LOW INPUT OFFSET VOLTAGE C-MOS OPERATIONAL AMPLIFIER

■ GENERAL DESCRIPTION

The NJU7061, 62 and 64 are single, dual and quad C-MOS Operational Amplifiers operated on a single-power-supply, low voltage and low operating current.

The input offset voltage is lower than 2mV, and the input bias current is as low as less than 1pA, consequently the very small signal around the ground level can be amplified.

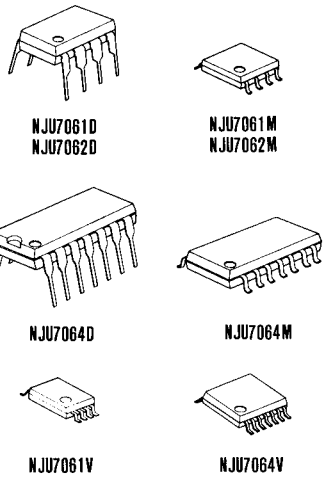
The minimum operating voltage is 3V and the output stage permits output signal to swing between both of the supply rails.

Furthermore, the operating current is also as low as 150 μA(typ) per circuit, therefore it can be applied especially to battery operated items.

■ FEATURES

- Single-Power-Supply
- Low Input Offset Voltage (V_{IO}=2mVmax)
- Wide Operating Voltage (V_{DD}=3~16V)
- Wide Output Swing Range (V_{OM}=9.98V typ. at V_{DD}=10V)
- Low Operating Current (150 μA/circuit)
- Low Bias Current (I_{IB}=1pA)
- Internal Compensation Capacitor
- External Offset Null Adjustment (Only NJU7061)
- Package Outline DIP/DMP/SSOP 8 (NJU7061)
  DIP/DMP 8 (NJU7062)
  DIP/DMP/SSOP 14 (NJU7064)
- C-MOS Technology

■ PACKAGE OUTLINE



NJU7061D NJU7062D

NJU7061M NJU7062M

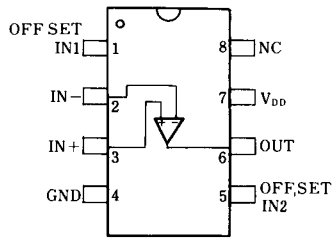
NJU7064D

NJU7064M

NJU7061V

NJU7064V

■ PIN CONFIGURATION



NJU7061D
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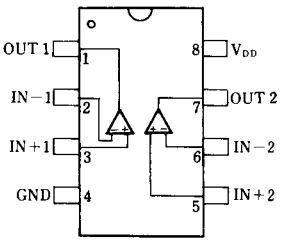

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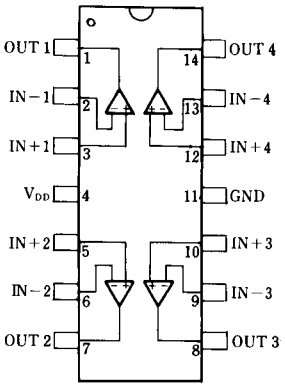
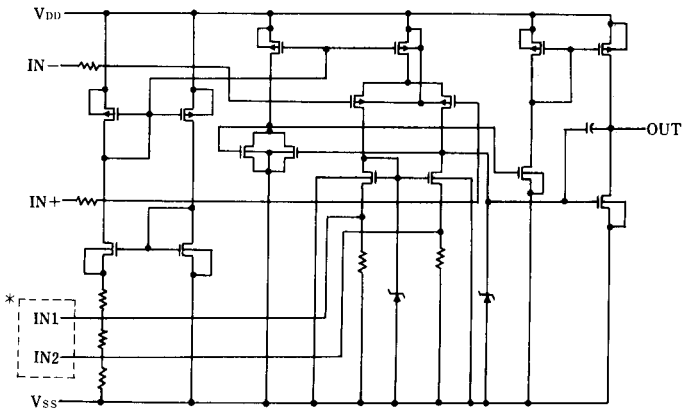


NJU7064D
NJU7064M
NJU7064V

■ EQUIVALENT CIRCUIT



IN1, IN2 are only for NJU7061(NJU7062/64 don,t have these terminals).

■ ABSOLUTE MAXIMUM RATINGS

(Ta=25℃)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V_{DD}	18	V
Differential Input Voltage	V_{ID}	±18 *1	V
Common Mode Input Voltage	V_{IC}	−0.3～18	V
Power Dissipation	P_D	(DIP14) 700	mW
		(DIP8) 500	
		(DMP8,14) 300	
		(SSOP8,14) 300	
Operating Temperature	T_{opr}	−20～+75	℃
Storage Temperature	T_{stg}	−40～+125	℃

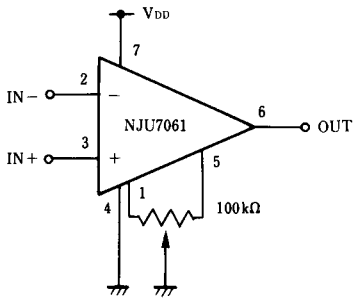
*1) If the supply voltage (V_{DD}) is less than 18V, the input voltage must not over the V_{DD} level though 18V is limit specified.

■ ELECTRICAL CHARACTERISTICS

(Ta=25℃, V_{DD}=10V, R_L=∞)

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	V_{IO}	R_S=50Ω			2	mV
Input Offset Current	I_{IO}			1		pA
Input Bias Current	I_{IB}			1		pA
Input Impedance	R_{IN}			1		TΩ
Large Signal Voltage Gain	A_V		80	95		dB
Input Common Mode Voltage Range	V_{ICM}		0～9			V
Maximum Output Swing Voltage	V_{OM}	R_L=1MΩ	9.80	9.98		V
Common Mode Rejection Ratio	CMR		60	75		dB
Supply Voltage Rejection Ratio	SVR		60	75		dB
Operating Current / Circuit	I_{DD}			150	300	μA
Slew Rate	SR			0.40		V/μs
Unity Gain Bandwidth	F_t	A_V=40dB C_L=10pF		0.4		MHz

■ OFFSET ADJUSTMENT CIRCUIT (ONLY FOR NJU7061)



MEMO

[CAUTION]
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