

NJM2082

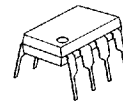
The NJM2082 is JFET input dual operational amplifiers. The NJM2082 features low input offset and bias current, high input impedance. The NJM2082 ideally suits for fast integrator, DA converter, sample & hold and audio applications. The NJM2082 is improved version of the NJM082.

Absolute Maximum Ratings (Ta=25°C)

Supply Voltage	V^+/V^-	$\pm 18V$
Differential Input Voltage	V_{ID}	$\pm 30V$
Input Voltage (note)	V_I	$\pm 15V$
Power Dissipation	P_D (D-Type)	500mW
	(M-Type)	300mW
	(L-Type)	800mW
	(V-Type)	250mW
Operating Temperature Range	T_{opr}	$-20 \sim +75^\circ C$
Storage Temperature Range	T_{stg}	$-40 \sim +125^\circ C$

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

Package Outline



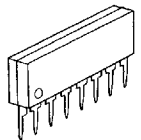
NJM2082D



NJM2082M



NJM2082V



NJM2082L

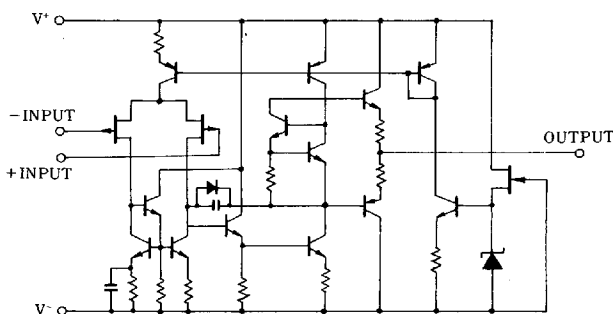
Recommended Operating Conditions

Supply Voltage	V^+/V^-	$\pm 4 \sim \pm 18V$
Load Capacitance	C_L ($A_V=1$)	$\leq 100pF$
Load Current	I_O	$\leq \pm 25mA$

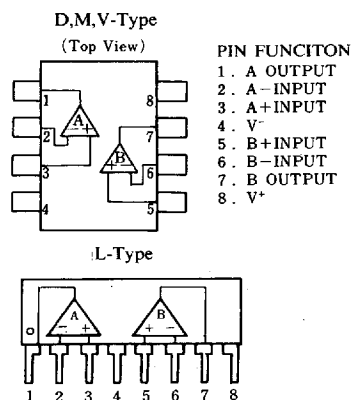
Electrical Characteristics (Ta=25°C, $V^+/V^- = \pm 15V$)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Input Offset Voltage	V_{IO}	$R_S=50\Omega$	—	2	10	mV
Input Offset Current	I_{IO}		—	5	200	pA
Input Bias Current	I_B		—	30	400	pA
Input Resistance	R_{IN}		—	10^{12}	—	Ω
Large Signal Voltage Gain	A_V	$R_L \geq 2k\Omega$, $V_O = \pm 10V$	86	110	—	dB
Maximum Output Voltage Swing	V_{OM}	$R_L=2k\Omega$	± 12	$+13.5, -13.0$	—	V
Input Common Mode Voltage Range	V_{ICM}		± 12	$+15.0, -12.5$	—	V
Common Mode Rejection Ratio	CMR	$R_S \leq 10k\Omega$	70	90	—	dB
Supply Voltage Rejection Ratio	SVR	$R_S \leq 10k\Omega$	76	100	—	dB
Supply Current	I_{CC}		—	4	6	mA
Slew Rate	SR		—	20	—	V/ μs
Gain Bandwidth Product 1	GB	$f=10kHz$	—	5	—	MHz
Equivalent Input Noise Voltage 1	e_n	$R_S=100\Omega$, $f=1kHz$	—	13	—	nV/ $\sqrt{Hz}$
Equivalent Input Noise Voltage 2	V_{NI}	RIAA $R_S=2.2k\Omega$, 30kHz LPF	—	1.6	—	μV

