

SINGLE-SUPPLY OPERATIONAL AMPLIFIER

■ GENERAL DESCRIPTION

The NJM2125 is a single-supply operational amplifier of ultra miniature surface mount package.

The features are single-supply operation, low operating voltage (minimum 2.7V) and ultra mini package (MTP5) are most suitable for portable items.

■ PACKAGE OUTLINE

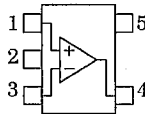


NJM2125F

■ FEATURES

- Single-Supply Operation
- Low Operating Voltage (+2.7V~20V)
- Low Operating Current (1.0mA typ.)
- Slew Rate (1.2V/μs typ.)
- Mounted in Ultra Mini Package (MTP5:1/5 of DMP)
- Bipolar Technology

■ PIN CONFIGURATION

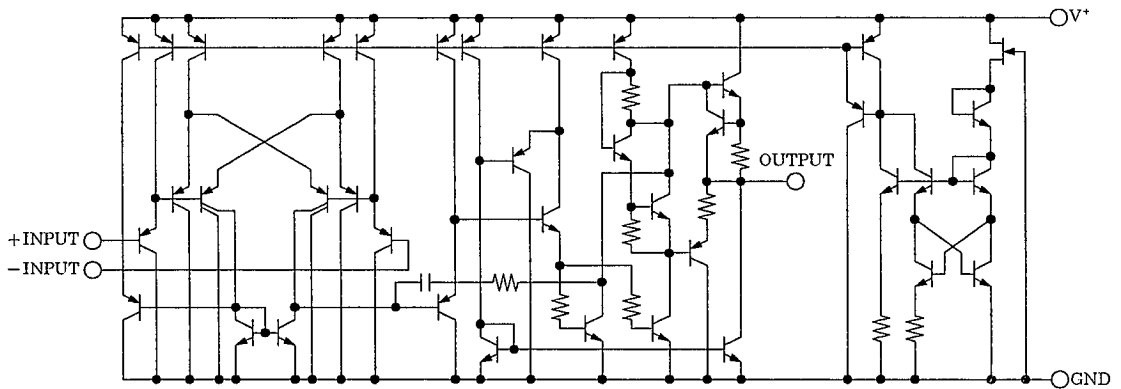


NJM2125F

PIN FUNCTION

- 1.+INPUT
- 2.GND
- 3.-INPUT
- 4.OUTPUT
- 5.V⁺

■ EQUIVALENT CIRCUIT



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■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V+	+20	V
Differential Input Voltage	V _{ID}	+20	V
Input Voltage	V _{IC}	-0.3~+20(note)	V
Power Dissipation	P _D	200	mW
Operating Temperature Range	T _{opr}	-40~85	°C
Storage Temperature Range	T _{stg}	-40~125	°C

(note)When the supply voltage is less than +20V,the absolute maximum input voltage is equal to the supply voltage.

