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New Japan Radio Co.,Ltd.

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QUAD J-FET INPUT OPERATIONAL AMPLIFIER

■ GENERAL DESCRIPTION

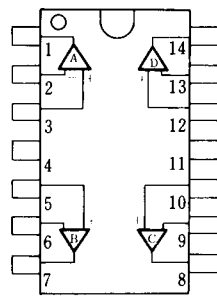
The NJM074/084 are quad JFET input operational amplifiers.

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

■ FEATURES

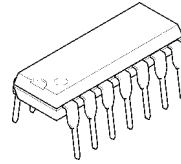
- Operating Voltage ($\pm 4V \sim \pm 18V$)
- J-FET Input
- High Input Resistance ($10^{12}\Omega$ typ.)
- Low Input Bias Current ($30pA$ typ.)
- High Slew Rate ($13V/\mu s$ typ.)
- Wide Unity Gain Bandwidth ($3MHz$ typ.)
- Package Outline DIP14, DMP14, SSOP14
- Bipolar Technology

■ PIN CONFIGURATION

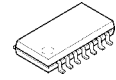


NJM074D/084D
 NJM074M/084M
 NJM074V/084V

■ PACKAGE OUTLINE



NJM074D
 NJM084D



NJM074M
 NJM084M

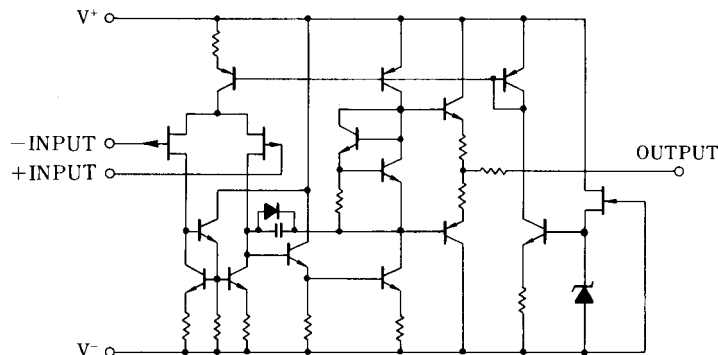


NJM074V
 NJM084V

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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