V_{CC} = 9V$ ,  $R_L = 3\Omega$  and THD = 10%:  $P_{OUT} = 2.8W$
- 2) The “pop” noise that occurs when the power is applied is extremely low.
- 3) Excellent ripple rejection ratio.

### ● Block diagram

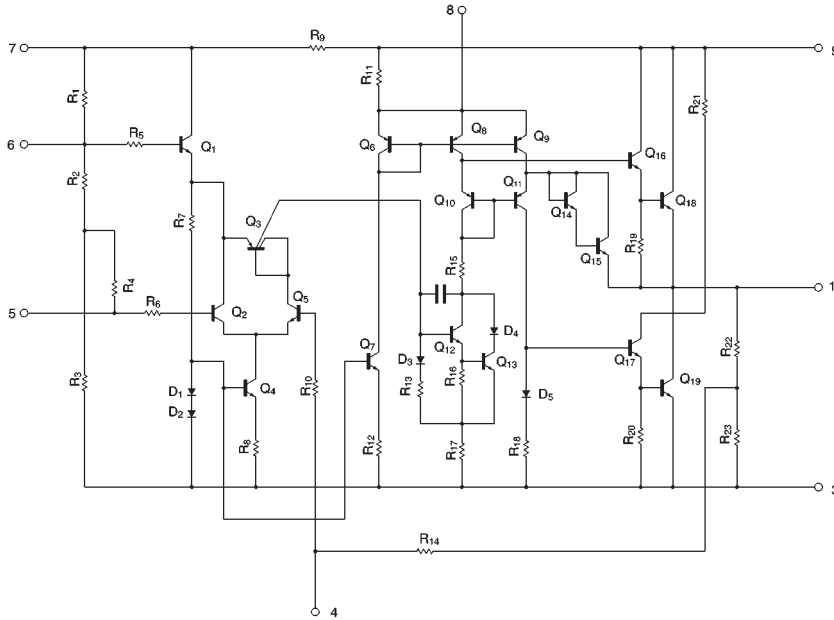


### ● Absolute maximum ratings ( $T_a = 25^\circ C$ )

Parameter	Symbol	Limits	Unit
Power supply voltage	$V_{CC}$	14	V
Power dissipation	$P_d$	2.5*	W
Operating temperature	$T_{opr}$	-25 ~ +75	°C
Storage temperature	$T_{stg}$	-55 ~ +125	°C

\* Reduced by 25mW for each increase in  $T_a$  of 1 °C over 25°C.  
(without radiation board)

● Internal circuit configuration



● Electrical characteristics (unless otherwise noted,  $T_a = 25^\circ\text{C}$ ,  $V_{CC} = 9\text{V}$ ,  $R_L = 4\Omega$  and  $R_{NF} = 100\Omega$ )

Parameter	Symbol	Min	Typ.	Max.	Unit	Conditions	Measurement circuit
Quiescent current	$I_Q$	—	20	50	mA	—	Fig.1
Closed loop voltage gain	$G_{VC}$	47	50	53	dB	$f=1\text{kHz}$	Fig.1
Rated output	$P_{OUT}$	1.7	2.3	—	W	THD=10%	Fig.1
Output noise voltage	$V_{NO}$	—	0.7	3.0	$\text{mV}_{\text{rms}}$	$R_g=10\text{k}\Omega$	Fig.1
Input resistance	$R_{IN}$	—	200	—	$\text{k}\Omega$	—	Fig.1
Total harmonic distortion	THD	—	0.3	2	%	$P_O=0.5\text{W}$	Fig.1

● Measurement circuit

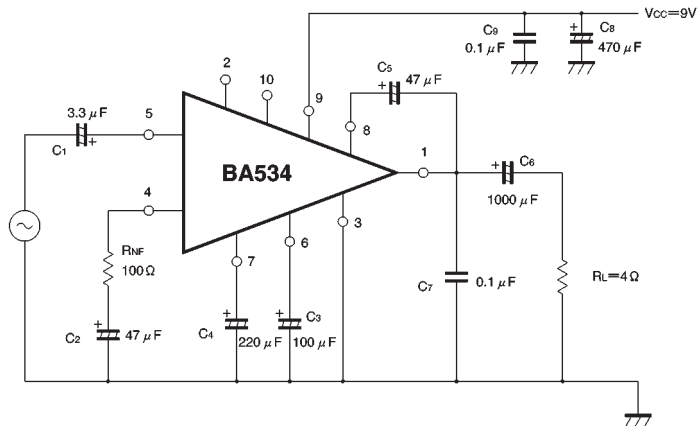


Fig. 1

●Application example

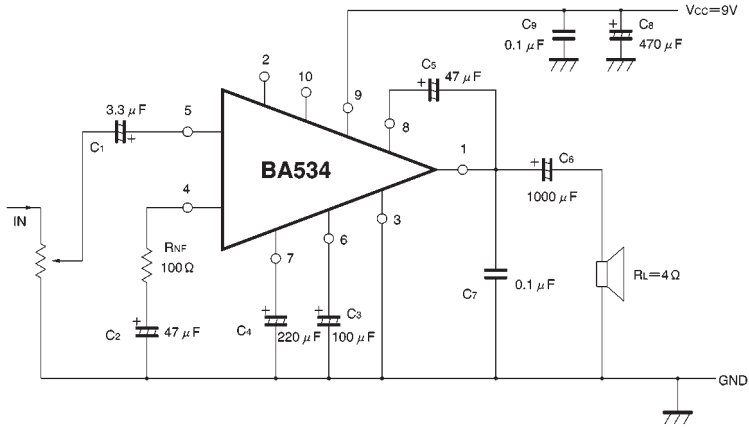


Fig. 2

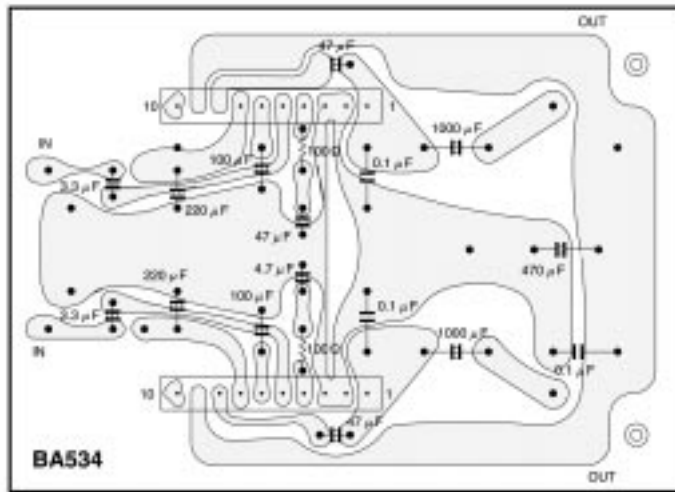


Fig. 3 PCB diagram

