

NJM072B/082B, 072/082

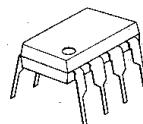
The NJM072B/082B & NJM072/082 are dual JFET input operational amplifiers. They feature low input bias and offset currents, high input impedance and fast slew rate. The low harmonic distortion and low noise make them ideally suit for amplifiers with high fidelity and audio amplifier applications.

The NJM072/082 may cause oscillation in some application like voltage follower.

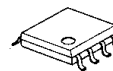
■ Absolute Maximum Ratings (Ta=25°C)

Supply Voltage	V ⁺ /V ⁻	±18V
Input Voltage (note 1)	V _{IC}	±15V
Differential Input Voltage	V _{ID}	±30V
Power Dissipation	P _D (D,S Type)	500mW
	(M,E Type)	300mW
Operating Temperature Range	T _{opr}	-20~+75°C
Storage Temperature Range	T _{stg}	-40~+125°C

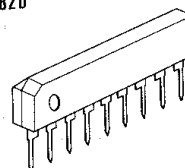
■ Package Outline



NJM072BD/082BD
NJM072D/082D



NJM072BM/082BM
NJM072M/082M
NJM072BE/082BE
NJM072E/082E



NJM072BS/NJM082BS
NJM072S/NJM082S

(note 1) For supply voltages less than ±15V, the absolute maximum input voltage is equal to the supply voltage.

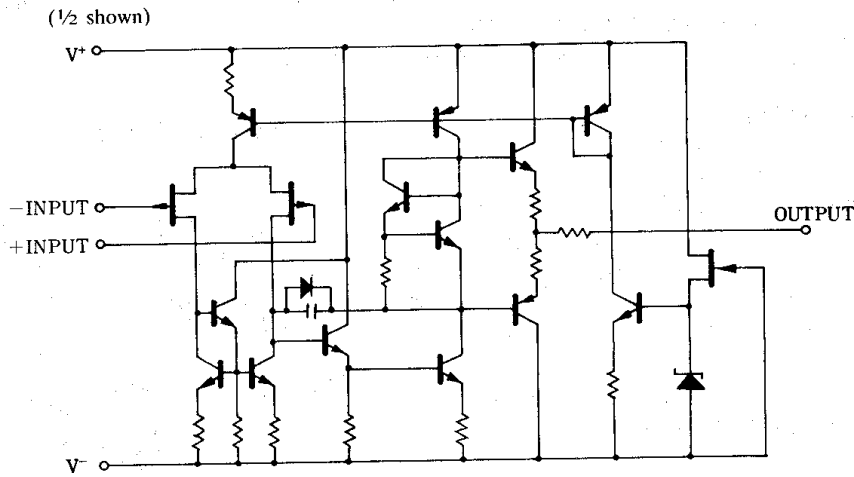
■ Electrical Characteristics (Ta=25°C, V⁺/V⁻=±15V)

() Applies to NJM082B, NJM082

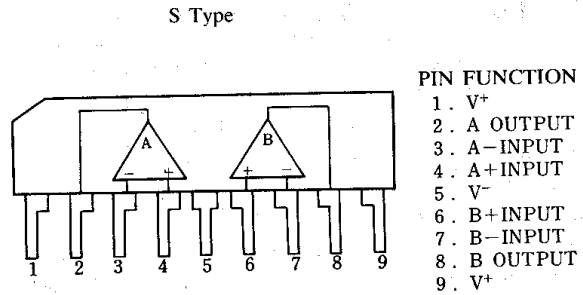
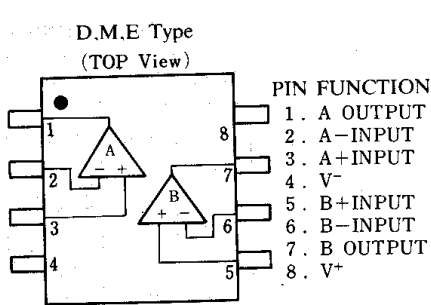
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input Offset Voltage	V _{IO}	R _S =50Ω	—	3(5)	10(15)	mV
Input Offset Current	I _{IO}		—	5	50(200)	pA
Input Bias Current	I _B		—	30	200(400)	pA
Input Common Mode Voltage Range	V _{ICM}		±10	—	—	V
Maximum Peak-to-peak Output Voltage Swing	V _{OPP}	R _L =10kΩ	24	27	—	V
Large-Signal Voltage Gain	A _V	R _L ≥10kΩ, V _O =±10V	3	6	—	V/mV
Unity Gain Bandwidth	f _T	072B/082B	—	3	—	MHz
		072/082	—	5	—	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
Supply Current	I _{CC}	R _L =∞each amplifier	—	3	5(5.6)	μA
Slew Rate	SR	072B/082B	—	13	—	V/μs
		072/082	—	20	—	V/μs
Equivalent Input Noise Voltage	V _{NI}	R _S =100Ω, B.W.=10~10kHz	—	4	—	μVrms

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■ Equivalent Circuit



■ Connection Diagram



■ Comparison between JFET-input Type Operational Amplifier and Bipolar Type

Products	Input Bias MAX. (pA)	Slew Rate TYP. (V/ μ s)	Input Offset Voltage MAX. (mV)	Unity Gain Bandwidth TYP. (MHz)
NJM072 (BIFET)	200	13	10	3
NJM082 (BIFET)	400	13	15	3
NJM4558 (BIPOLAR)	500,000	1	6	2.5
NJL2043 (BIPOLAR)	1,000,000	6	3	14
NJM2904 (BIPOLAR)	250,000	0.4	7	0.8