

AN7116

1W Audio Power Amplifier Circuit

■ Description

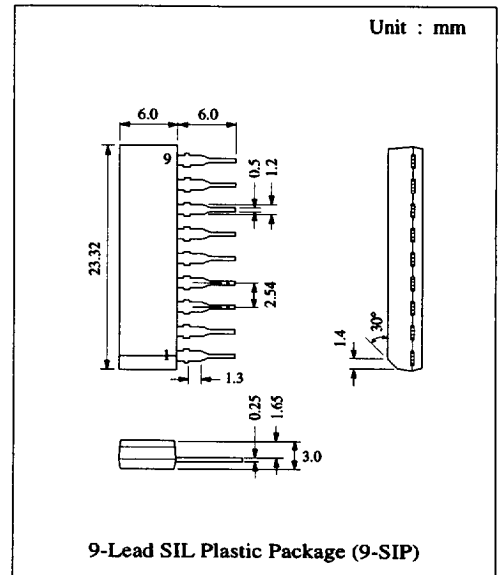
The AN7116 is a monolithic integrated circuit designed for 1W audio power amplifier.

■ Features

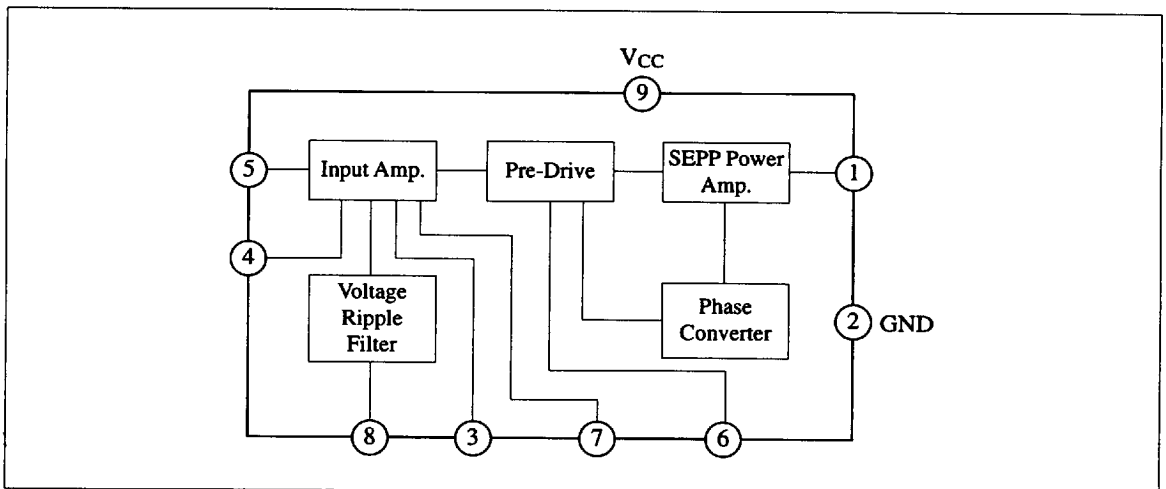
- Low quiescent current: $I_{CQ} = 13\text{mA}$ typ.
(at $V_{CC} = 6\text{V}$, $R_L = 4\Omega$)
- Low voltage operation: $V_{CC} = 3 \sim 9\text{V}$.

■ Pin

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



■ Block Diagram



■ Absolute Maximum Ratings ($T_a=25^\circ\text{C}$)

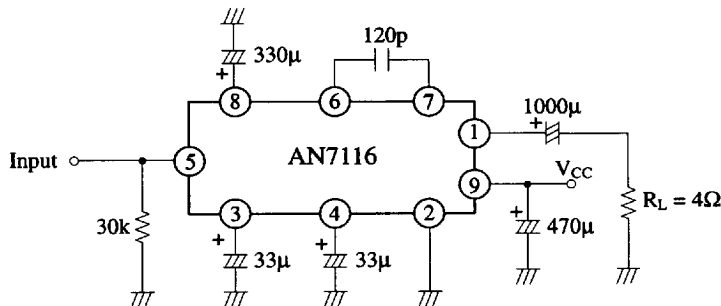
Item	Symbol	Rating	Unit
Supply Voltage	V_{CC}	9	V
Supply Current	I_{CC}	2	A
Power Dissipation	P_D	1	W
Operating Ambient Temperature	T_{opr}	-20 ~ +75	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 ~ +150	$^\circ\text{C}$

