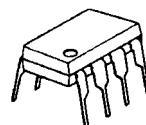


DUAL J-FET INPUT OPERATIONAL AMPLIFIER

■ GENERAL DESCRIPTION

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.

■ PACKAGE OUTLINE



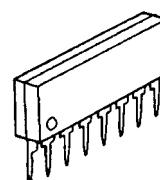
NJM2082D



NJM2082M



NJM2082V

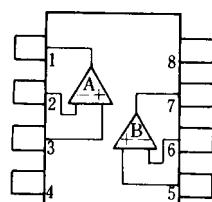


NJM2082L

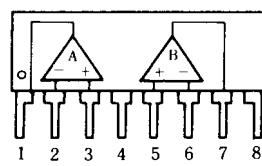
■ FEATURES

- Operating Voltage ($\pm 4V \sim \pm 18V$)
- High Input Resistance ($10^{12}\Omega$ typ.)
- High Slew Rate ($20V/\mu s$ typ.)
- Package Outline DIP8,DMP8,SIP8,SSOP8
- Bipolar Technology

■ PIN CONFIGURATION



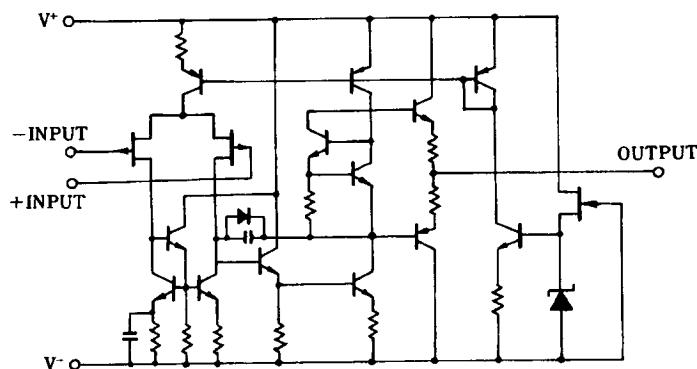
NJM2082D
NJM2082M
NJM2082V



NJM2082L

PIN FUNCTION	
1.A OUTPUT	
2.A-INPUT	
3.A+INPUT	
4.V	
5.B+INPUT	
6.B-INPUT	
7.B OUTPUT	
8.V ⁺	

■ EQUIVALENT CIRCUIT (1/2 Shown)



NJM2082

■ 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 (note)	V
Power Dissipation	P _D	(DIP8) 500 (DMP8) 300 (SIP8) 800 (SSOP8) 250	mW
Operating Temperature Range	T _{opr}	-40~+85	°C
Storage Temperature Range	T _{stg}	-40~+125	°C

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

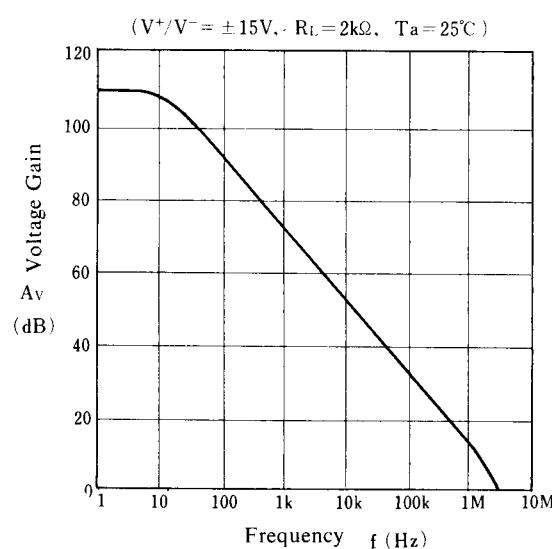
■ ELECTRICAL CHARACTERISTICS

(Ta=+25°C, V⁺/V=±15V)

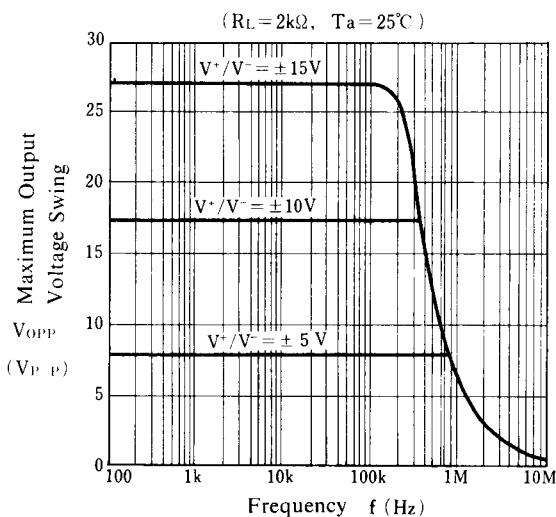
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	V _{IO}	R _S =50Ω	-	2	10	mV
Input Offset Current	I _{IO}		-	5	200	pA
Input Bias Current	I _B		-	30	400	pA
Input Resistance	R _{IN}		-	10 ¹²	-	Ω
Large Signal Voltage Gain	A _V	R _L ≥2kΩ, V _O =±10V	86	110	-	dB
Maximum Output Voltage Swing	V _{OM}	R _L =2kΩ	± 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 ≤10kΩ	70	90	-	dB
Supply Voltage Rejection Ratio	SVR	R _S ≤10kΩ	76	100	-	dB
Operating Current	I _{CC}		-	4	6	mA
Slew Rate	SR		-	20	-	V/μs
Gain Bandwidth Product	GB	f=10kHz	-	5	-	MHz
Equivalent Input Noise Voltage 1	e _n	R _S =100Ω, f=1kHz	-	13	-	nV/√Hz
Equivalent Input Noise Voltage 2	V _{NI}	RIAA R _S =2.2kΩ, 30kHz LPF	-	1.6	-	μVrms

