PRELIMINARY

PRE&HI-POWER AMPLIFIER with ALC for PORTABLE TAPE RECORDER

■ GENERAL DESCRIPTION

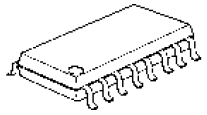
The NJM2775A is a pre&power amplifier with ALC designed for micro and compact cassette recorders.

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.

The NJM2775A improves high output power compared with the NJM2128.

It is suitable for portable tape recorder, and other portable playing back and recording recorder items.

■ PACKAGE OUTLINE

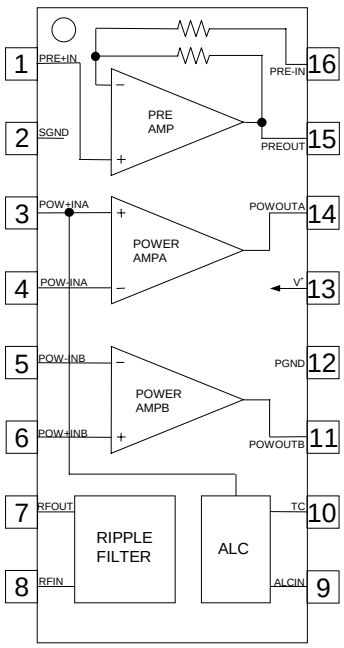


NJM2775AM

■ FEATURES

●Operating Voltage	V^+=1.8 to 6.0V
●Operating Current	9mA typ.
●Output Power	350mW typ. at V^+=3V,R_L=4Ω,THD=10%
●Automatic Level Control (ALC) Limit Level	200mVrms typ., at f=1kHz
●Ripple Filter R.R. (Ripple Rejection)	47dB typ., at f=200Hz,C=47µF
●Bipolar Technology	
●Package Outline	DMP16

■ PIN CONFIGURATION



PIN FUNCTION
1.PRE +IN
2.SGND
3.POW +1NA
4.POW -INA
5.POW -INB
6.POW +INB
7.REFOUT
8.REFIN
9.ALCIN
10.TC
11.POW OUTB
12.PGND
13. V^+
14.POW OUTA
15.PREOUT
16.PRE -IN

■ **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	Topr	-20 to +75	°C
Storage Temperature Range	Tstg	-40 to +125	°C

■ **RECOMMENDED OPERATING VOLTAGE RANGE** (Ta=25°C)

