AN7130

4.2W Audio Power Amplifier

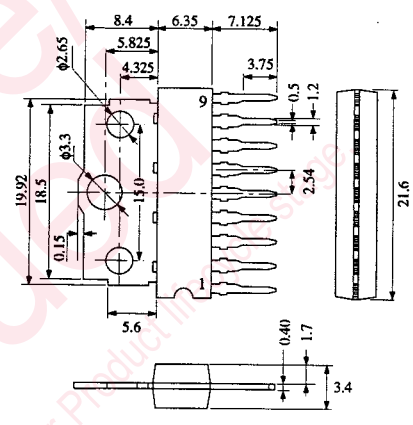
■ Description

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 = 4Ω
- Low quiescent current: I_{CQ} = 20mA at V_{CC} = 13.2V

Unit : mm

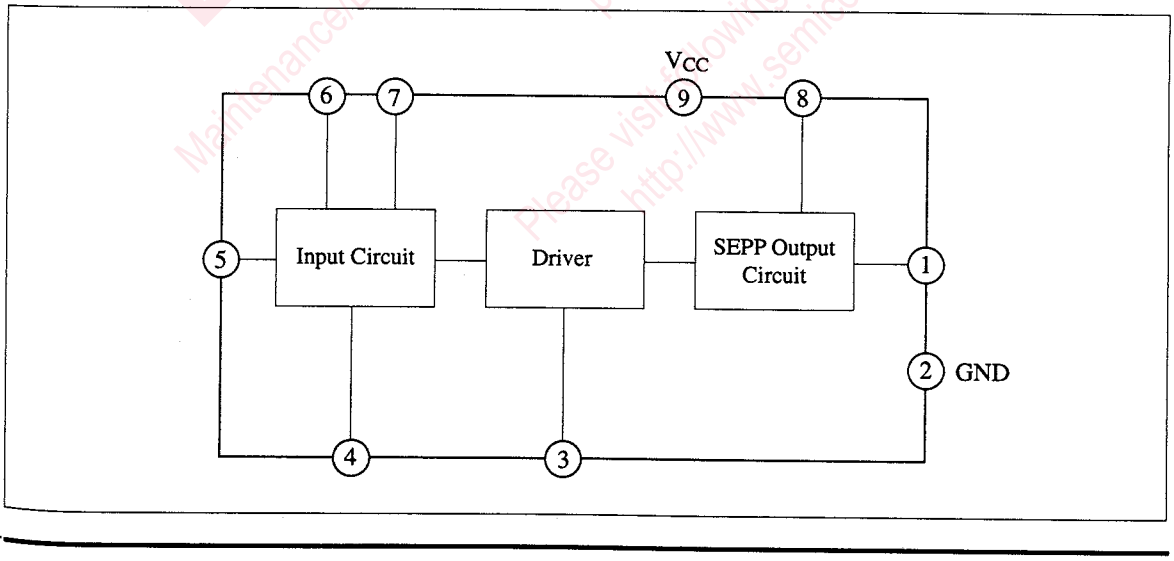


9-Lead SIL Plastic Package with Fin (9-SIP-F)

■ 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)

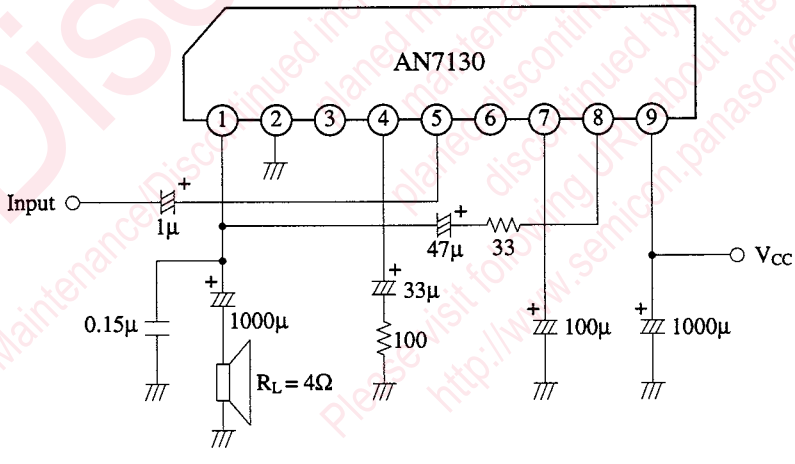
Item	Symbol	Rating	Unit
Supply Voltage	V_{CC}	18	V
Supply Current	I_{CC}	3	A
Power Dissipation	P_D	10	W
Operating Ambient Temperature	Topr	-30 ~ +75	°C
Storage Temperature	Tstg	-40 ~ +150	°C

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

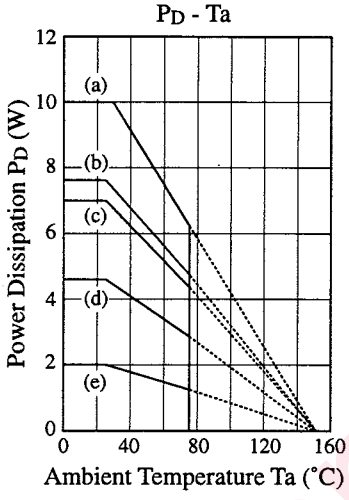
■ Electrical Characteristics (V_{CC}=13.2V, R_L=4Ω, f=1kHz, Ta=25±2°C)

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

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