IC's For Radio, Audio

AN7120 — 2.1W Audio Power Amplifier

Maximum Ratings (Ta=25°C):
- V_{CC} (V_{7-10}) = 18V
- $I_{CC(Peak)}$ = 2A
- P_D = 1.2W
- P_D = 2.25W*
- Topr = −20~+70℃
- Tstg = −40~+150℃

*With heat sink

Electrical Characteristics (Ta=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
(V_{CC}=9V, R_L=4Ω, f=1kHz)						
Quiescent Current	I_{CQ}	V_i=0	10	27	50	mA
Open Loop Voltage Gain	G_{VO}	V_i=1mV		62		dB
Closed Loop Voltage Gain	G_{VC}	V_i=5mV	42	45	48	dB
Output Power	P_O	THD=10%	1.7	2.1		W
		R_L=8Ω, THD=10%		1.4		W
Total Harmonic Distortion	THD	V_i=5mV		0.5	1.5	%
Output Noise Voltage	V_{no}	Rg=10kΩ		0.4	1	mV
Input Impedance	Z_i			25		kΩ

AN7130 — 4.2W Audio Power Amplifier

Maximum Ratings (Ta=25°C):
- V_{CC}(V_{9-2}) = 18V
- I_{CC} = 3A
- P_D = 10W (Ta=30℃, θ_{j-c}=12℃/W)
- Topr = −30~+75℃
- Tstg = −40~+150℃

Electrical Characteristics (Ta=25°C)

Item	Symbol	Condition	min.	typ.	max.	Unit
(V_{CC}=13.2V, R_L=4Ω, f=1kHz)						
Quiescent Current	I_{CQ}	V_i=0	10	20	50	mA
Closed Loop Voltage Gain	G_{VC}	V_i=5mV	43	46	49	dB
Output Power	P_O	THD=10%	3.7	4.2		W
Total Harmonic Distortion	THD	V_i=5mV		0.4	1.5	%
Output Noise Voltage	V_{no}	Rg=10kΩ		0.5	1.2	mV
Input Impedance	Z_i			25		kΩ

AN7131 / AN7140 — 5W Audio Power Amplifier

Maximum Ratings (Ta=25°C):
- V_{CC}(V_{9-2}) = 24V*1
- V_{CC}(V_{9-2}) = 20V*2
- I_{CC} = 4A
- P_D = 10W (Ta=30℃)
- Topr = −30~+75℃
- Tstg = −40~+150℃

*1 Without signal (AN7131 only)
*2 Operation

Electrical Characteristics (Ta=25°C)

Item	Symbol	Condition		min.	typ.	max.	Unit
(V_{CC}=13.2V, R_L=4Ω, f=1kHz)							
Quiescent Current	I_{CQ}	V_i=0	AN7131	7	20	45	mA
			AN7140	15	30	55	mA
Voltage Gain	G_V	V_i=3mV		51.5	53.5	55.5	dB
Output Power	$P_{O(max)}$	THD=10%		4.5	5		W
Total Harmonic Distortion	THD	V_i=3mV	AN7131		0.3	1	%
			AN7140		0.15	1	%
Output Noise Voltage	V_{no}	Rg=10kΩ			1.5	3	mV
Input Impedance	Z_i				30		kΩ

