

AN7141

1W Audio Power Amplifier Circuit

■ Description

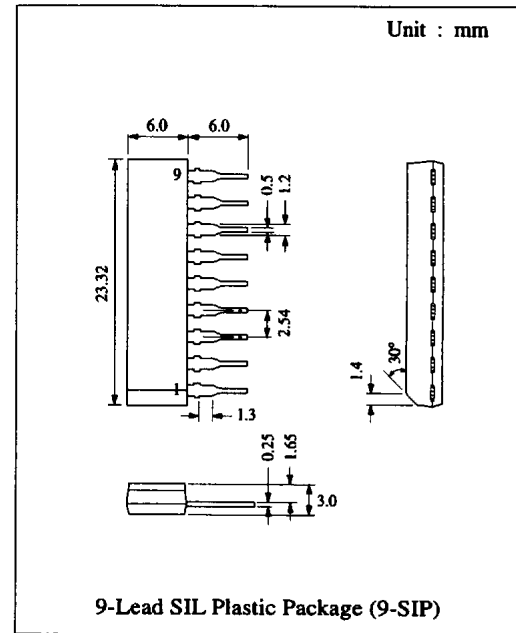
The AN7141 is a monolithic integrated circuit designed for 1W audio power amplifier suitable for radio cassette recorders.

■ Features

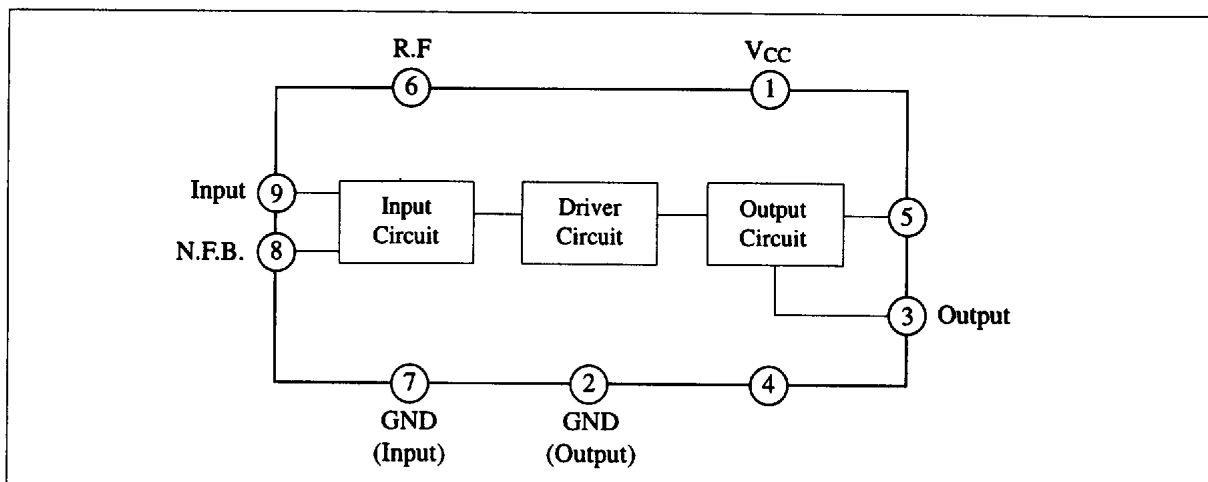
- Low quiescent current
- High operation stability
- Low radiation
- Low noise
- Fewer external components

■ Pin

Pin No.	Pin Name
1	Vcc
2	GND (Output)
3	Output
4	Suppression Crossover Distortion
5	Bootstrap
6	Ripple Filter
7	GND (Input)
8	N.F.B.
9	Input



■ Block Diagram



■ Absolute Maximum Ratings (Ta=25°C)

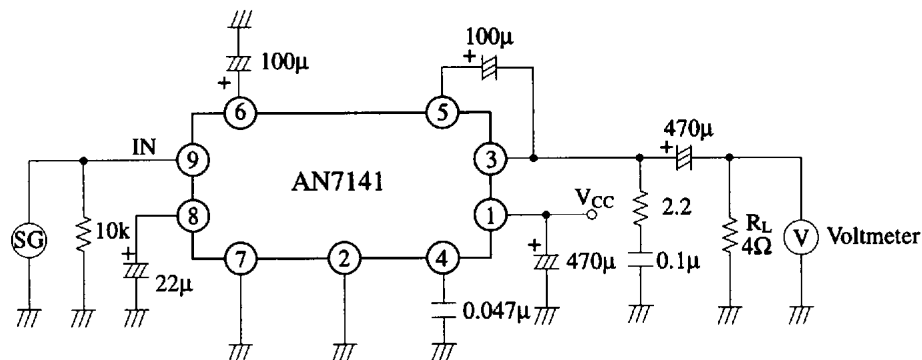
Item	Symbol	Rating	Unit
Supply Voltage	V _{CC}	15	V
Supply Current	I _{CC}	2	A
Power Dissipation	P _D	1.25	W
Operating Ambient Temperature	T _{opr}	-30 ~ +75	°C
Storage Temperature	T _{stg}	-55 ~ +150	°C

Operating Supply Voltage Range: V_{CC} = 3.9V ~ 15.0V

■ Electrical Characteristics (V_{CC}=6V, R_L=4Ω, f=1kHz, Ta=25°C)

