

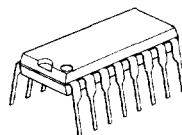
NJM2066

NJM2066 is dual headphone driver with low quiescent current, small number of external parts and excellent ripple rejection for motor influence. The NJM2066 includes ripple filter, muting circuit, power off circuit and operating supply voltage is wide as 1.8 ~ 5V.

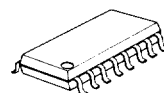
■ Package Outline

■ Features

- Low Quiescent Current $I_{CC} = 7\text{mA}$ Typ. at $V^+ = 3\text{V}$
- Internal Ripple Filter, Muting Circuit, Power Off Circuit
- Small Parts Count
- 16 Pin Package Dual-in-line and Miniflat Type



NJM2066D



NJM2066M

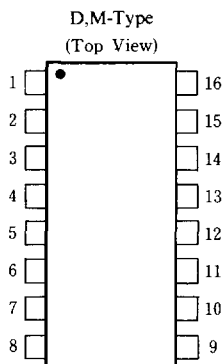
■ Absolute Maximum Ratings (Ta=25°C)

Supply Voltage	V^+	7V
Output Current	I_O	160mA/ch
Filter Output Current	I_{OF}	10mA
Power Dissipation	P_D (D-Type)	700mW
	(M-Type)	700mW (note)
Operating Temperature Range	T_{opr}	-20~75°C
Storage Temperature Range	T_{stg}	-40~125°C

(note) At on PC board.

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■ Connection Diagram



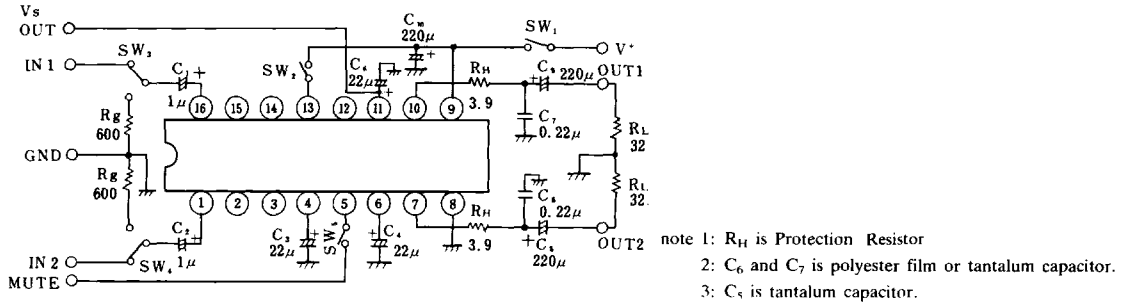
PIN FUNCTION

1. INPUT 2	9. V^+
2. NF 2	10. OUT 1
3. V_B 2	11. V_R
4. BYPASS 2	12. BASE
5. MUTE	13. $PW_{ON/OFF}$
6. BYPASS 1	14. V_B 1
7. OUT 2	15. NF 1
8. GND	16. INPUT 1

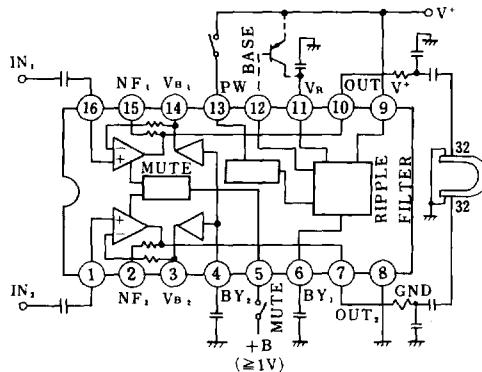
■ **Electrical Characteristics** ($T_a=25^\circ\text{C}$, $V^+=3\text{V}$, $R_e=600\Omega$, $f=1\text{kHz}$, $R_H=3.9\Omega$, $R_l=32\Omega$)

