



NJM2107

SINGLE OPERATIONAL AMPLIFIER

■ GENERAL DESCRIPTION

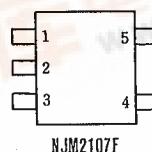
NJM 2107F is a single operational amplifier of ultra miniature surface mount package.

NJM 2107F has features of low operating supply voltage and low saturation output voltage. The NJM2107F is suitable for small electronic equipments and hybrid circuits.

■ FEATURE

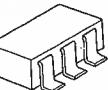
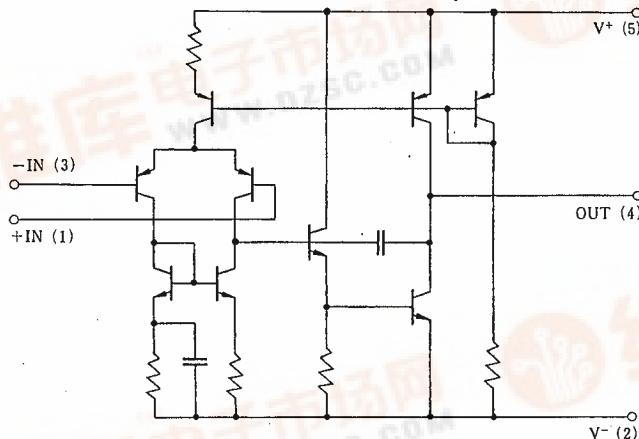
- Operating Voltage $(V^+/V^- = \pm 1.0V \text{ to } \pm 3.5V)$
- Low Output Saturation : $4V_{RP}$ at single 5V supply
- V⁻ Shield Plate between +Input and -Input
- Suitable Pin Arrangement for Application
- Mounted in Ultra Miniature $2.9 \times 1.5\text{mm}$: (1/5 of DMP-8 package)
- Bipolar Technology

■ PIN CONFIGURATION



Pin Function	
1.	+INPUT
2.	V ⁻
3.	-INPUT
4.	OUTPUT
5.	V ⁺

■ EQUIVALENT CIRCUIT



NJM2107F

■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V ⁺ /V ⁻	±3.5	V
Differential Input Voltage	V _{ID}	±7	V
Input Voltage	V _{IC}	±3.5	V
Power Dissipation	P _D	200	mW
Operating Temperature Range	T _{opr}	-40 ~ +85	°C
Storage Temperature Range	T _{stg}	-40 ~ +125	°C

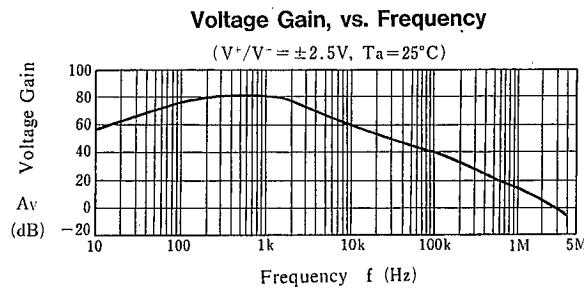
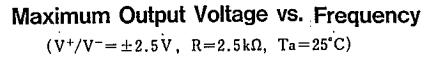
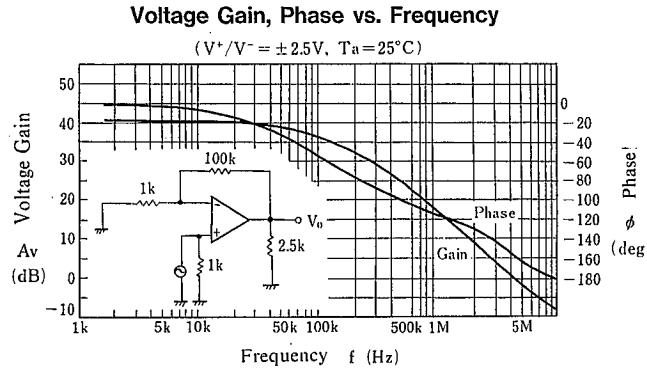
■ ELECTRICAL CHARACTERISTICS

