

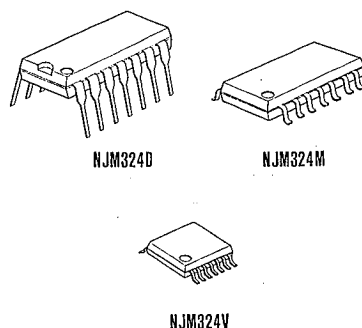
查询"NJM324D"供应商 **SINGLE-SUPPLY QUAD OPERATIONAL AMPLIFIER**

■ GENERAL DESCRIPTION

The NJM324 consists of four independent, high gain, internally frequency compensated operational amplifiers which were designed specifically to operate from a single power supply over a wide range of voltages. Operation from split power supplies is also possible and the low power supply current drain is independent of the magnitude of the power supply voltage.

Application areas include transducer amplifiers, DC gain blocks and all the conventional op amp circuits which now can be more easily implemented in single power supply systems. For example, the NJM324 can be directly operated off of the standard +5V_{DC} power supply voltage which is used in digital systems and will easily provide the required interface electronics without requiring the additional ±15V_{DC} power supplies.

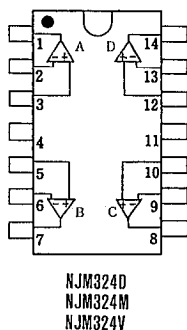
■ PACKAGE OUTLINE



■ FEATURES

- Single Supply Operation
- Operating Voltage (+3V ~ +32V)
- Low Operating Current (0.7mA typ.)
- Package Outline (DIP14, DMP14, SSOP14)
- Bipolar Technology

■ PIN CONFIGURATION

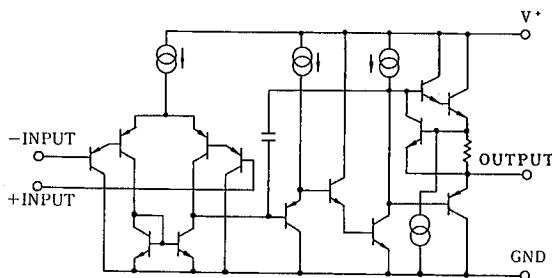


PIN FUNCTION

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

■ EQUIVALENT CIRCUIT

(1/4 Shown)



查询"NJM324D"供应商

■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V ⁺ /V ⁻	32(or±16)	V
Differential Input Voltage	V _{ID}	32	V
Input Voltage	V _{ic}	-0.3~+32	V
Power Dissipation	P _D	(DIP14) 570	mW
		(DIM14) 300	mW
		(SSOP14) 300	mW
Operating Temperature Range	T _{opr}	-40~+85	°C
Storage Temperature Range	T _{stg}	-40~+125	°C

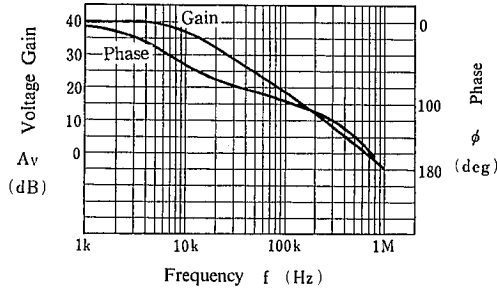
■ ELECTRICAL CHARACTERISTICS

(Ta=25°C, V⁺=5V)

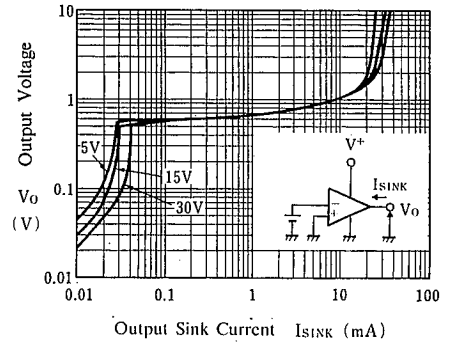
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	V _{IO}	R _S =0Ω, V ⁺ =5~30V _{DC}	—	2	7	mV
Input Offset Current	I _{IO}		—	5	50	nA
Input Bias Current	I _B		—	20	250	nA
Input Common Mode Voltage Range	V _{ICM}		0~3.5	—	—	V
Operating Current	I _{CC}	R _L =∞	—	0.7	1.2	mA
Large-signal Voltage Gain	A _V	R _L ≥2kΩ, V ⁺ =15V	88	100	—	dB
Maximum Peak-to-peak Output Voltage Swing	V _{OPP}	R _L =2kΩ	3.5	—	—	V
Common Mode Rejection Ratio	CMR	DC	65	70	—	dB
Supply Voltage Rejection Ratio	SVR	DC	65	100	—	dB
Output Source Current	I _{SOURCE}	V _{IN} ⁺ /V _{IN} ⁻ =1/0V, V ⁺ =15V	20	40	—	mA
Output Sink Current 1	I _{SINK1}	V _{IN} ⁺ /V _{IN} ⁻ =0/1V, V ⁺ =15V	10	20	—	mA
Output Sink Current 2	I _{SINK2}	V _{IN} ⁺ /V _{IN} ⁻ =0/1V, V _O =200mV	12	50	—	μA
Channel Separation	CS	f=1kHz~20kHz, Input Referred	—	120	—	dB

