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New Japan Radio Co.,Ltd.

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PRE & POWER AMPLIFIER WITH ALC

■ GENERAL DESCRIPTION

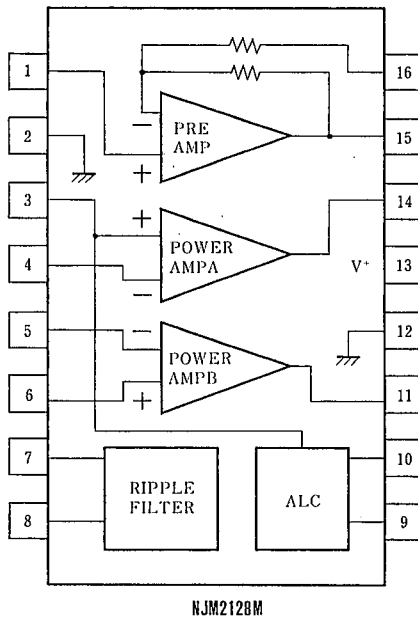
NJM2128 is a pre & power amplifier with ALC for micro and compact cassette recorders. It contains pre-amplifier, ALC circuit, power amplifiers, and ripple filter.

The pre-amplifier amplifies the signal come from magnetic head. The ALC circuit limits the input signal to optimize level in recording. The power amplifiers drive a speaker in play back and the magnetic head in recording. The ripple filter stabilizing the supply voltage to the internal pre-amplifier and an external condenser microphone.

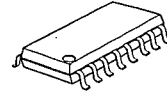
■ FEATURES

- Operating Voltage 1.8V ~ 6.0V
- Automatic Level Control (ALC) Limit Level=100mVrms typ.(f=1kHz)
- Ripple Filter R.R. (Ripple Rejection)=47dB typ.(f=200Hz, C=47 μF)
- Bipolar Technology
- Package Outline DMP16

■ PIN CONFIGURATION



■ PACKAGE OUTLINE



NJM2128M

PIN FUNCTION

1. PRE+IN
2. SGND
3. POWER+INA
4. POWER-INB
5. POWER-INB
6. POWER+INB
7. RFOUT
8. RFIN
9. ALCIN
10. TC
11. POWER OUT B
12. POWER GND
13. V+
14. POWER OUT A
15. PREOUT
16. PRE-IN

5

■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V ⁺	+7.0	V
PA Output Peak Current	I _{op}	1	A
PA Input Voltage Range	V _{IN}	±0.4	V
Power Dissipation	P _D	(DMP16) 300	mW
Operating Temperature Range	T _{opr}	-20 ~ +75	°C
Storage Temperature Range	T _{stg}	-40 ~ +125	°C

■ ELECTRICAL CHARACTERISTICS

(V⁺=3V, Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNIT
Operating Voltage	V ⁺		1.8	3.0	6.0	V
Operating Current	I _{CC}	R _L =∞	—	9	14	mA

Power Amp

Input Bias Current	I _B		—	140	—	nA
Output Offset	ΔV _O	R _L =8Ω	—	0	50	mV
Output Power (Note 1)	P _O	THD=10%, f=1kHz, V ⁺ =4V, R _L =8Ω	300	400	—	mW
	P _O	THD=10%, f=1kHz, V ⁺ =3V, R _L =4Ω	150	220	—	mW
T.H.D.	THD	V ⁺ =4V, R _L =8Ω, P _O =200mV, f=1kHz	—	0.2	—	%
Close Loop V-Gain	A _{V1}	f=1kHz	41	44	47	dB
Equivalent Input Noise Voltage	V _{N1}	R _S =10kΩ, R _L =4Ω, A curve.	—	2	—	μVrms
	V _{N2}	R _S =10kΩ, R _L =4Ω, BW=22Hz~22kHz	—	2.5	—	μVrms
Ripple Rejection	RR	f=100Hz	—	47	—	dB
Cut off Frequency	f _H	A _V =-3dB from f=1kHz, R _L =4Ω, P _O =0.1W	—	80	—	kHz

Pre Amp

Output Voltage	V _O	f=1kHz, THD=1%	0.1	0.2	—	Vrms
Voltage Gain	A _V	f=1kHz	35	38	41	dB
Output Noise Voltage	V _{NO}	R _S =3.3kΩ	—	0.1	0.4	mVrms

ALC

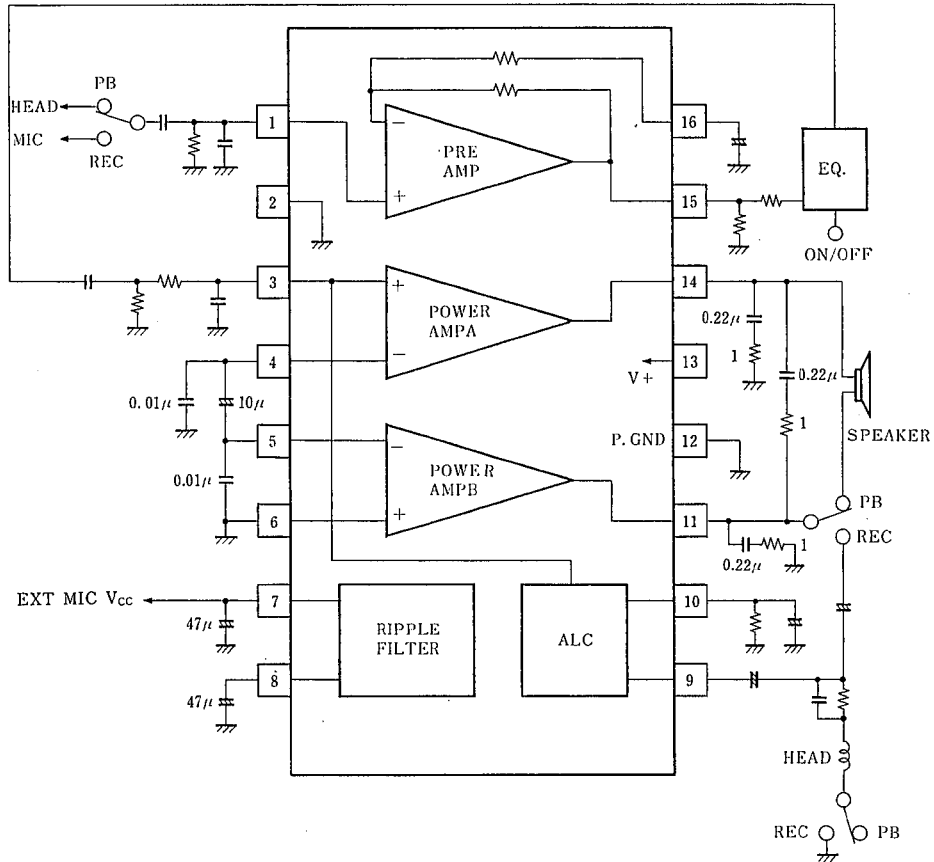
Limit Level	ALC	f=1kHz	100	200	300	mVrms
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Ripple Filter

Output Voltage	V _O	R _L =2kΩ	V ⁺ -0.24	V ⁺ -0.2	V ⁺ -0.16	V
Ripple Rejection	RR	f=200Hz, C=47μF	40	47	54	dB

(Note 1) at on PC Board

■ TYPICAL APPLICATIONS



5

MEMO

[CAUTION]

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