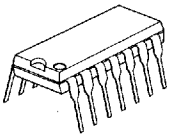
NJM4741

The NJM4741 consists of four independent high-gain operational amplifiers that are designed for high slew rate, wide band, good noise characteristics.

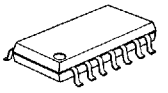
■ Features

Wide Band	3.5MHz (typ.)
High Slew Rate	1.6V/μs (typ.)
Low Noise	9nV/√Hz (typ.)
Internally Compensated	
No Cross-over Distortion	

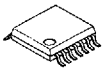
■ Package Outline



NJM4741D



NJM4741M



NJM4741V

■ Absolute Maximum Ratings (Ta=25°C)

Supply Voltage	V^+/V^-	±20V
Differential Input Voltage	V_{ID}	±30V
Input Voltage (note)	V_I	±15V
Power Dissipation	P_D (D-Type)	500mW
	(M, V-Type)	300mW
Operating Temperature Range	T_{opr}	−20~+75°C
Storage Temperature Range	T_{stg}	−40~+125°C

(note) For Supply Voltage less than ±15V, the absolute maximum input voltage is equal to the supply voltage.

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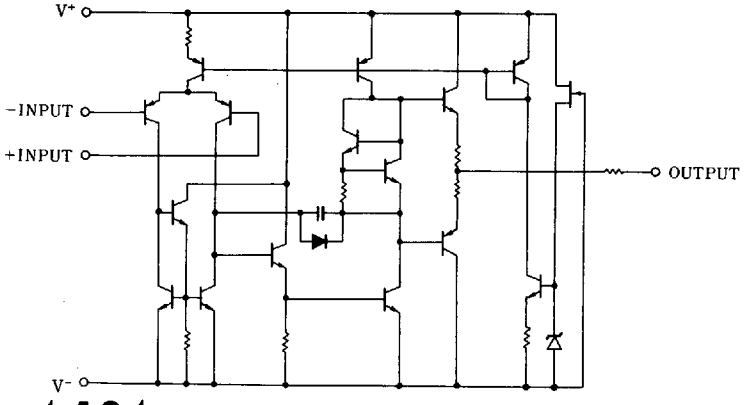
■ Electrical Characteristics (Ta25°C, V⁺/-=±15V)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input Offset Voltage	V_{IO}	$R_S \leqq 100k\Omega$	—	1.0	5.0	mV
Input Offset Current	I_{IO}		—	30	50	nA
Input Bias Current	I_B		—	100	300	nA
Large Signal Voltage Gain	A_V	$R_L \geqq 2k\Omega$, $V_O = \pm 10V$	88	94	—	dB
Supply Current	I_{CC}		—	—	7	mA
Common Mode Rejection Ratio	CMR		80	120	—	dB
Supply Voltage Rejection Ratio	SVR		80	120	—	dB
Maximum Output Voltage 1	V_{OM1}	$R_L \geqq 10k\Omega$	±12	±13.7	—	V
Maximum Output Voltage 2	V_{OM2}	$R_L \geqq 2k\Omega$	±10	±12.5	—	V
Input Common Mode Voltage Range	V_{ICM}		±12	±14	—	V
Slew Rate	SR	$A_V = 1$	—	1.6	—	V/μs
Equivalent Input Noise Voltage	en	f=1kHz	—	9	—	nA/√Hz
Channel Separation	CS	f=10kHz, Input Referred	—	108	—	dB

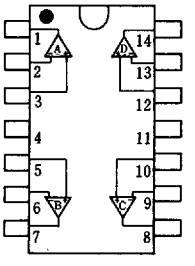
(note):

The circuit when operating low level input, and in case when there's extremely difference of each channel inside power dissipation, that the mutual interference might be caused by temperature fluctuation grade.

