LOW INPUT OFFSET VOLTAGE C-MOS OPERATIONAL AMPLIFIER

■ GENERAL DESCRIPTION

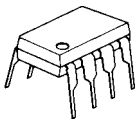
The NJU7061,62 and 64 are single, dual and quad C-MOS Operational Amplifiers operated on a single-power-supply, low voltage and low operating current.

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.

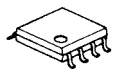
The minimum operating voltage is 3V and the output stage permits output signal to swing between both of the supply rails.

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

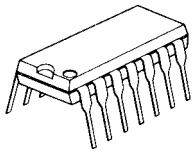
■ PACKAGE OUTLINE



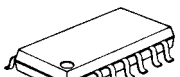
NJU7061D
NJU7062D



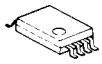
NJU7061M
NJU7062M



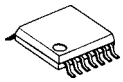
NJU7064D



NJU7064M



NJU7061V

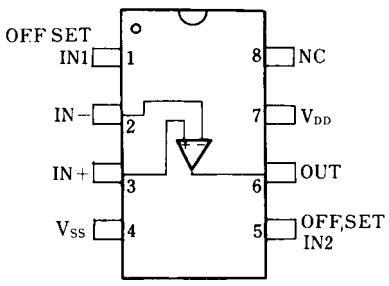


NJU7064V

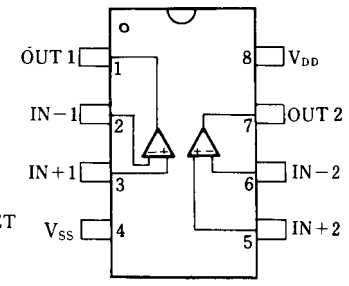
■ FEATURES

- Single-Power-Supply
- Low Input Offset Voltage (V_{IO}=2mV max)
- Wide Operating Voltage (V_{DD}=3~16V)
- Wide Output Swing Range (V_{OM}=9.98V typ. @ V_{DD}=10V)
- Low Operating Current (150μA/circuit)
- Low Bias Current (I_{IB}=1pA typ.)
- Internal Compensation Capacitor
- External Offset Null Adjustment (Only NJU7061)
- Package Outline DIP/DMP/SSOP8 (NJU7061)
  DIP/DMP8 (NJU7062)
  DIP/DMP/SSOP14 (NJU7064)
- C-MOS Technology

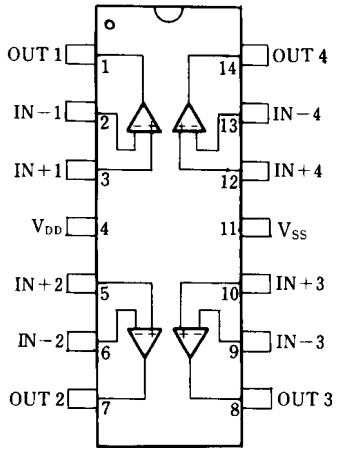
■ PIN CONFIGURATION



NJU7061D
NJU7061M
NJU7061V

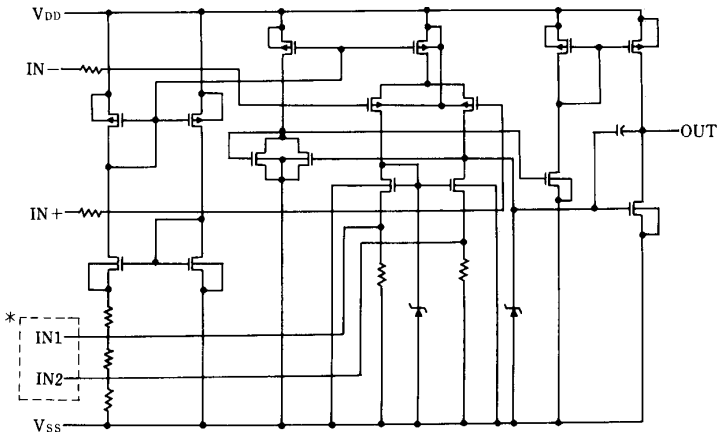


NJU7062D
NJU7062M



NJU7064D
NJU7064M
NJU7064V

■ EQUIVALENT CIRCUIT



* IN1,IN2 are only for NJU7061 (NJU7062/64 don't have these terminals).

■ ABSOLUTE MAXIMUM RATINGS

(Ta=25˚C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V_{DD}	18	V
Differential Input Voltage	V_{ID}	± 18 (note1)	V
Common Mode Input Voltage	V_{IC}	-0.3~18	V
Power Dissipation	P_D	(DIP14) 700 (DIP8) 500 (DMP8,14) 300 (SSOP8,14) 300	mW
Operating Temperature Range	T_{opr}	-20~+75	˚C
Storage Temperature Range	T_{stg}	-40~+125	˚C

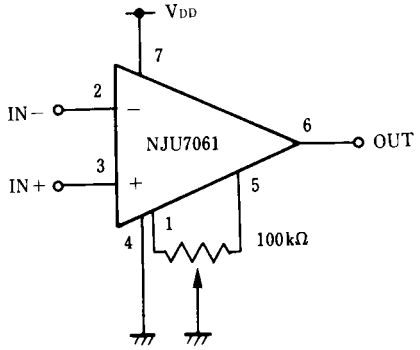
(note1) If the supply voltage (V_{DD}) is less than 18V, the input voltage must not over the V_{DD} level though 18V is limit specified.

■ ELECTRICAL CHARACTERISTICS

(Ta=25˚C,V_{DD}=10V,R_L=∞)

PARAMETER	SYMBOL	TEST CONDITION	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)



Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

NJR:

NJU7061D NJU7064E NJU7062M NJU7064M NJU7064D NJU7061M NJU7062D NJU7064AV-TE2 NJU7064AV-TE1 NJU7061M-TE2 NJU7061M-TE1 NJU7064M-TE1 NJU7064M-TE2 NJU7064V-TE1 NJU7064V-TE2 NJU7062M-TE2 NJU7062M-TE3 NJU7062M-TE1 NJU7061V-TE1 NJU7062M-T1 NJU7064M-T1