■ TYPICAL CHARACTERISTICS

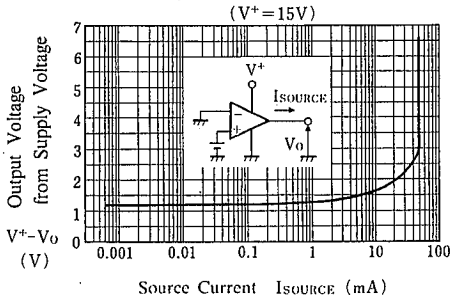
Voltage Gain, Phase vs. Frequency



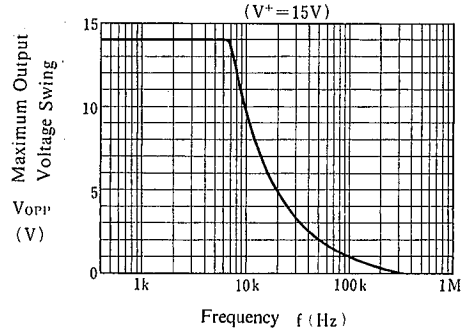
Output Sink Current



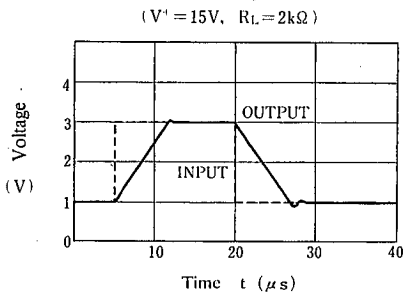
Output Source Current



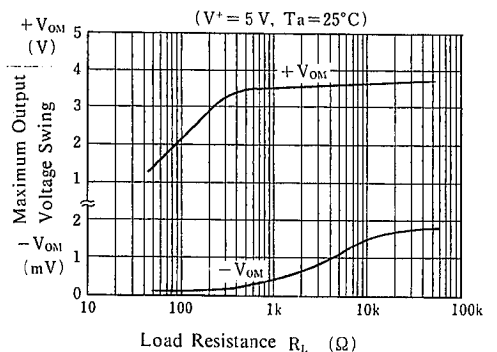
Maximum Output Voltage Swing vs. Frequency



Pulse Response



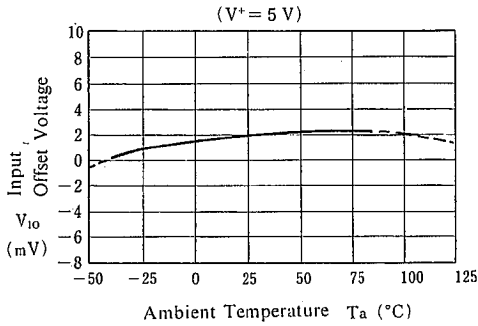
Maximum Output Voltage Swing vs. Load Resistance



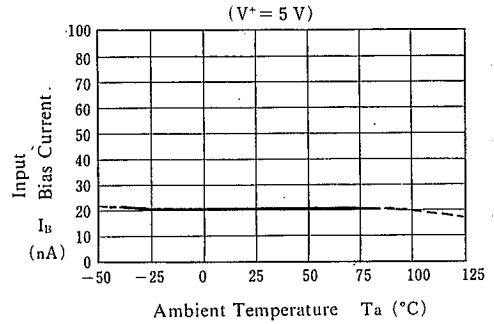
[查询"NJM324D"供应商](#)