■ TYPICAL CHARACTERISTICS

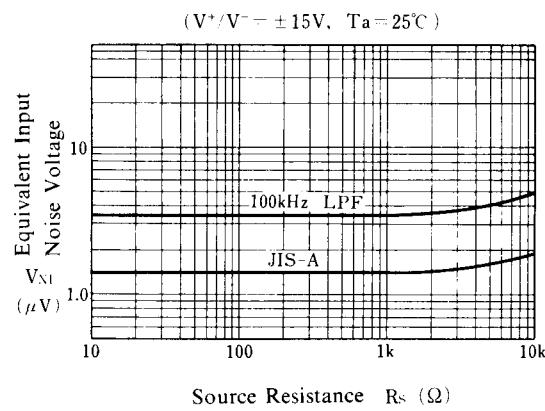
Voltage Gain vs. Frequency



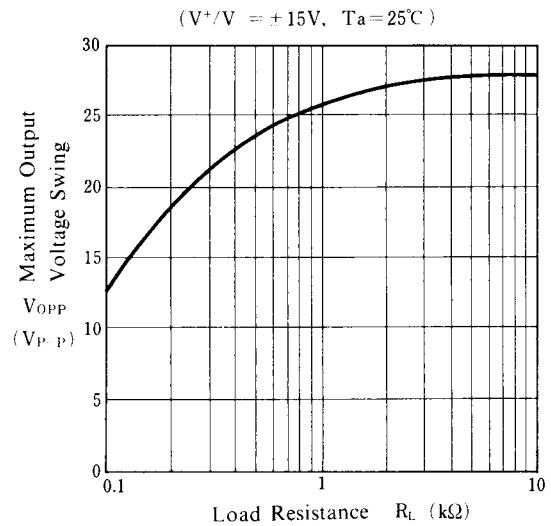
Maximum Output Voltage Swing vs. Frequency



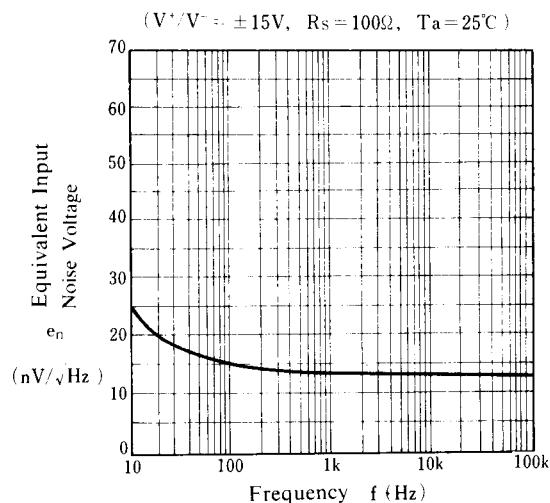
Equivalent Input Noise Voltage vs. Source Resistance



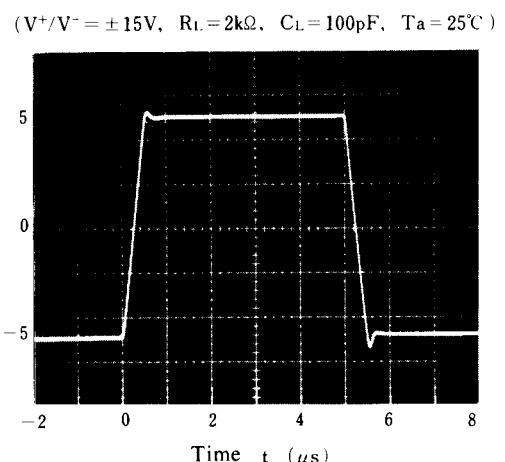
Maximum Output Voltage Swing vs. Load Resistance