(V⁺/V⁻=±2.5V, Ta=25°C)

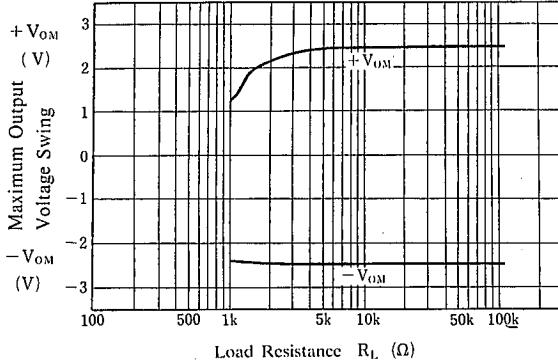
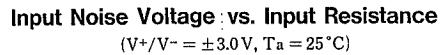
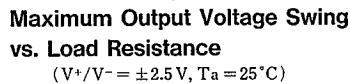
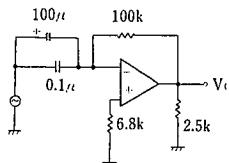
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	V _{IO}	R _S =10kΩ	—	1	6	mV
Input Offset Current	I _{IO}	I ⁺ -I ⁻	—	5	200	nA
Input Bias Current	I _B		—	100	500	nA
Input Common Mode Voltage Range	V _{ICM}		±1.5	—	—	V
Large Signal Voltage Gain	A _V	R _L =10kΩ, V _O =±2.0V	60	80	—	dB
Output Voltage Swing	V _{OM}	R _L =2.5kΩ	±2.0	±2.2	—	V
Common Mode Rejection Ratio	CMR	R _S ≤10kΩ	60	80	—	dB
Supply Voltage Rejection Ratio	SVR	R _S ≤10kΩ	60	70	—	dB
Slew Rate	SR	V _{IN} =±1V _{p-p} , A _{CL} =+1	—	3	—	V/μs
Operating Current	I _{CC}		1	2	3	mA

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■ TYPICAL CHARACTERISTICS

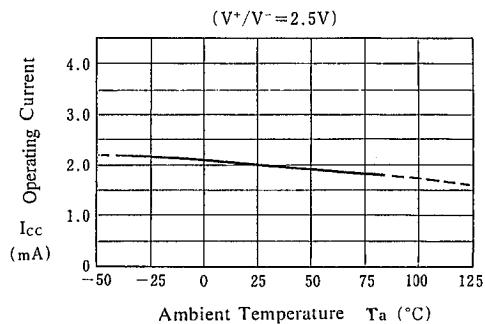


Test Circuit

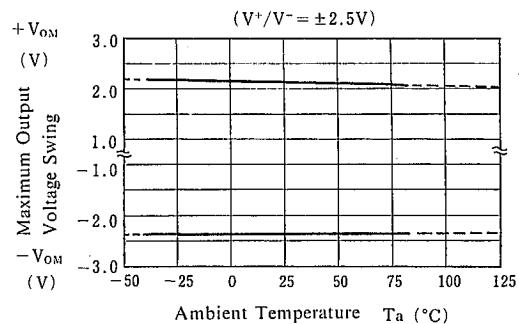


■ TYPICAL CHARACTERISTICS

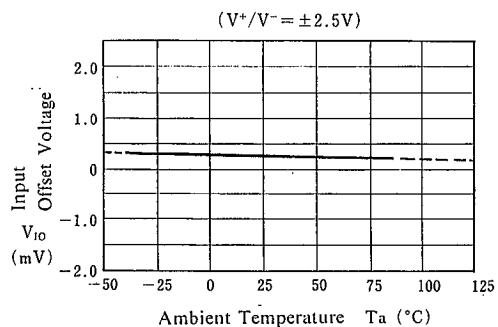
Operating Current vs. Temperature



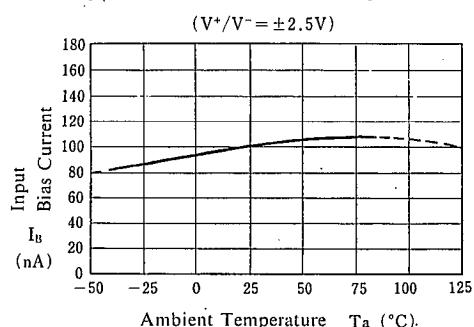
Maximum Output Voltage Swing vs. Temperature