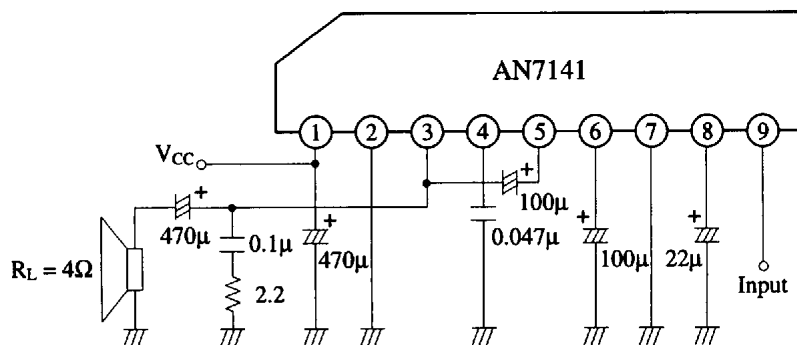
Item	Symbol	Condition	min.	typ.	max.	Unit
Quiescent Current	I _{CQ}	V _{in} = 0mV	5	8.5	12	mA
Output Noise Voltage	V _{no}	V _{in} = 0mA, R _g = 10kΩ, With filter 15~30kHz (12dB/Oct)		0.3	0.5	mV
Voltage Gain	G _V	V _O = 0.5V	41.5	43.5	45.5	dB
Total Harmonic Distortion	THD	V _O = 0.5V		0.7	1.1	%
Maxmium Output Power	P _{O(max)}	THD = 10%	0.7	0.9	1.1	W

Test Circuit

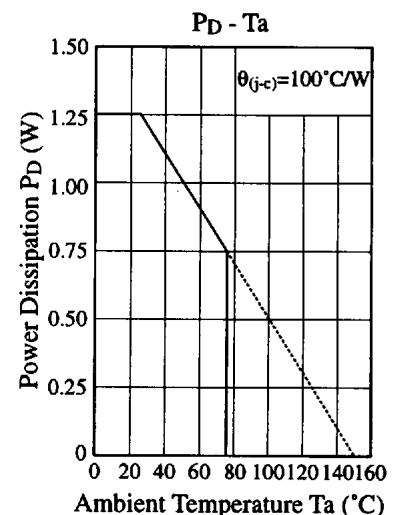
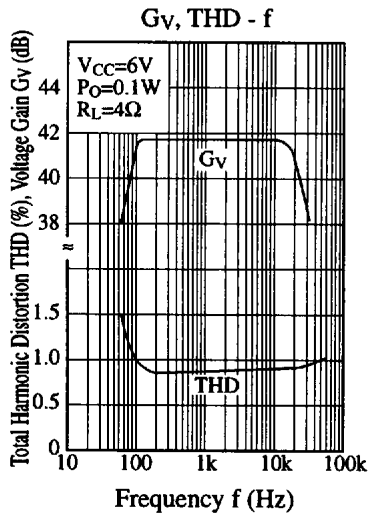
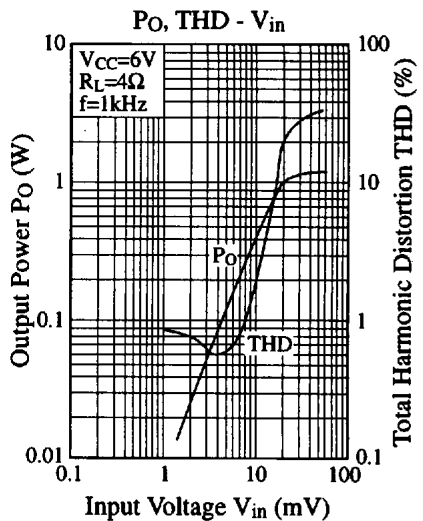
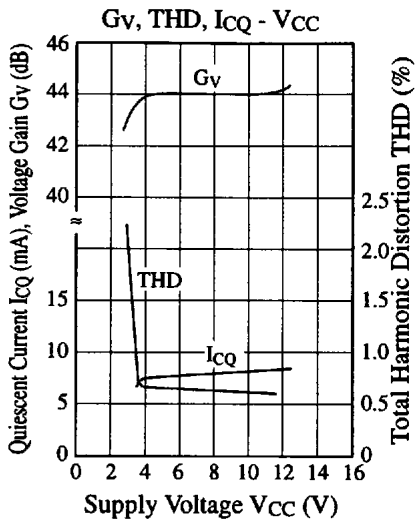
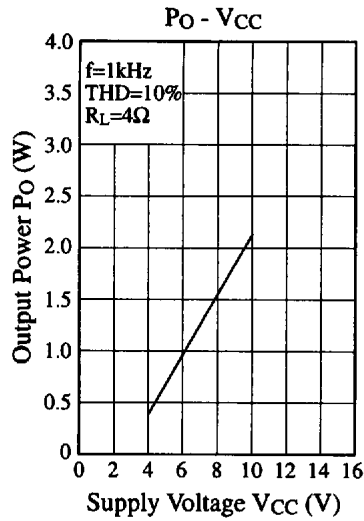


SG (Signal Generator) is separated from pin 9 at measurement of Quiescent Current and Output Noise Voltage.

■ Application Circuit



■ Characteristics Curve



■ Printed Circuit Board Layout (Scale: 1:1)