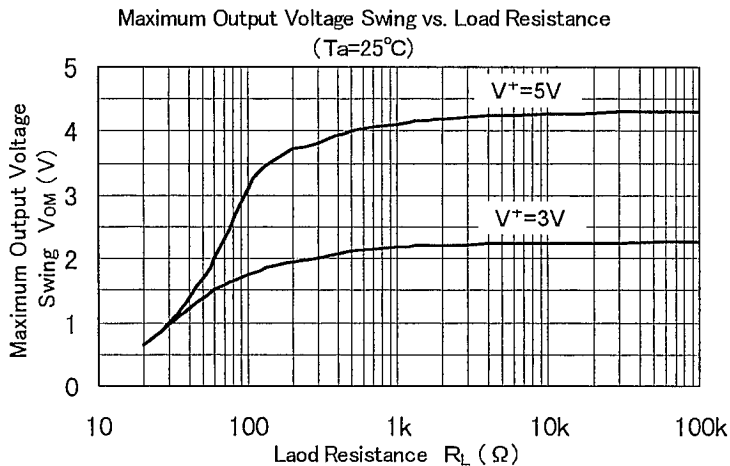
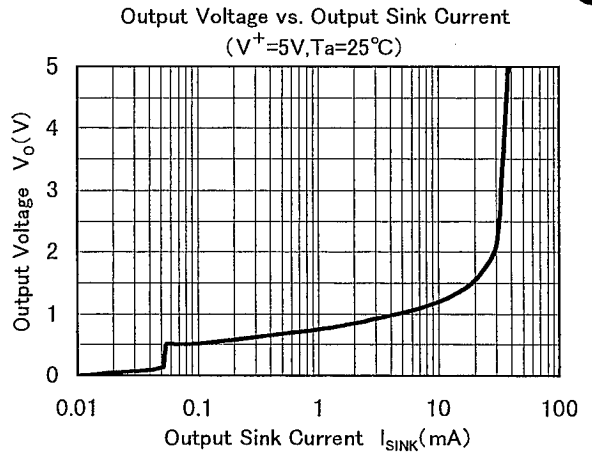
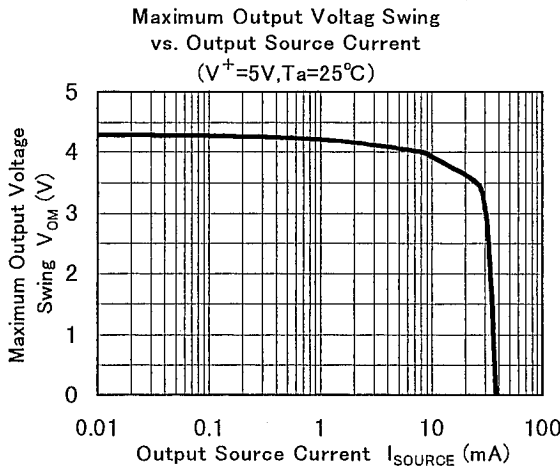
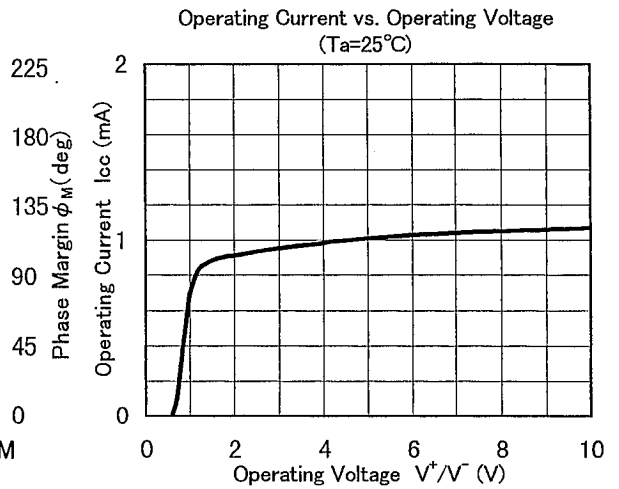
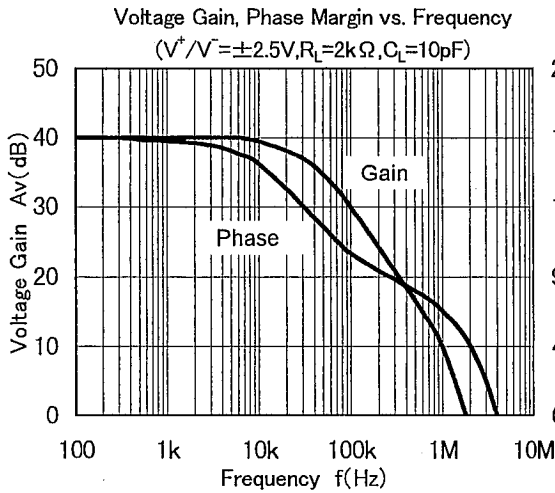
■ ELECTRICAL CHARACTERISTICS

(V⁺=5V, Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	V _{IO}	R _S =0Ω	—	2	7	mV
Input Offset Current	I _{IO}		—	5	50	nA
Input Bias Current	I _B		—	25	250	nA
Large Signal Voltage Gain	A _V	R _L ≥2kΩ	88	100	—	dB
Maximum Output Voltage Swings	V _{OM}	R _L =2kΩ	3.5	—	—	V
Input Common Mode Voltage Range	V _{ICM}		0~3.5	—	—	V
Common Mode Rejection Ratio	CMR		70	90	—	dB
Supply Voltage Rejection Ratio	SVR		80	94	—	dB
Output Source Current	I _{SOURCE}	V _{IN} ⁺ =1V, V _{IN} ⁻ =0V	20	30	—	mA
Output Sink Current	I _{SINK}	V _{IN} ⁺ =0V, V _{IN} ⁻ =1V	8	20	—	mA
Operating Current	I _{CC}	R _L =∞	—	1.0	1.75	mA
Slew Rate	SR		—	1.2	—	V/μs
Unity Gain Frequency	f _T		—	1.2	—	MHz

