

ICs for Audio Common Use

Panasonic

AN7140

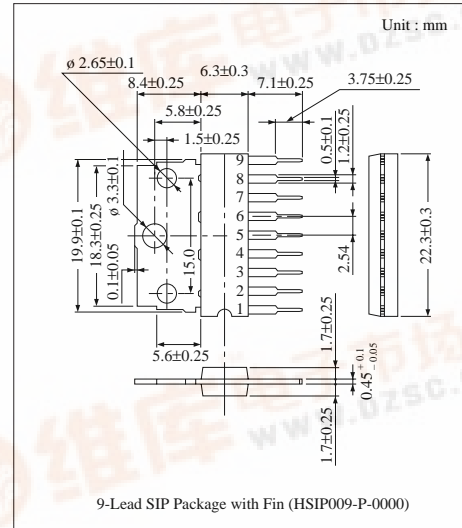
5W Audio Power Amplifier Circuit

Overview

The AN7140 is an integrated circuit designed for low power amplifier such as portable radio, radio cassette tape recorder and car radio. Wide supply voltage range (6 ~ 16V) enables stabilized operation. Fewer external components and 9-pin SIP package achieved compact and highly integrated set.

Features

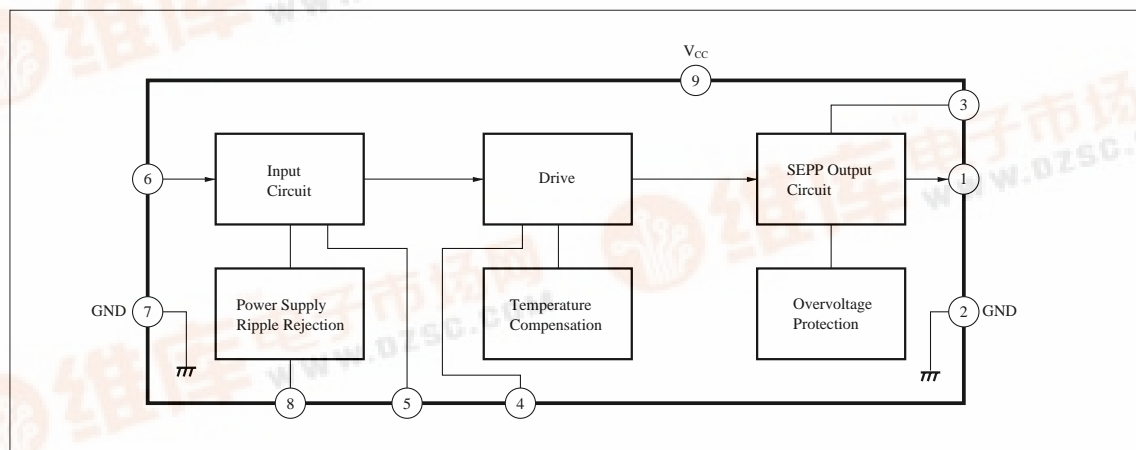
- High gain, low distortion, low noise
- Fewer external components
- Built-in thermal protection circuit
- Built-in overvoltage protection circuit
- Incorporating automatic operating point stabilizer circuit
- Low shock noise when power is switched ON and OFF



Pin Descriptions

Pin No.	Pin Name
1	Output
2	GND
3	Bootstrap
4	Phase Compensation
5	N.F.B
6	Input
7	GND
8	Ripple Filter
9	V _{CC}

Block Diagram

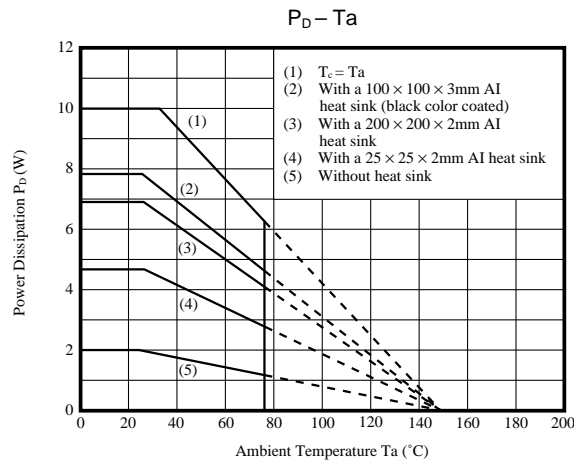


■ Absolute Maximum Ratings (Ta= 25°C)

Parameter	Symbol	Rating	Unit
Supply Voltage	V _{CC}	20	V
Supply Current	I _{CC}	4	A
Power Dissipation (Ta = 30°C)	P _D	10	W
Operating Ambient Temperature	T _{opr}	- 30 ~ + 75	°C
Storage Temperature	T _{stg}	- 40 ~ + 150	°C

■ Electrical Characteristics (V_{CC} = 13.2V, R_L = 4Ω, f = 1kHz, Ta = 25°C)

Parameter	Symbol	Condition	min.	typ.	max.	Unit
Quiescent Circuit Current	I _{CQ}	V _i = 0	15	30	55	mA
Voltage Gain	G _V	V _i = 3mV	51.5	53.5	55.5	dB
Output Power	P _O	THD = 10%	4.5	5	—	W
Total Harmonic Distortion	THD	V _i = 3mV	—	0.15	1	%
Output Noise Voltage	V _{no}	R _g = 10kΩ	—	1.5	3	mV
Input Impedance	Z _i		—	30	—	kΩ



■ Application Circuit