Parameter	Symbol	Test Condition	Min.	Typ	Max	Unit
Quiescent Current at No Signal	I_{CC1}	$V_{IN}=0$	—	7	12	mA
Quiescent Current at No Signal	I_{CC2}	$V_{IN}=0$, SW_2 : OFF	—	1	10	μA
Output Power	P_{O1}	THD=10%	20	30	—	mW
Output Power	P_{O2}	$R_L=16\Omega$, THD=10%	—	37	—	mW
Total Harmonic Distortion	THD	$P_O=10\text{mW/ch}$	—	0.2	1.0	%
Voltage Gain	A_V	$V_{IN}=-40\text{dBm}$	28.5	30.5	32.5	dB
Channel Balance	ΔA_V	$V_{IN}=-40\text{dBm}$	—	0	± 1	dB
Crosstalk	CT	$V_{OUT}=0\text{dBm}$, $CH_1 \rightarrow CH_2$	45	65	—	dB
Headphone Amp. Ripple Rejection	RR_1	$f=1\text{kHz}$, $V_{IN}=-20\text{dBm}$	30	45	—	dB
Ripple Filter Ripple Rejection	RR_2	$f=100\text{Hz}$, $V_{IN}=-20\text{dBm}$	—	40	—	dB
Output Noise Voltage	V_{NO}	$BW=20\text{Hz}\sim 20\text{kHz}$	—	0.06	0.2	mVrms
Input Resistance	R_{IN}	$f=1\text{kHz}$	15	20	25	k Ω
Ripple Filter Output Voltage	V_{S1}	$V^+=2\text{V}$, $I_r=10\text{mA}$	1.45	1.6	—	V
Ripple Filter Output Voltage	V_{S2}	$V^+=3\text{V}$, $I_r=10\text{mA}$	2.1	2.3	2.5	V
Ripple Filter Output Voltage	V_{S3}	$V^+=4.5\text{V}$, $I_r=10\text{mA}$	—	3.4	—	V
Muting Attenuation	ATT	$V_M=3\text{V}$ (0dB=240mVrms)	60	80	—	dB
Muting Input Voltage	V_M	ATT $\geq 50\text{dB}$ (0dB=240mVrms)	—	0.7	1.0	V
Muting Input Current	I_M	ATT $\geq 50\text{dB}$ (0dB=240mVrms)	—	35	—	μA
Ripple Filter Base Current	I_B		—	0.05	—	mA

■ **Test Circuit**



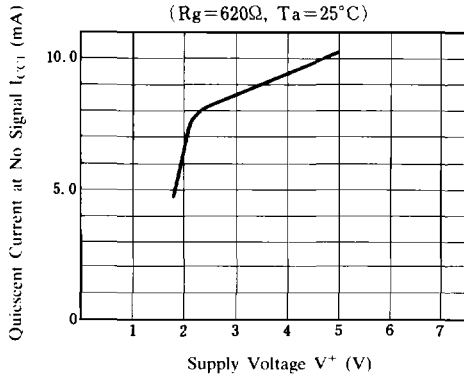
■ **Application Circuit**



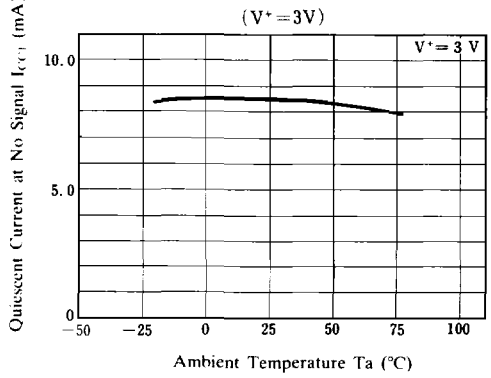
note: Mount a PNP transistor externally as shown by a dotted line, if a ripple filter output current of higher than 10mA is required.

■ Typical Characteristics

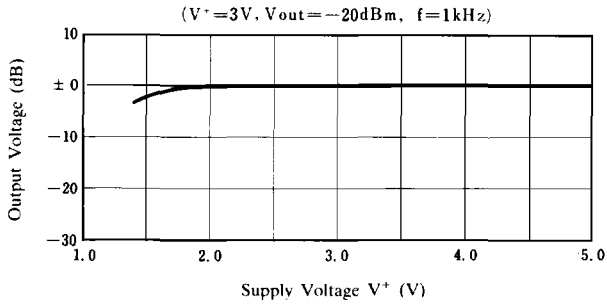
Quiescent Current at No Signal vs. Supply Voltage



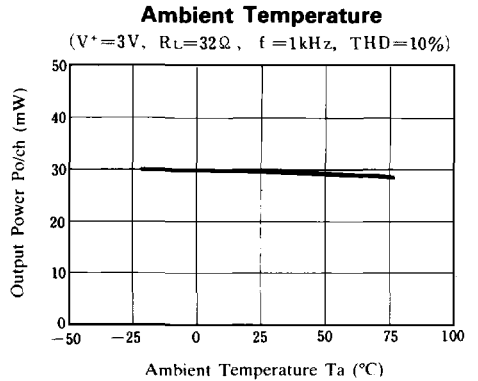
Quiescent Current at No Signal vs. Ambient Temperature