Equivalent Circuit (1/2 Shown)



Connection Diagram

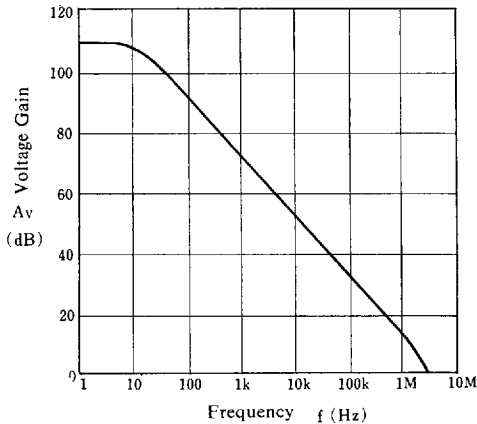


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■ Typical Characteristics

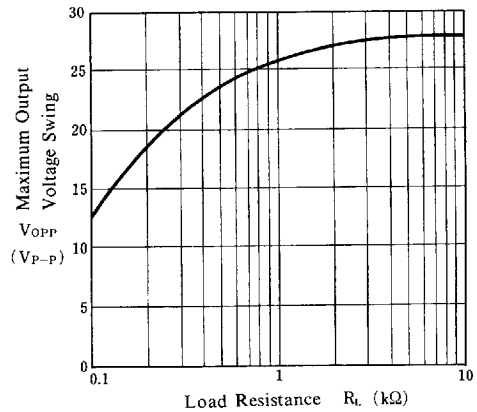
Voltage Gain vs. Frequency

($V^+/V^- = \pm 15V$, $R_L = 2k\Omega$, $T_a = 25^\circ C$)



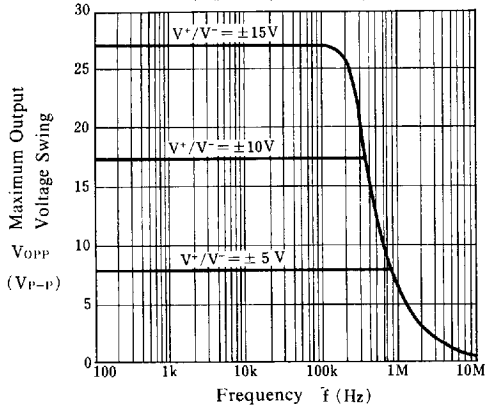
Maximum Output Voltage Swing vs. Load Resistance

($V^+/V^- = \pm 15V$, $T_a = 25^\circ C$)



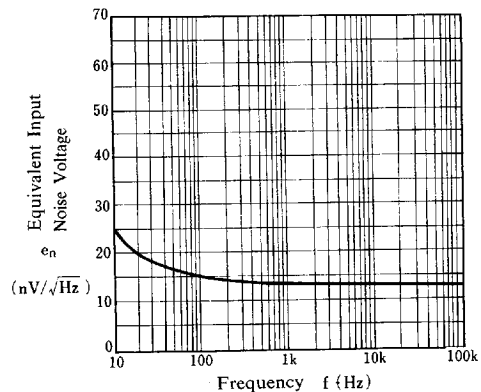
Maximum Output Voltage Swing vs. Frequency

($R_L = 2k\Omega$, $T_a = 25^\circ C$)



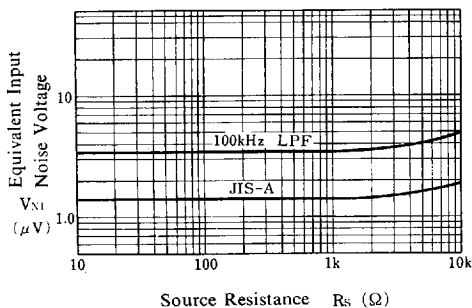
Equivalent Input Noise Voltage vs. Frequency

($V^+/V^- = \pm 15V$, $R_S = 100\Omega$, $T_a = 25^\circ C$)



