QUAD J-FET INPUT OPERATIONAL AMPLIFIER

■ GENERAL DESCRIPTION

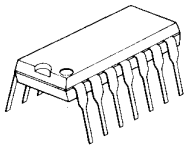
The NJM074/084 are quad JFET input operational amplifiers.

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

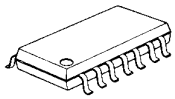
■ FEATURES

- Operating Voltage (±4V~±18V)
- J-FET Input
- High Input Resistance ($10^{12}\Omega$ typ.)
- Low Input Bias Current (130pA typ.)
- High Slew Rate (13V/μs typ.)
- Wide Unity Gain Bandwidth (3MHz typ.)
- Package Outline DIP14,DMP14,SSOP14
- Bipolar Technology

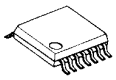
■ PACKAGE OUTLINE



NJM074D
NJM084D

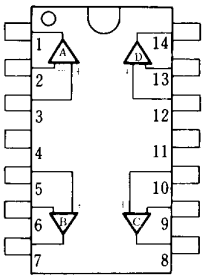


NJM074M
NJM084M



NJM074V
NJM084V

■ PIN CONFIGURATION

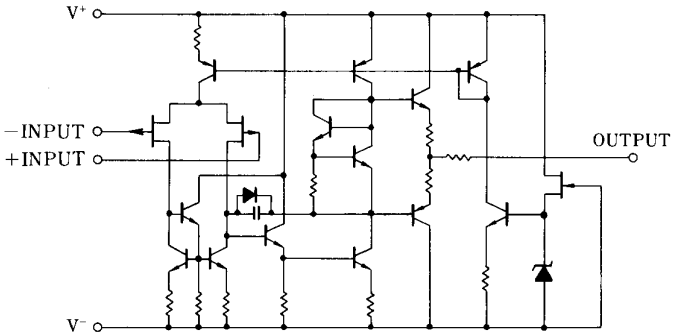


NJM074D/084D
NJM074M/084M
NJM074V/084V

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 (1/4 Shown)



■ 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 (note1)	V
Power Dissipation	P_D	(DIP14) 700 (DMP14) 700 (note2) (SSOP14) 300	mW
Operating Temperature Range	T_{opr}	-20~+75	˚C
Storage Temperature Range	T_{stg}	-40~+125	˚C

(note1) For supply voltage less than ±15V. the absolute maximum input voltage is equal to the supply voltage.
(note2) 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	-	μV_{rms}