

QUAD J-FET INPUT OPERATIONAL AMPLIFIER

■ GENERAL DESCRIPTION

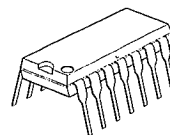
The NJM074/084 are quad JFET input operational amplifiers.

The NJM074/084 have the same electrical characteristics of NJM072B/082B except supply current.

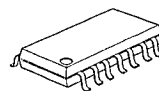
■ FEATURES

- Operating Voltage $(\pm 4V \sim \pm 18V)$
- J-FET Input
- High Input Resistance $(10^{12} \Omega \text{ typ.})$
- Low Input Bias Current (30pA typ.)
- High Slew Rate $(13V/\mu\text{s typ.})$
- Wide Unity Gain Bandwidth (3MHz typ.)
- Package Outline DIP14, DMP14, SSOP14
- Bipolar Technology

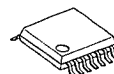
■ PACKAGE OUTLINE



NJM074D
NJM084D

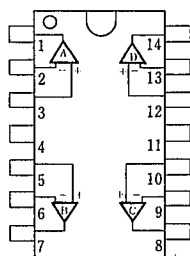


NJM074M
NJM084M



NJM074V
NJM084V

■ PIN CONFIGURATION

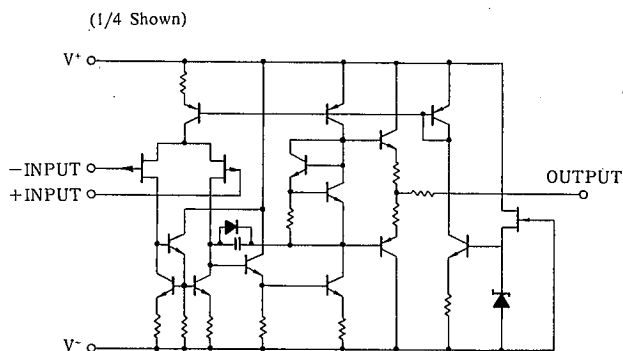


NJM074D/084D
NJM074M/084M
NJM074V/084V

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

■ EQUIVALENT CIRCUIT



■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V ⁺ /V ⁻	±18	V
Differential Input Voltage	V _{ID}	±30	V
Input Voltage	V _{IC}	±15(note 1)	V
Power Dissipation	P _D	(DIP14) 700	mW
		(DMP14) 700(note 2)	mW
		(SSOP14) 300	mW
Operating Temperature Range	T _{opr}	-20~+75	°C
Storage Temperature Range	T _{stg}	-40~+125	°C

(note 1) For supply voltage less than ±15V, the absolute maximum input voltage is equal to the supply voltage.
(note 2) at on PC board

■ ELECTRICAL CHARACTERISTICS (Ta=+25°C, V⁺/V⁻=±15V)

() Applies to NJM084

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	V _{IO}	R _S =50Ω	—	3(5)	10(15)	mV
Input Offset Current	I _{IO}		—	5	50(200)	pA
Input Bias Current	I _B		—	30	200(400)	pA
Input Common Mode Voltage Range	V _{ICM}		±10	—	—	V
Maximum Peak-to-peak Output Voltage Swing	V _{OPP}	R _L =10kΩ	24	27	—	V _{p-p}
Large-Signal Voltage Gain	A _V	R _L ≥2kΩ, V _O =±10V	88	106	—	dB
Unity Gain Bandwidth	f _T		—	3	—	MHz
Input Resistance	R _{IN}		—	10 ¹²	—	Ω
Common Mode Rejection Ratio	CMR	R _S ≤10kΩ	70	76	—	dB
Supply Voltage Rejection Ratio	SVR	R _S ≤10kΩ	70	76	—	dB
Operating Current	I _{CC}		—	6	10(11.2)	mA
Slew Rate	SR		—	13	—	V/μs
Equivalent Input Noise Voltage	V _{NI}	R _S =100Ω, B.W.=10~10kHz	—	4	—	μVrms

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.