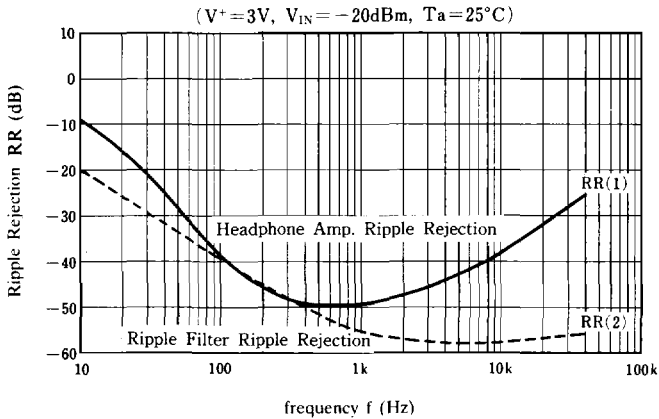
Output Voltage vs. Supply Voltage



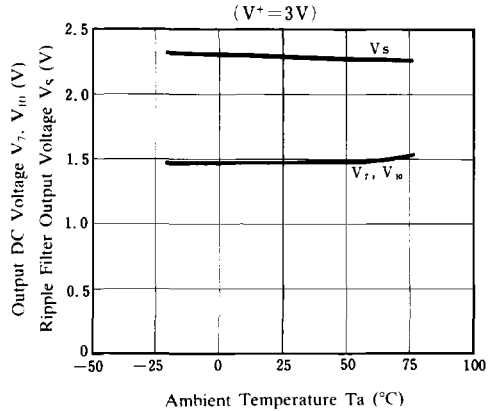
Power Output vs. Ambient Temperature



Ripple Rejection vs. frequency

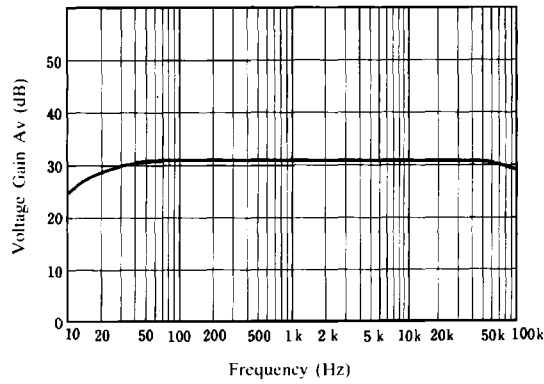


Output DC Voltage vs. Temperature



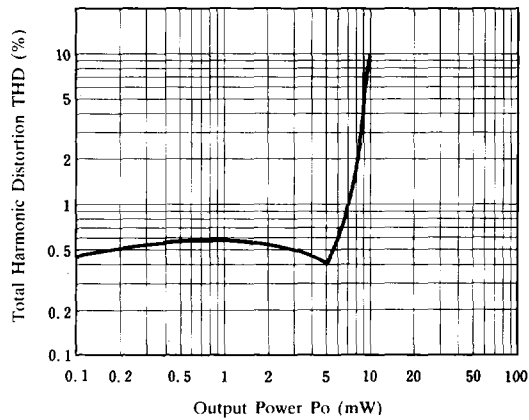
Voltage Gain vs. Frequency

($V^+ = 3V$, $V_{IN} = -40dBm$, $T_a = 25^\circ C$)



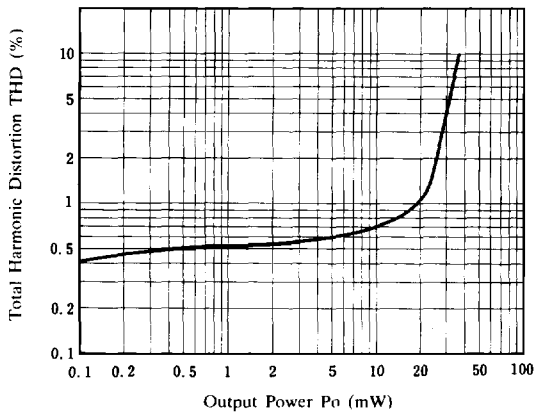
Total Harmonic Distortion vs. Output Power

($V^+ = 1.8V$, $R_L = 32\Omega$, $f = 1kHz$, $T_a = 25^\circ C$)



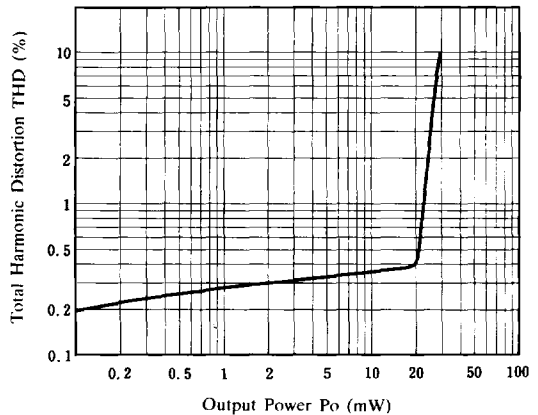
Total Harmonic Distortion vs. Output Power

($V^+ = 3V$, $R_L = 16\Omega$, $f = 1kHz$, $T_a = 25^\circ C$)



Total Harmonic Distortion vs. Output Power

($V^+ = 3V$, $R_L = 32\Omega$, $f = 1kHz$, $T_a = 25^\circ C$)



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