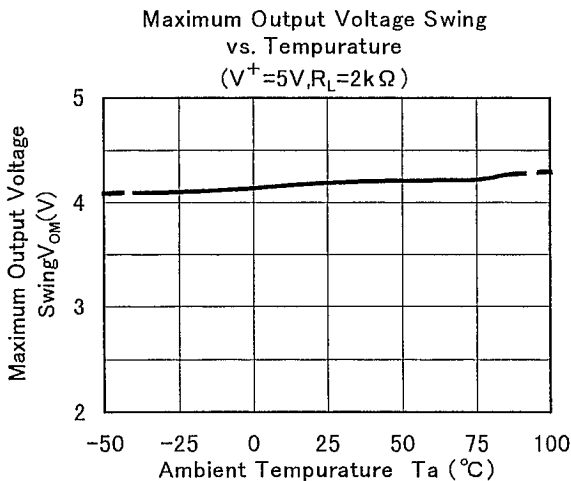
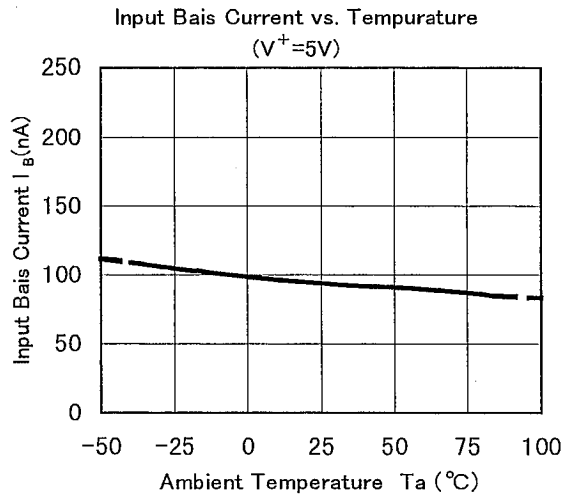
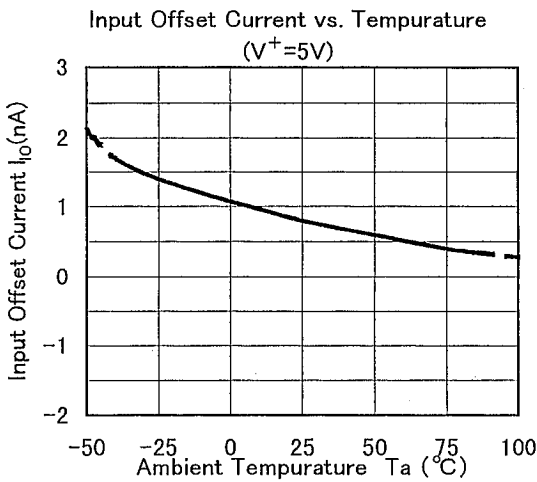
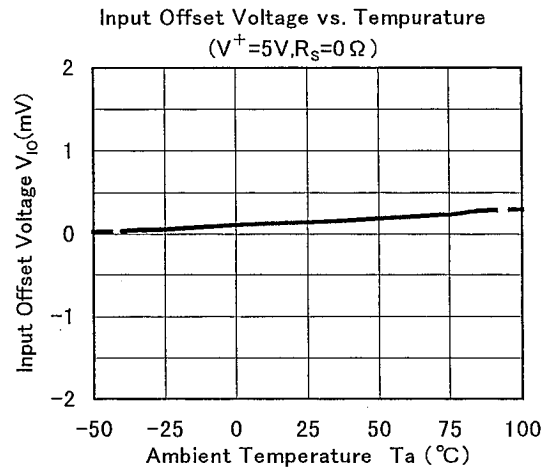
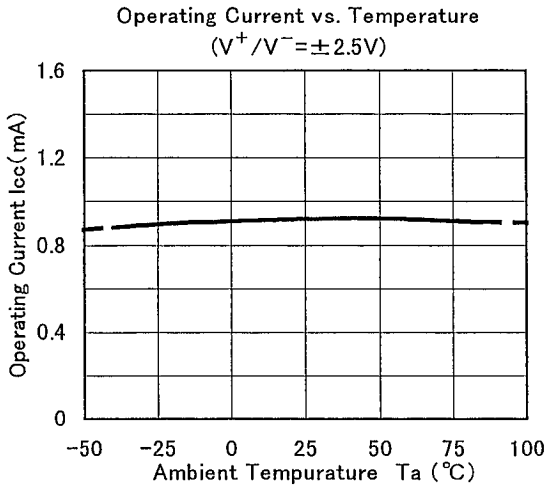
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■ TYPICAL CHARACTERISTICS



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■ TYPICAL CHARACTERISTICS



MEMO

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