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QUAD J-FET INPUT OPERATIONAL AMPLIFIER

■ GENERAL DESCRIPTION

The NJM074/084 are quad JFET input operational amplifiers.

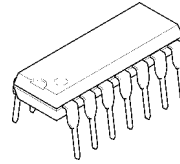
The NJM074/084 have the same electrical characteristics of NJM072B/082B except supply current.

■ FEATURES

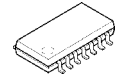
- Operating Voltage ($\pm 4V \sim \pm 18V$)
- J-FET Input
- High Input Resistance ($10^{12}\Omega$ typ.)
- Low Input Bias Current ($30pA$ typ.)
- High Slew Rate ($13V/\mu s$ typ.)
- Wide Unity Gain Bandwidth ($3MHz$ typ.)
- Package Outline DIP14, DMP14, SSOP14
- Bipolar Technology

■ PIN CONFIGURATION

■ PACKAGE OUTLINE



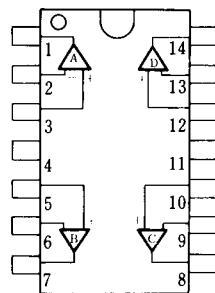
NJM074D
NJM084D



NJM074M
NJM084M



NJM074V
NJM084V

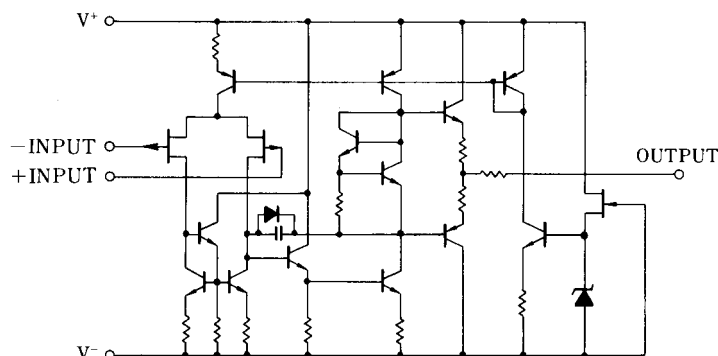


NJM074D/084D
NJM074M/084M
NJM074V/084V

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)



NJM074/084

■ 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} | -40~+85 | °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, $V^+ / V^- = \pm 15V$)

() Applies to NJM084



| PARAMETER | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|---|-----------|---|------|-----------|----------|------------------------|
| Input Offset Voltage | V_{IO} | $R_S = 50\Omega$ | - | 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} | $R_L = 10k\Omega$ | 24 | 27 | - | V_{P-P} |
| Large-Signal Voltage Gain | A_V | $R_L \geq 2k\Omega, V_O = \pm 10V$ | 88 | 106 | - | dB |
| Unity Gain Bandwidth | f_T | | - | 3 | - | MHz |
| Input Resistance | R_{IN} | | - | 10^{12} | - | Ω |
| Common Mode Rejection Ratio | CMR | $R_S \leq 10k\Omega$ | 70 | 76 | - | dB |
| Supply Voltage Rejection Ratio | SVR | $R_S \leq 10k\Omega$ | 70 | 76 | - | dB |
| Operating Current | I_{CC} | | - | 6 | 10(11.2) | mA |
| Slew Rate | SR | | - | 13 | - | V/ μ s |
| Equivalent Input Noise Voltage | V_{NI} | $R_S = 100\Omega, B.W. = 10 \sim 10kHz$ | - | 4 | - | μ V _{rms} |

[CAUTION]

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