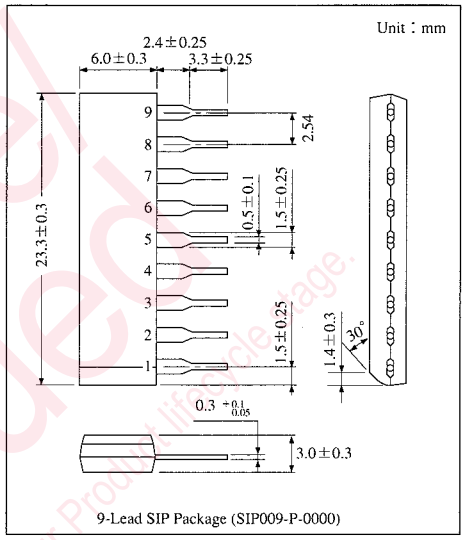
AN7141N

1.0W Audio Power Amplifier Circuit

■ Overview

The AN7141N is an integrated circuit designed for power amplifier of 1.0W (6.0V, 4Ω) output. As the quiescent circuit current is very small compared with current power amplifier, it is most suitably used for battery-operated set such as radio cassette recorder. Low noise and fewer external components have been realized. 9-pin SIL package has realized the compactness and the high-density mounting of a set.



9-Lead SIP Package (SIP009-P-0000)

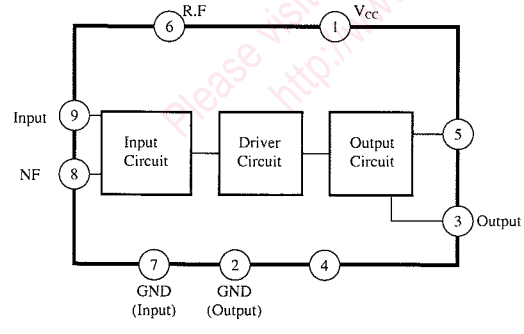
■ Features

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

■ Pin Descriptions

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

■ Block Diagram



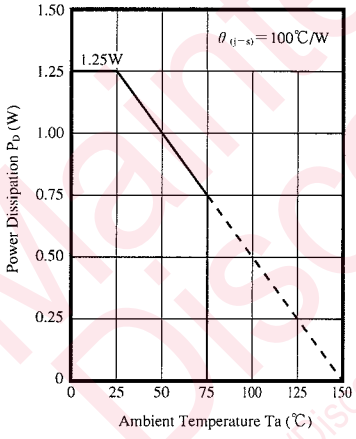
■ Absolute Maximum Ratings (Ta=25℃)

Parameter	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	℃
Storage Temperature	T_{stg}	−55～+150	℃

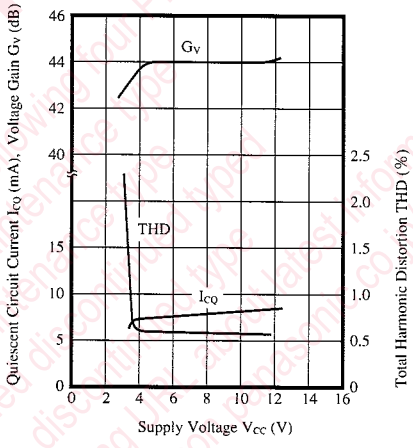
■ Electrical Characteristics (V_{CC}=6V, R_L=4Ω, f=1kHz, Ta=25℃)

Parameter	Symbol	Condition	min.	typ.	max.	Unit
Quiescent Circuit Current	I_{CQ}	V_{in}=0mV	5	8.5	12	mA
Output Noise Voltage	V_{no}	V_{in}=0mV, R_g=10kΩ With filter as 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	%
Maximum Output Power	$P_{O\,(max.)}$	THD=10%	0.7	0.9	—	W

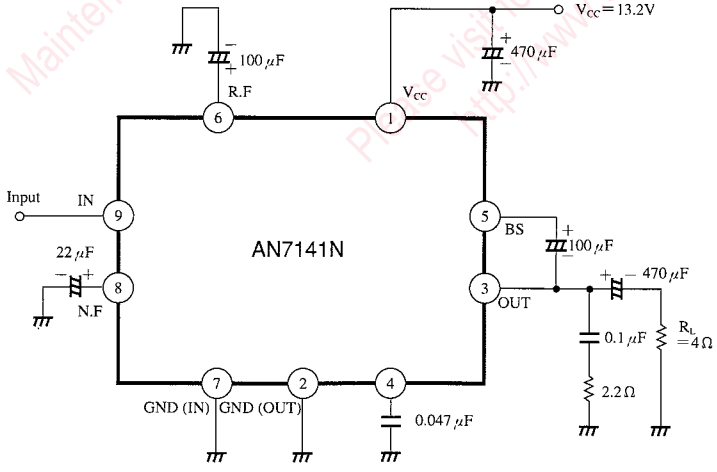
P_D—Ta



G_V, THD, I_{CQ}—V_{CC}



■ Application Circuit



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