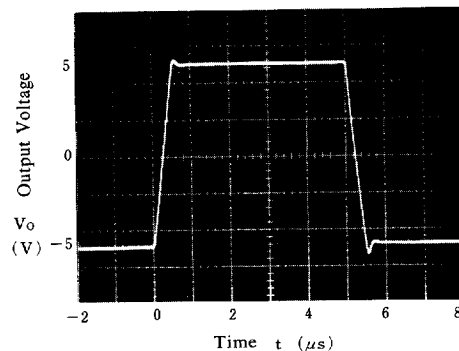
Equivalent Input Noise Voltage vs. Source Resistance

($V^+/V^- = \pm 15V$, $T_a = 25^\circ C$)



Voltage Follower Pulse Response

($V^+/V^- = \pm 15V$, $R_L = 2k\Omega$, $C_L = 100pF$, $T_a = 25^\circ C$)

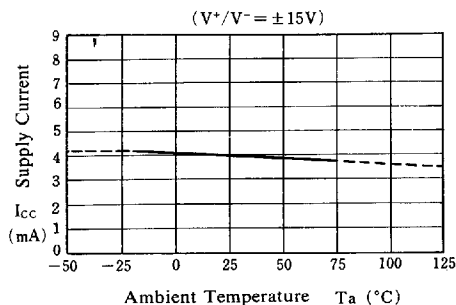


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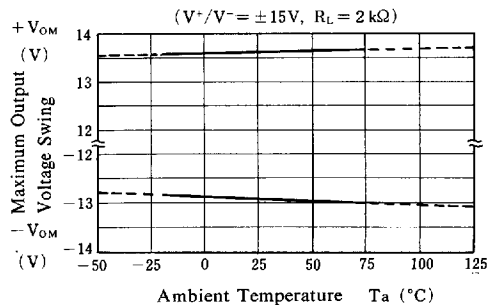
New Japan Radio Co., Ltd.

Typical Characteristics

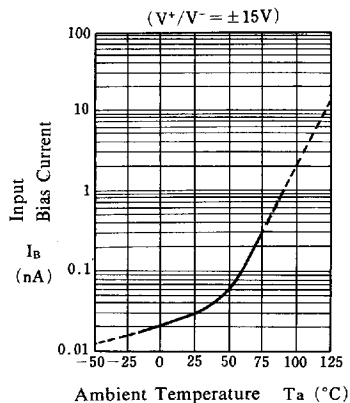
Supply Current vs. Temperature



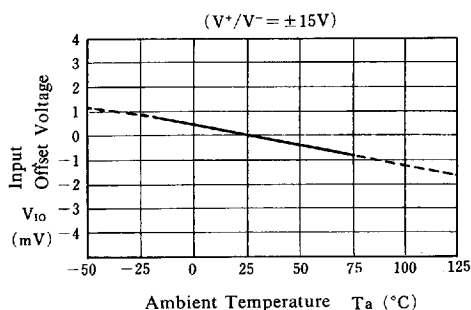
Maximum Output Voltage Swing vs. Temperature



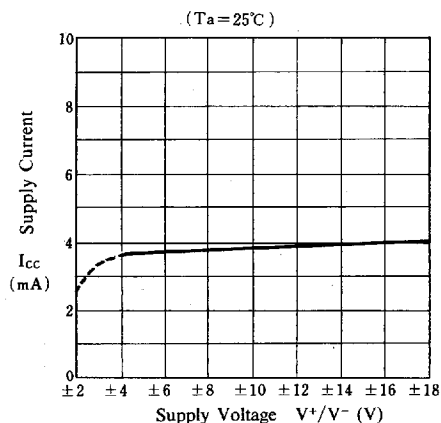
Input Bias Current vs. Temperature



Input Offset Voltage vs. Temperature



Supply Current vs. Supply Voltage



Maximum Output Voltage Swing vs. Supply Voltage