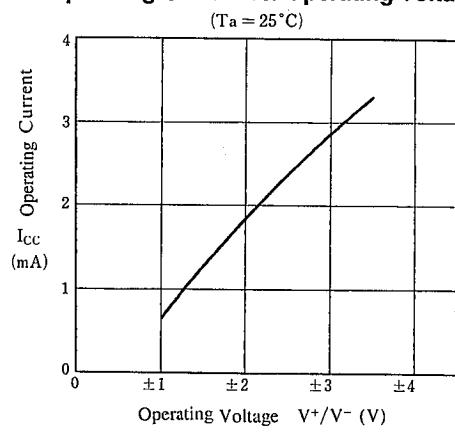
Input Offset Voltage vs. Temperatre



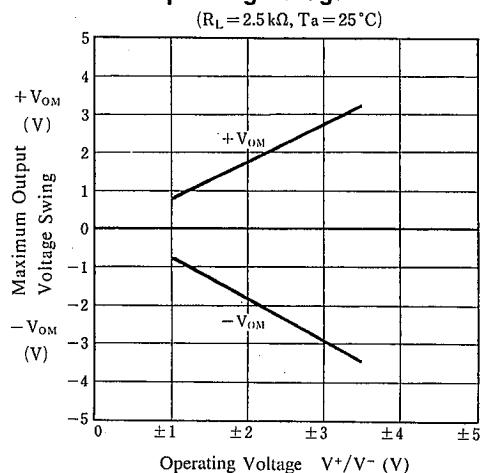
Input Bias Current vs. Temperature



Operating Current vs. Operating Voltage

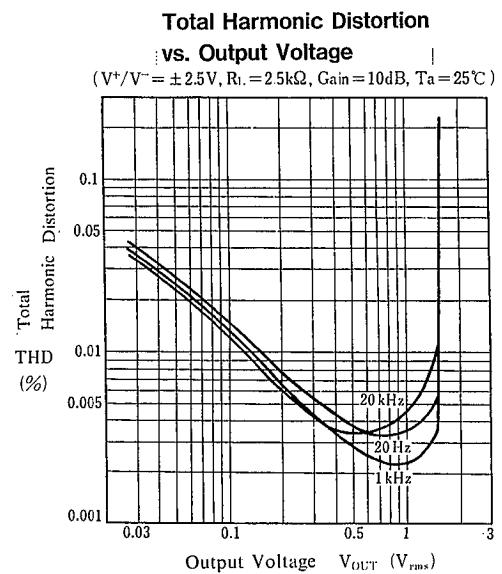
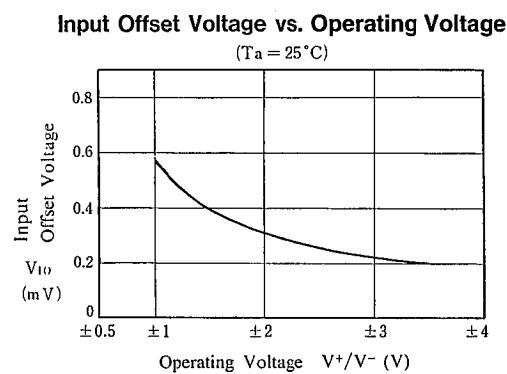


Maximum Output Voltage Swing vs. Operating Voltage



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■ TYPICAL CHARACTERISTICS



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MEMO

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