■ Equivalent Circuit (¼ Shown)



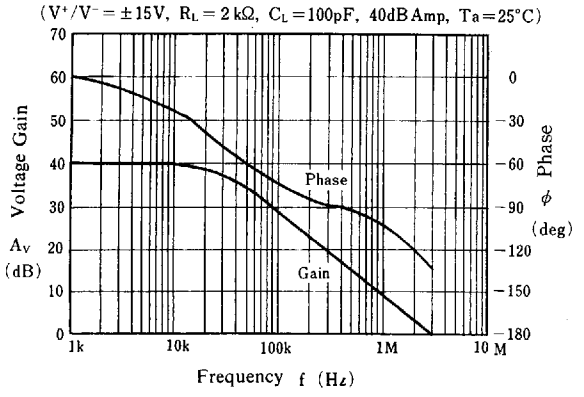
■ Connection Diagram



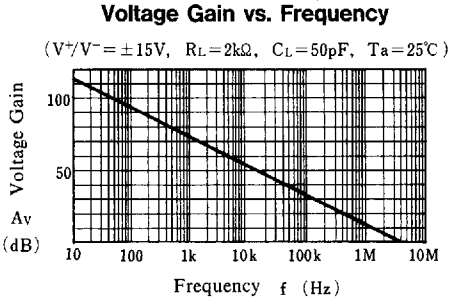
PIN FUNCTION
1. A OUTPUT
2. A−INPUT
3. A+INPUT
4. V⁺
5. B+INPUT
6. B−INPUT
7. B OUTPUT
8. C OUTPUT
9. C−INPUT
10. C+INPUT
11. V⁻
12. D+INPUT
13. D−INPUT
14. D OUTPUT

■ Typical Characteristics

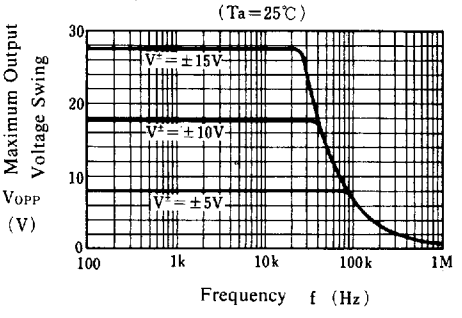
Voltage Gain, Phase vs. Frequency



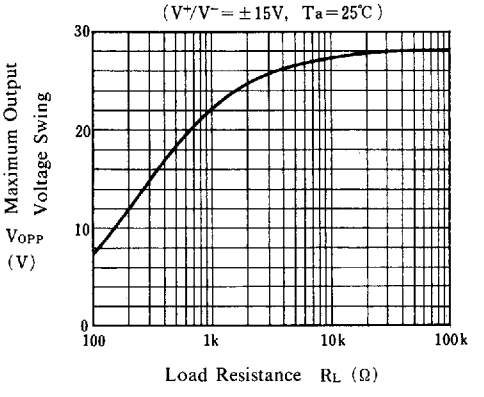
Voltage Gain vs. Frequency



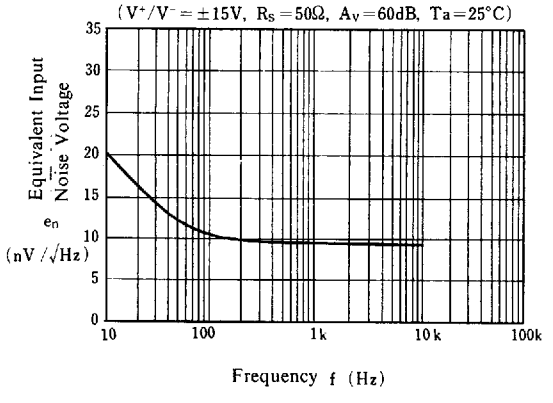
Maximum Output Voltage Swing vs. Frequency



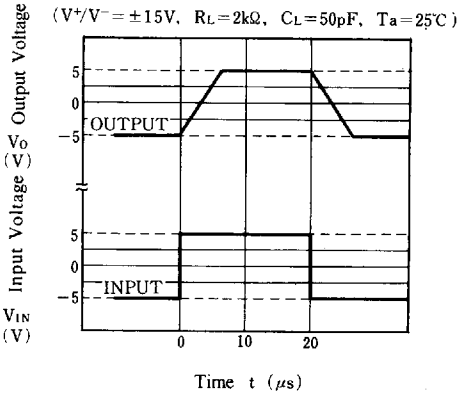
Maximum Output Voltage Swing vs. Load Resistance