■ TYPICAL CHARACTERISTICS

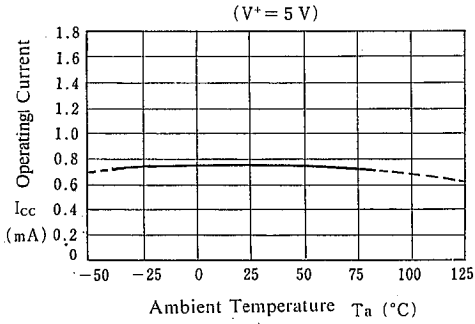
Input Offset Voltage vs. Temperature



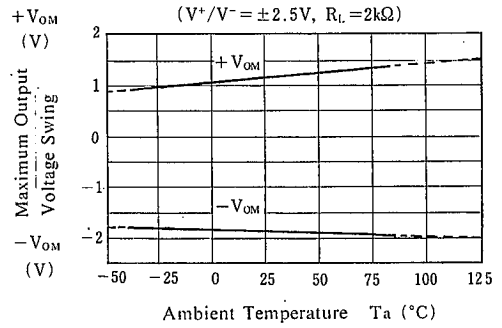
Input Bias Current vs. Temperature



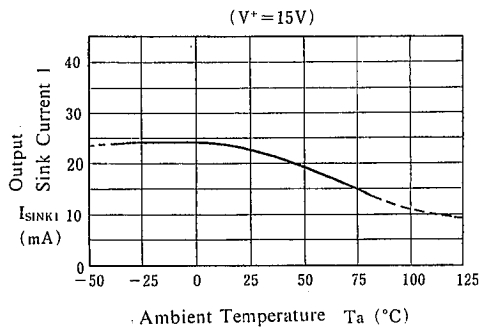
Operating Current vs. Temperature



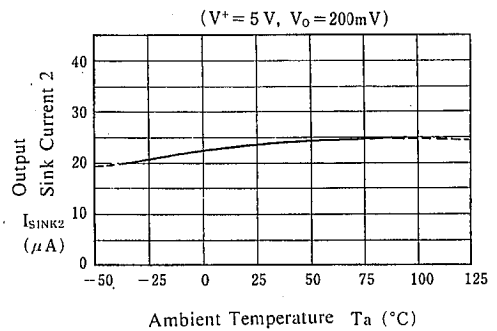
Maximum Output Voltage Swing vs. Temperature



Output Sink Current 1 vs. Temperature

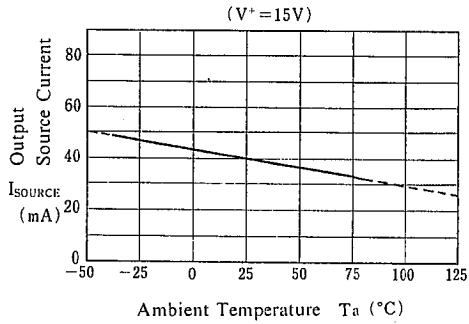


Output Sink Current 2 vs. Temperature

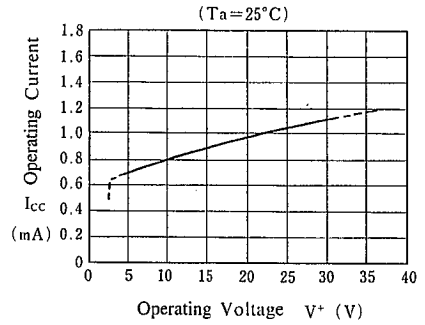


■ TYPICAL CHARACTERISTICS

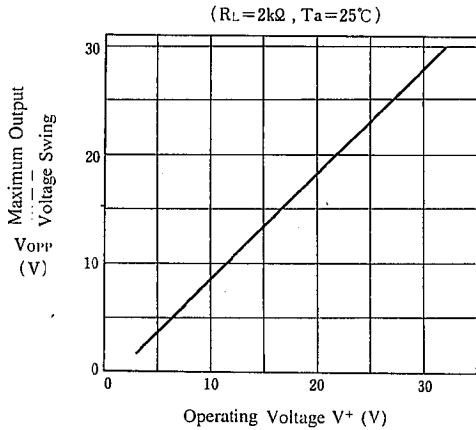
Output Source Current vs. Temperature



Operating Current vs. Operating Voltage



Maximum Output Voltage Swing vs. Operating Voltage



4

NJM324

[查询"NJM324D"供应商](#)

MEMO

[CAUTION]

The specifications on this databook are only given for information , without any guarantee as regards either mistakes or omissions. The application circuits in this databook are described only to show representative usages of the product and not intended for the guarantee or permission of any right including the industrial rights.