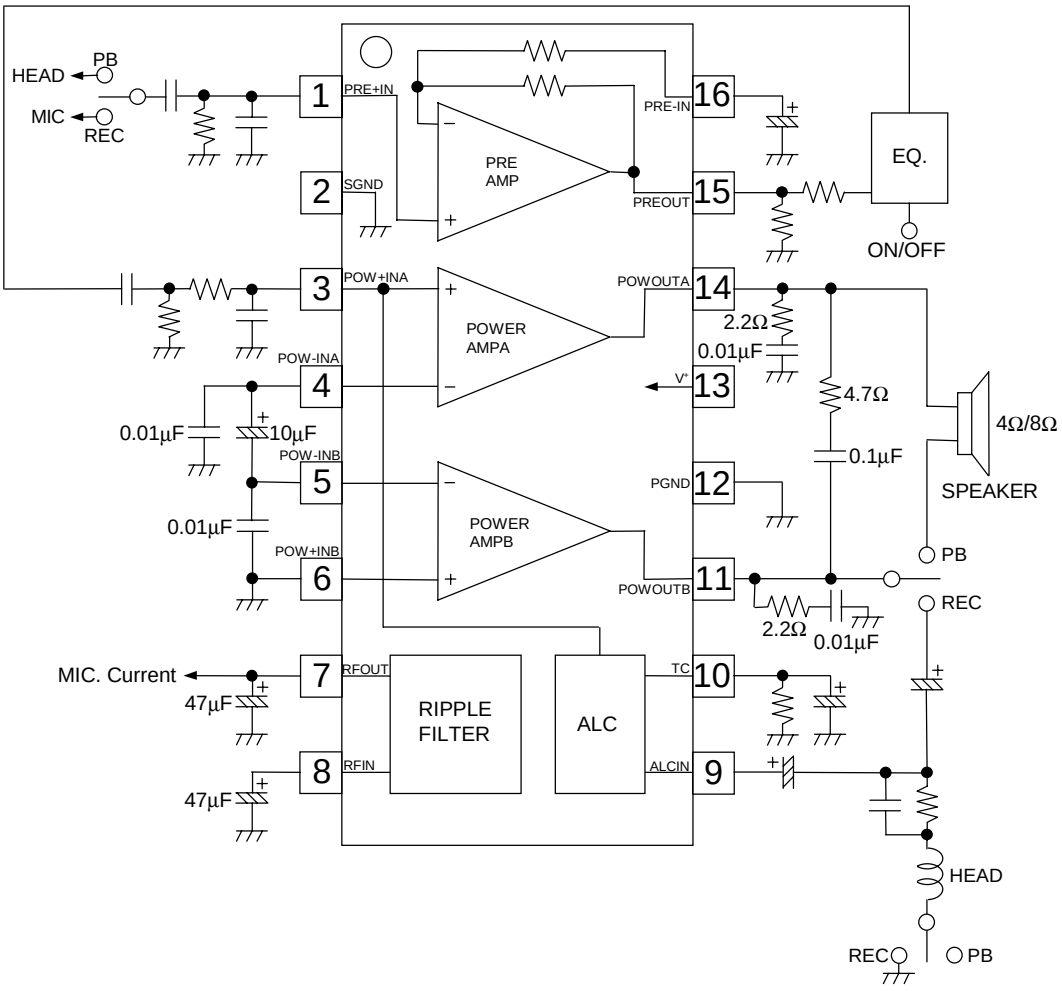
PARAMETER	MIN.	TYP	MAX.	UNIT
Operating Voltage Range	1.8	3.0	6.0	V

■ **ELECTORICAL CHARACTERISTICS** (V^+=3.0V,Ta=25°C)

PARAMETER	SYMBOL	RATINGS	MIN.	TYP	MAX.	UNIT
Operating Voltage	I_{CC}	R_L=∞	-	9	14	mA
Power Amp						
Input Bias Current	I_B		-	140	-	nA
Out Put Offset	ΔVo	R_L=8Ω	-	0	50	mV
Output Power	P_O1	THD=10%,f=1kHz,V^+=4V,R_L=8Ω	400	500	-	mW
(Note 1)	P_O2	THD=10%,f=1kHz,V^+=3V,R_L=4Ω	250	300	-	
T.H.D.	THD	V^+=4V,R_L=8Ω,Po=200mW,f=1kHz	-	0.2	-	%
Close Loop V-Gain	Av1	f=1kHz	41	44	47	dB
Equivalent Input	V_{NI}1	R_S=10kΩ,R_L=4Ω,A-Weighted	-	2.0	-	μVrms
Noise Voltage	V_{NI}2	R_S=10kΩ,R_L=4Ω,BW=22Hz to 22kHz	-	2.5	-	μVrms
Ripple Rejection	RR1	f=100Hz	-	47	-	dB
Cut off Frequency	F_H	R_L=4Ω,Po=0.1W, Av=-3dB from f=1kHz	-	80	-	kHz
Pre Amp						
Output Voltage	Vo1	f=1kHz,THD=1%	0.1	0.2	-	Vrms
Voltage Gain	Av	f=1kHz	35	38	41	dB
Output Noise Voltage	V_{NO}	Rs=3.3kΩ	-	0.1	0.4	mVrms
ALC						
Limit Level	ALC	f=1kHz	100	200	300	mVrms
Ripple Filter						
Output Voltage	V_O2	R_L=2kΩ	V^+-0.24	V^+-0.2	V^+-0.16	V
Ripple Rejection	RR2	f=200Hz,C=47μF	40	47	54	dB

(Note 1) at on PC Board

■ TYPICAL APPLICATIONS



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