Equivalent Input Noise Voltage vs. Frequency

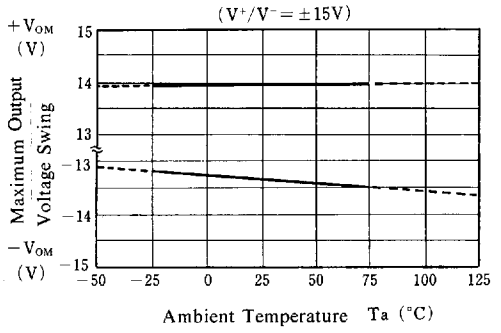


Pulse Response

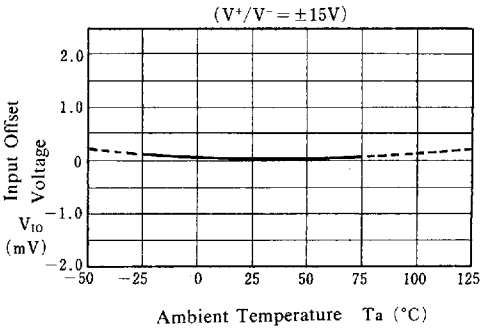


■ Typical Characteristics

Maximum Outout Voltage Swing vs. Temperature



Input Offset Voltage vs. Temperature



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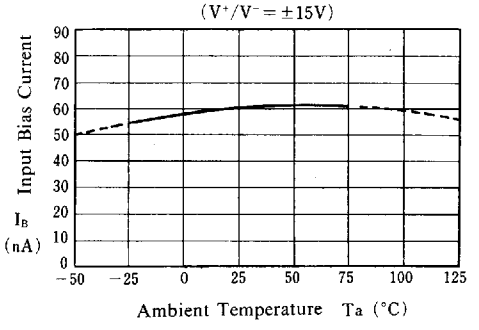
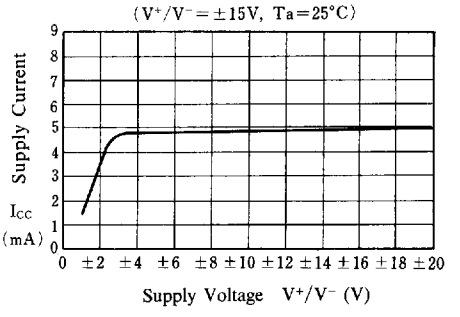
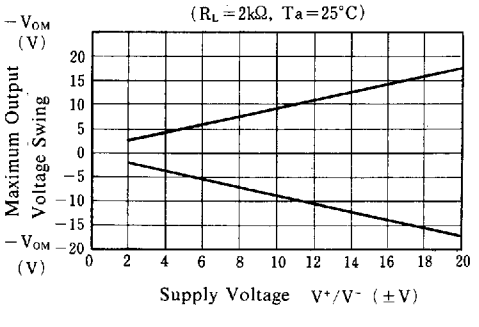
Input Bias Current vs. Temperature



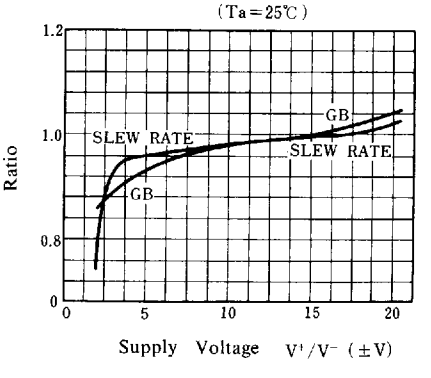
Supply Current vs. Supply Voltage



Maximum Output Voltage Swing vs. Supply Voltage



Slew Rate, Unity Gain Bandwidth vs. Supply Voltage



■ Typicai Characteristics

Supply Current vs. Temperature

($V^+/V^-=\pm15V$, $R_L=2k\Omega$)