

AN7130

4.2W Audio Power Amplifier

Description

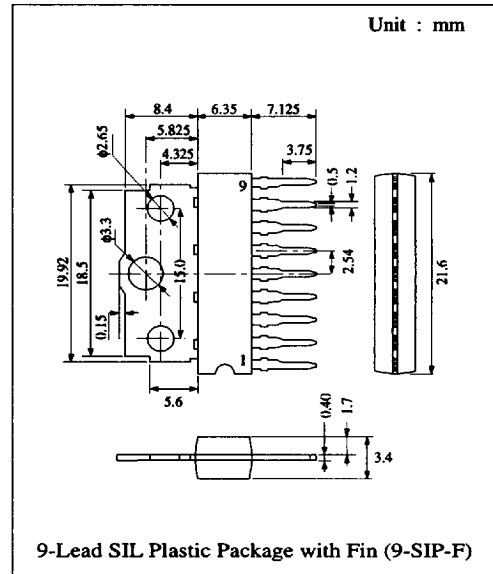
The AN7130 is a monolithic integrated circuit designed for audio high power amplifiers in consumer applications. It is also suitable for portable radios and cassette recorders.

Features

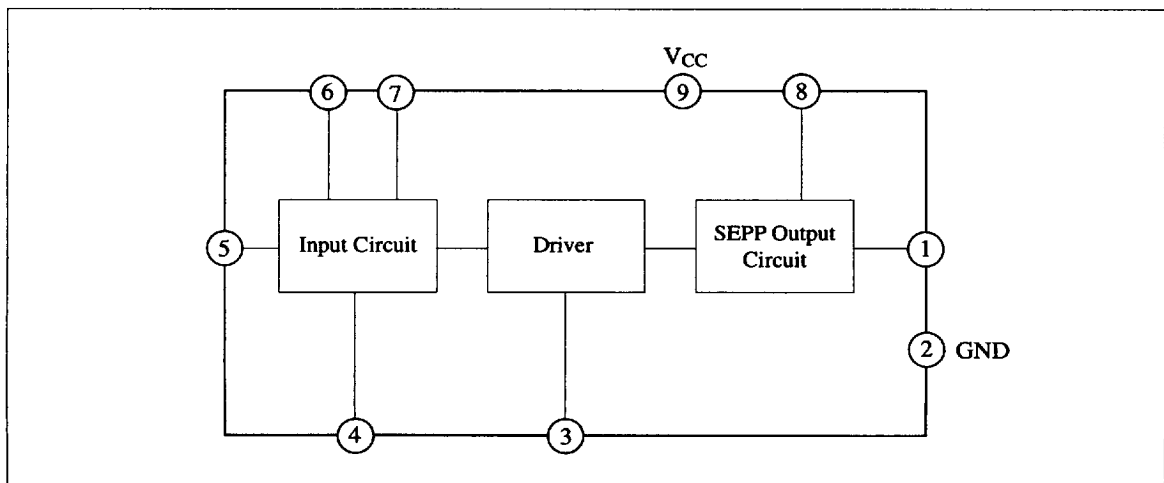
- High maximum output power: $P_O = 4.2W$ at $V_{CC} = 13.2V$, $R_L = 4\Omega$
- Low quiescent current: $I_{CQ} = 20mA$ at $V_{CC} = 13.2V$

Pin

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



Block Diagram



■ Absolute Maximum Ratings (Ta=25°C)

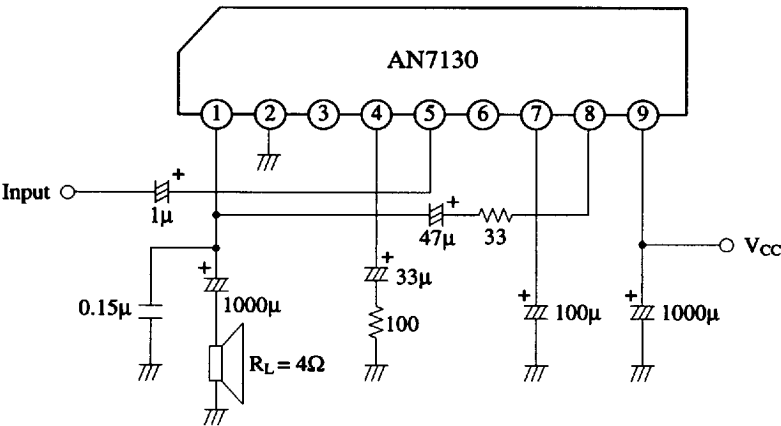
Item	Symbol	Rating	Unit
Supply Voltage	V _{CC}	18	V
Supply Current	I _{CC}	3	A
Power Dissipation	P _D	10	W
Operating Ambient Temperature	T _{opr}	-30 ~ +75	°C
Storage Temperature	T _{stg}	-40 ~ +150	°C

Operating Supply Voltage Range: V_{CC} = 4.0V ~ 18.0V

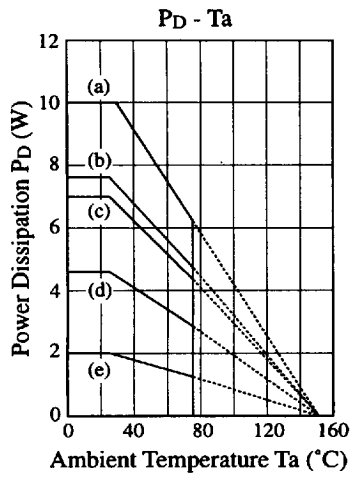
■ Electrical Characteristics (V_{CC}=13.2V, R_L=4Ω, f=1kHz, Ta=25±2°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
Quiescent Current	I _{CQ}	V _{in} = 0mV	10	20	50	mA
Voltage Gain	G _v	V _{in} = 5mV	43	46	49	dB
Output Power	P _O	THD = 10%	3.7	4.2		W
Total Harmonic Distortion	THD	V _{in} = 5mV		0.4	1.5	%
Output Noise Voltage	V _{no}	R _g = 10kΩ		0.5	1.2	mV
Input Impedance	Z _{in}			25		kΩ

■ Application Circuit



■ Characteristics Curve



- (a) Infinite heat sink
- (b) 100cm² x 3mm Al (black colour coated) or a 200cm² x 2mm Al (not lacquered) heat sink.
- (c) 100cm² x 2mm Al (not lacquered) heat sink
- (d) 25cm² x 2mm Al (not lacquered) heat sink
- (e) Without heat sink