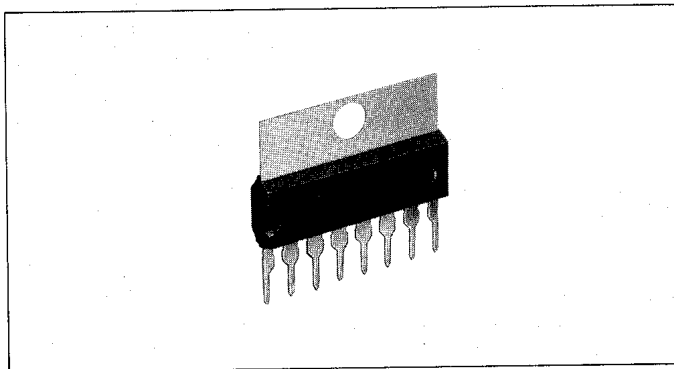


9V/1.5W Power Amplifier BA518/BA547



Dimensions (mm)

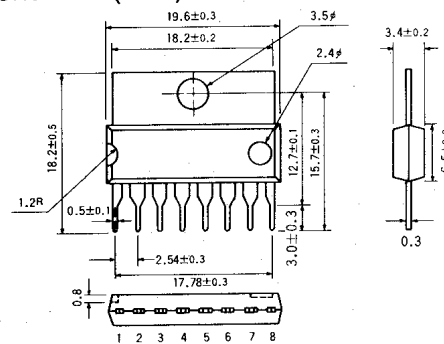


Fig. 1

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

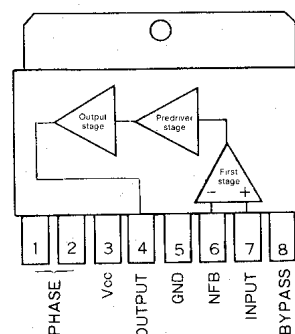


Fig. 2

Applications

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

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Limits	Unit
Supply voltage	V_{CC}	15	V
Power dissipation	P_d	2*	W
Operating temperature	T_{opr}	$-25 \sim +65$	$^\circ\text{C}$
Storage temperature	T_{stg}	$-55 \sim +125$	$^\circ\text{C}$

* Tab temperature 65°C

Electrical Characteristics ($T_a = 25^\circ\text{C}$, $V_{CC} = 12\text{V}$, $R_L = 8\Omega$, $f = 1\text{kHz}$, $R_{NF} = 120\Omega$)

Parameter	Symbol	BA518			BA547			Unit	Conditions	Test circuit
		Min	Typ	Max	Min	Typ	Max			
Quiescent current	I_Q	—	15	25	—	10.5	17	mA	$V_{IN} = 0\text{V}$	Fig. 15
Closed-loop voltage gain	G_{VC}	42	45	48	42	45	48	dB	$V_{IN} = -50\text{dBm}$	Fig. 15
Rated output power	P_{OUT}	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	%	$P_{OUT} = 100\text{mW}$	Fig. 15
Output noise voltage	V_{NO}	—	0.3	5.0	—	0.3	5.0	mVrms	$R_g = 10\text{k}\Omega$	Fig. 15

Circuit Diagram

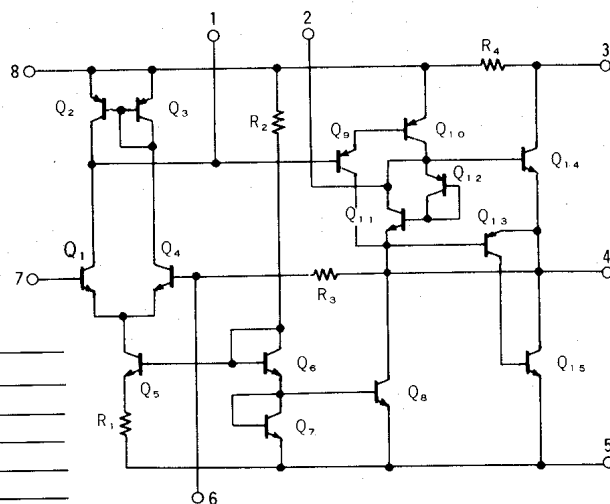


Fig. 3