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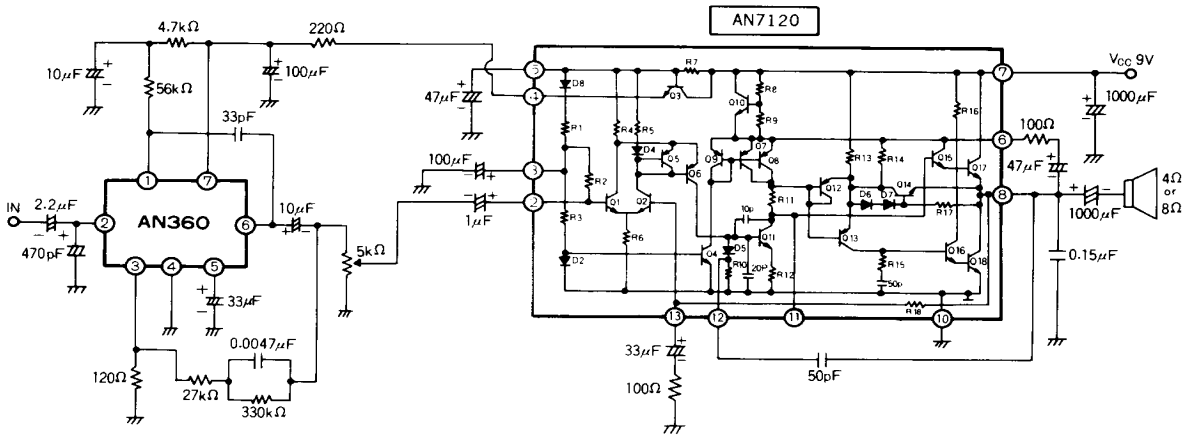
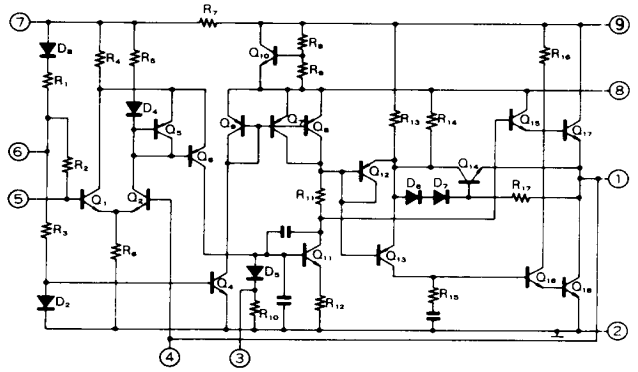
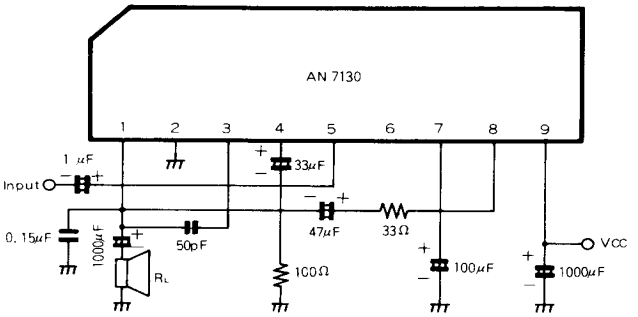
Circuit Diagram	Application Circuit

AN7120 (Package I—17,14—Lead Plastic DIL with Fin)

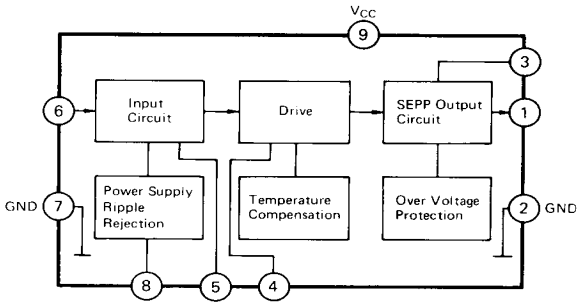


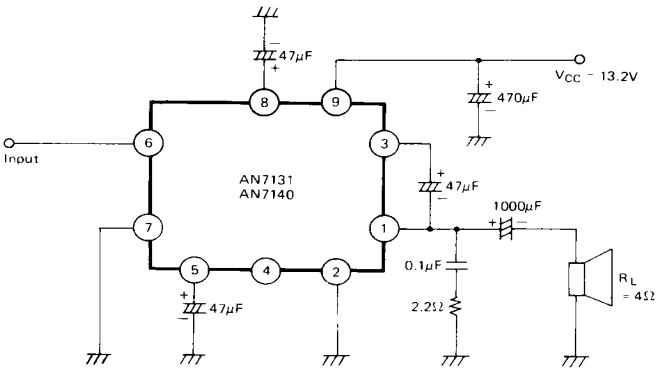
AN7130 (Package I—8, 9—Lead Plastic SIL with Fin)





AN7131, AN7140
(Package I—8, 9—Lead Plastic SIL with Fin)





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