Equivalent Input Noise Voltage vs. Frequency



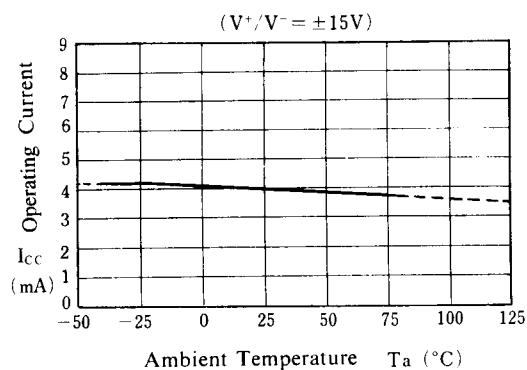
Voltage Follower Pulse Response



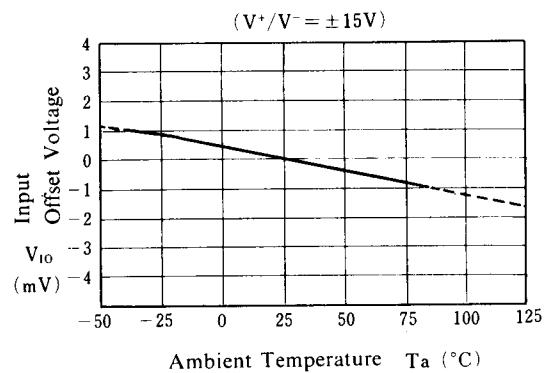
NJM2082

■ TYPICAL CHARACTERISTICS

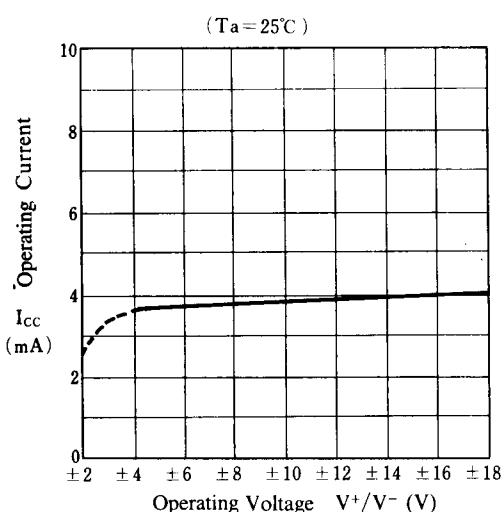
Operating Current vs. Temperature



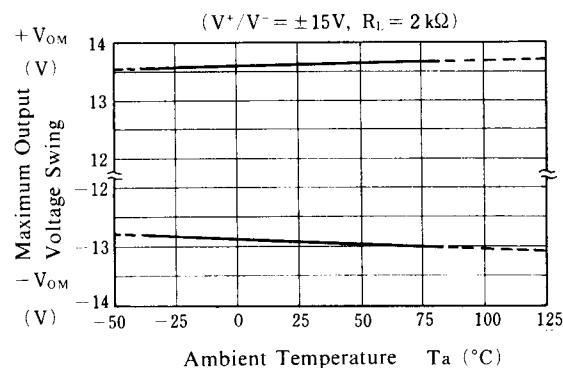
Input Offset Voltage vs. Temperature



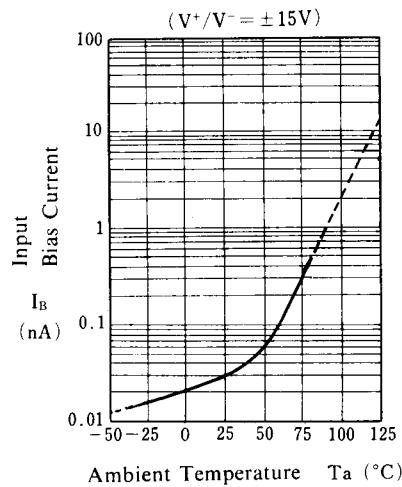
Operating Current vs. Operating Voltage



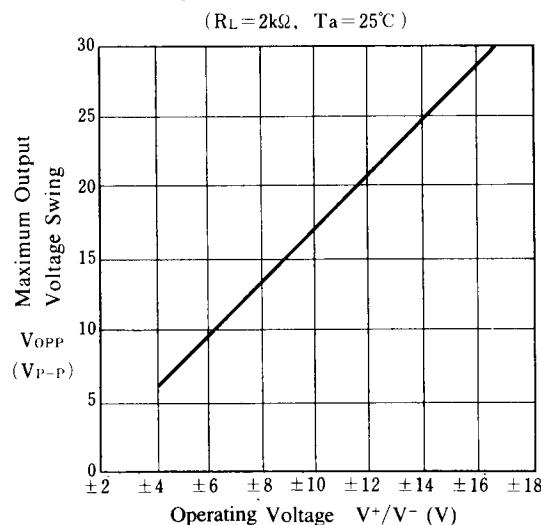
Maximum Output Voltage Swing vs. Temperature



Input Bias Current vs. Temperature



Maximum Output Voltage Swing vs. Operating Voltage



[CAUTION]
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