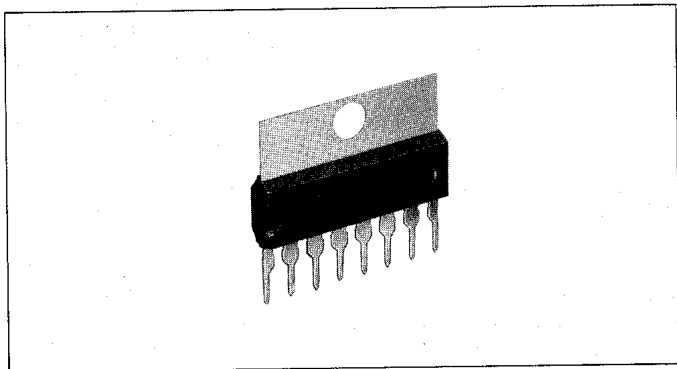


**9V/1.5W Power Amplifier  
BA518/BA547**



Dimensions (mm)

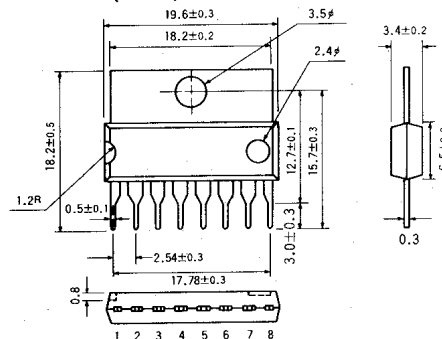


Fig. 1

The BA518/547 is a monolithic integrated circuit consisting of a 1.5W output power amplifier useable over a wide range of supply voltage from 6 to 12V. This makes it ideally suited for applications such as radios, tape recorders, and turntables operating on dry batteries, AC power, or car batteries. It can operate on voltages as low as 2V with superior characteristics.

**Features**

1. Even equipped with a radiating fin, the compact 8-pin SIP package is no more than 15mm high above the PC board.
2. Wide operating voltage range (2.5 ~ 12V)
3. Superior supply voltage and temperature characteristics
4. The BA547 is particularly low in current consumption.

**Block Diagram**

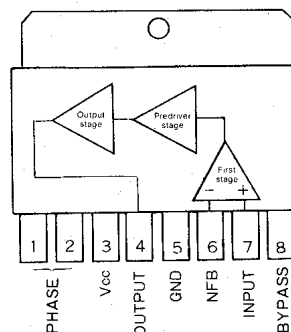


Fig. 2

**Applications**

1. Radios operating on dry batteries, car batteries, and AC power
2. Tape recorders
3. Turntables

**Absolute Maximum Ratings (T<sub>a</sub> = 25°C)**

Parameter	Symbol	Limits	Unit
Supply voltage	V <sub>CC</sub>	15	V
Power dissipation	P <sub>d</sub>	2*	W
Operating temperature	T <sub>opr</sub>	-25~+65	°C
Storage temperature	T <sub>stg</sub>	-55~+125	°C

\* Tab temperature 65°C

**Circuit Diagram**

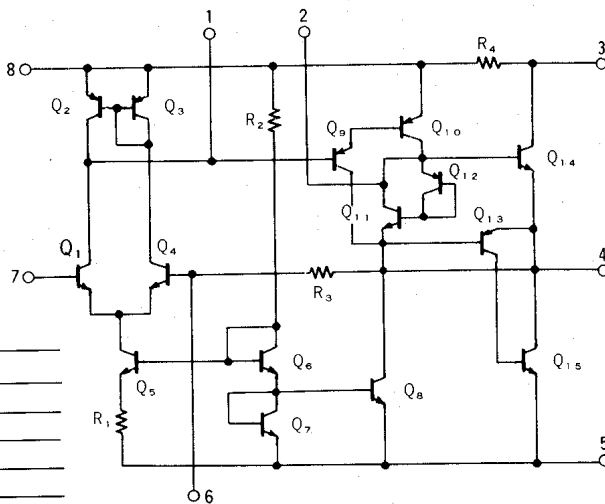


Fig. 3

**Electrical Characteristics (T<sub>a</sub> = 25°C, V<sub>CC</sub> = 12V, R<sub>L</sub> = 8Ω, f = 1kHz, R<sub>NF</sub> = 120Ω)**

Parameter	Symbol	BA518			BA547			Unit	Conditions	Test circuit
		Min	Typ	Max	Min	Typ	Max			
Quiescent current	I <sub>Q</sub>	—	15	25	—	10.5	17	mA	V <sub>IN</sub> = 0V	Fig. 15
Closed-loop voltage gain	G <sub>VC</sub>	42	45	48	42	45	48	dB	V <sub>IN</sub> = -50dBm	Fig. 15
Rated output power	P <sub>OUT</sub>	1.0	1.5	—	1.0	1.5	—	W	THD = 10%	Fig. 15
Total harmonic distortion	THD	—	0.6	2.0	—	0.65	2.5	%	P <sub>OUT</sub> = 100mW	Fig. 15
Output noise voltage	V <sub>NO</sub>	—	0.3	5.0	—	0.3	5.0	mVrms	R <sub>g</sub> = 10kΩ	Fig. 15