Operating Supply Voltage Range: $V_{CC} = 3.0\text{V} \sim 9.0\text{V}$

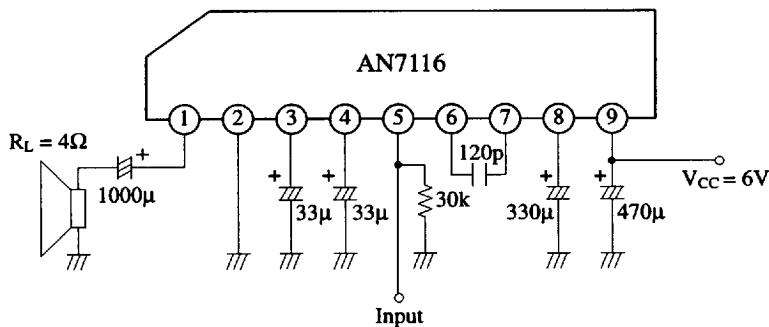
■ Electrical Characteristics ($V_{CC}=6\text{V}$, $R_L=4\Omega$, $f=1\text{kHz}$, $T_a=25\pm 2^\circ\text{C}$)

Item	Symbol	Condition	min.	typ.	max.	Unit
Quiescent Current	I_{CQ}	$V_{in} = 0\text{mV}$		13	23	mA
Voltage Gain	G_V	$V_{in} = 3\text{mV}$	48	50	52	dB
Output Power	P_O	THD = 10%	700	770		mW
Output Power	P_O	$R_L = 8\Omega$, THD = 10%		450		mW
Total Harmonic Distortion	THD	$V_{in} = 2\text{mV}$		0.6	1.5	%
Output Noise	V_{no}	$R_g = 10\text{k}\Omega$		0.7	2	mV
Input Resistance	R_{in}			30		$\text{k}\Omega$
Ripple Rejection	RR			40		dB

Test Circuit



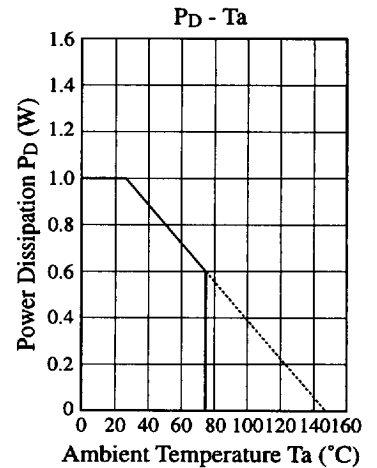
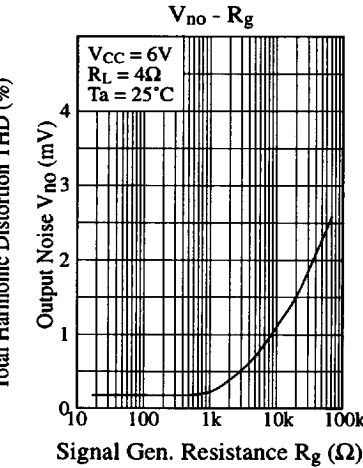
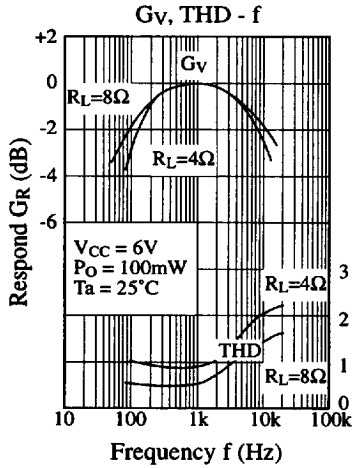
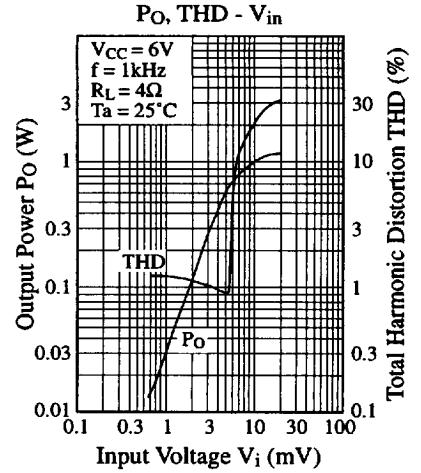
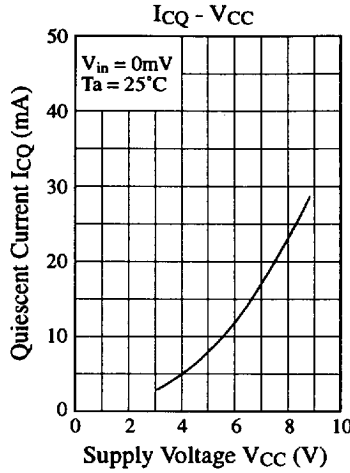
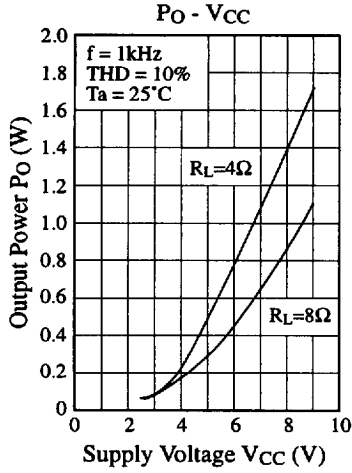
■ Application Circuit



■ 6932852 0013760 347 ■

Panasonic

■ Characteristics Curve



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

