Designated client product

This product will be discontinued its production in the near term.
And it is provided for customers currently in use only, with a time limit.
It can not be available for your new project. Please select other new or existing products.
For more information, please contact our sales office in your region.

New Japan Radio Co.,Ltd.

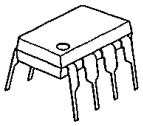
www.njr.com

LOW VOLTAGE POWER AMPLIFIER

■ GENERAL DESCRIPTION

NJM2070 is a power amplification monolithic IC of wide Operating voltage range. It is applied for audio power amplifier in portable radio and handy cassette player.

■ PACKAGE OUTLINE



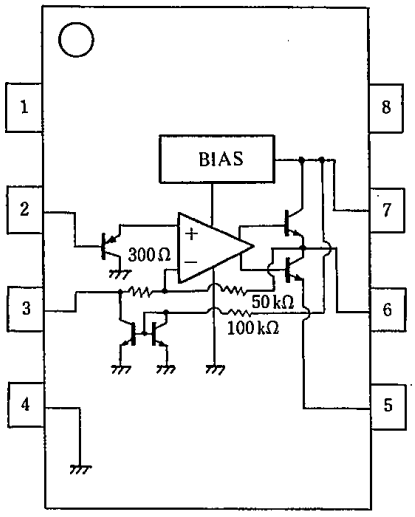
NJM2070D

NJM2070M

■ FEATURES

- Operating Voltage (1.8V～15V)
- Low Operating Current 4mA typ : V^+=6V)
- Package Outline DIP8, DMP8
- Bipolar Technology

■ PIN CONFIGURATION



NJM2070D
NJM2070M

PIN FUNCTION
1. NC
2. +INPUT
3. −INPUT
4. GND
5. GND
6. OUTPUT
7. V^+
8. NC

5

■ ABSOLUTE MAXIMUM RATINGS

(Ta=25℃)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V^+	15	V
Output Peak Current	I_{OP}	1	A
Power Dissipation	P_D	(DIP8) 700 (DMP8) 500(note)	mW
Input Voltage Range	V_{IN}	±0.4	V
Operating Temperature Range	T_{opr}	-40~+85	℃
Storage Temperature Range	T_{stg}	-40~+125	℃

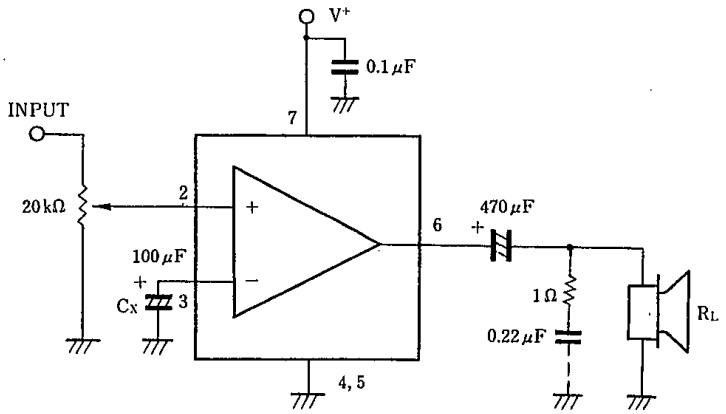
(note) At on PC board

■ ELECTRICAL CHARACTERISTICS

(V^+=6V, Ta=25℃)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Operating Voltage	V^+		1.8	—	15	V
Output Voltage	V_O		—	2.7	—	V
Operating Current	I_{CC}	$R_L=\infty$	—	4	7	mA
Input Bias Current	I_{IB}		—	200	—	nA
Output Power		THD=10%, f=1kHz				
	P_O	V^+=6V, R_L=4Ω	0.5	0.6	—	W
	P_O	V^+=4.5V, R_L=4Ω	—	0.32	—	W
	P_O	V^+=3V, R_L=4Ω	—	120	—	mW
	P_O	V^+=2V, R_L=4Ω	—	30	—	mW
		THD=1%, f=1kHz				
	P_O	V^+=6V, R_L=4Ω	—	500	—	mW
	P_O	V^+=4.5V, R_L=4Ω	—	250	—	mW
Total Harmonic Distortion	THD	P_O=0.4W, R_L=4Ω, f=1kHz	—	0.25	—	%
Voltage Gain	A_V	f=1kHz	41	44	47	dB
Input Impedance	Z_{IN}	f=1kHz	100	—	—	kΩ
Equivalent Input Noise Voltage	V_{NI1}	R_S=10kΩ, A Curve	—	2.5	—	μV
	V_{NI2}	R_S=10kΩ, B=22Hz~22kHz	—	3	—	μV
Ripple Rejection	RR	f=100Hz, C_X=100μF	24	30	—	dB
Cut Off Frequency	f_H	A_V=−3dB from f=1kHz R=8Ω, P_O=250mW	—	200	—	kHz

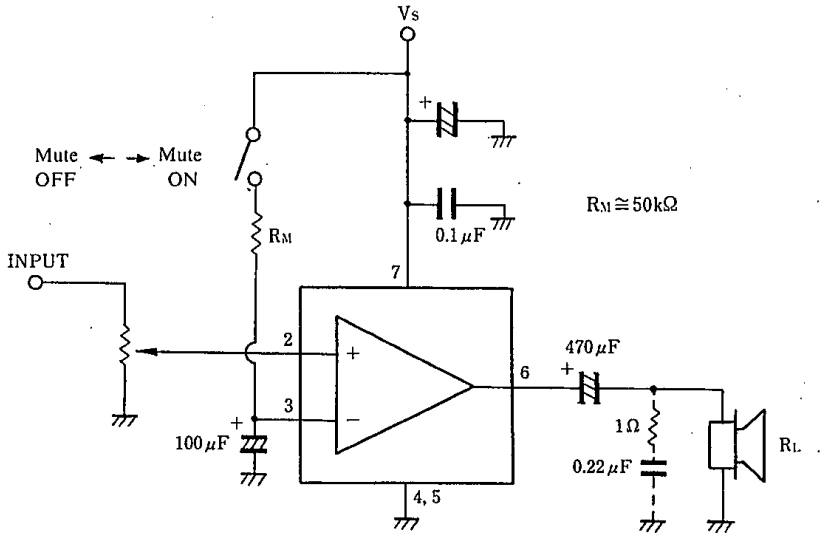
■ TYPICAL APPLICATION AND TEST CIRCUIT



■ OSCILLATION PREVENTION

Put in series a 1Ω resistor and a 0.22 μF capacitor on parallel to load, if the load is speaker. Recommend putting in parallel between pin 4 and pin 7, 0.1 μF and more than 100 μF capacitors with good high frequency characteristics near to the ground and supply voltage pins on parallel.

■ MUTING CIRCUIT



MEMO