

SINGLE SUPPLY HIGH-SLEW RATE SINGLE OPERATIONAL AMPLIFIER

■ GENERAL DESCRIPTION

The NJM2716 is single supply single high slew rate operational amplifier.

It is applicable to A/D converters, FAX, scanner which require the single supply operation and high slew rate.

■ PACKAGE OUTLINE

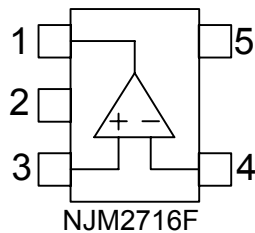


NJM2716F

■ FEATURES

- Single Supply
- Operating Voltage +2.7V to 12V
- Operating Current 5.5mA max.
- High Slew Rate 40V/ μ s typ.
- Bipolar Technology
- Package Outline SOT-23-5

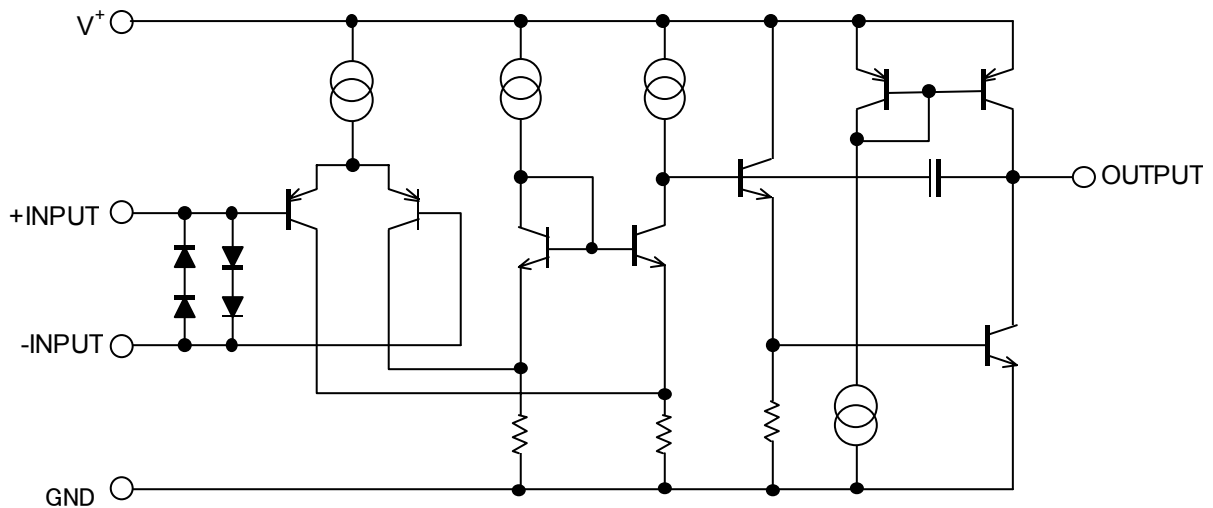
■ PIN CONFIGURATION



PIN FUNCTION

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

■ EQUIVALENT CIRCUIT



NJM2716

■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V ⁺	15.0	V
Power Dissipation	P _D	200	mW
Differential Input Voltage	V _{ID}	±3	V
Input Voltage	V _{IC}	-0.3 to +15 (note)	V
Output Sink Current	I _{SINK}	10	mA
Operating Temperature Range	T _{opr}	-40 to +85	°C
Storage Temperature Range	T _{stg}	-40 to +125	°C

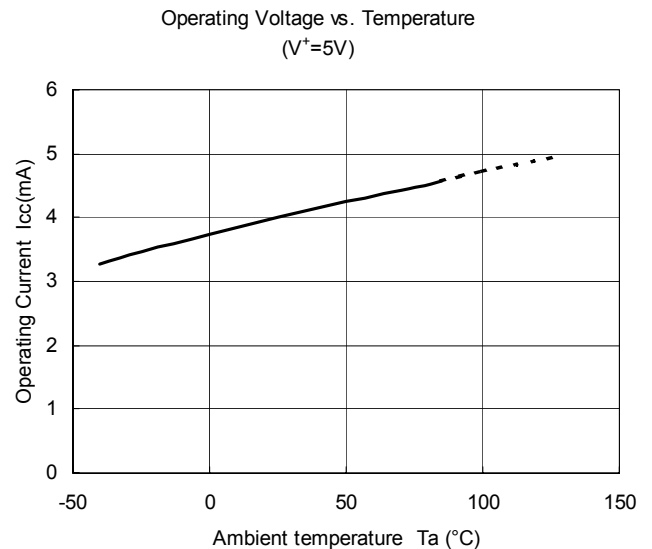
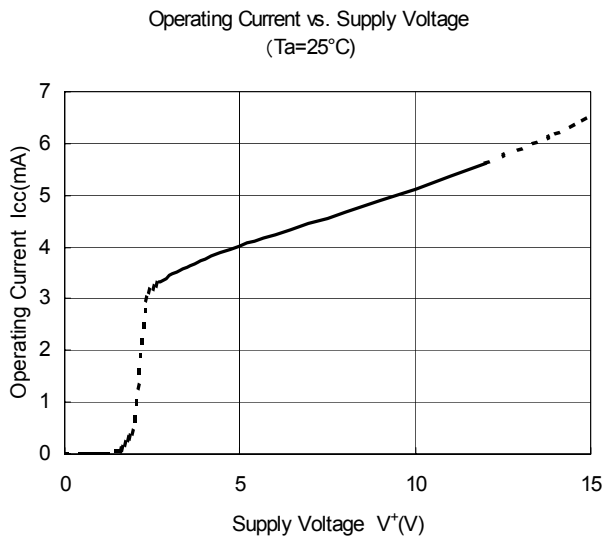
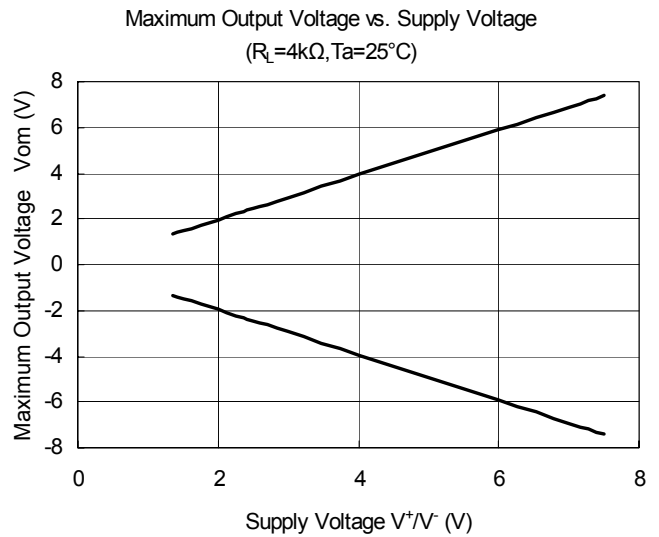
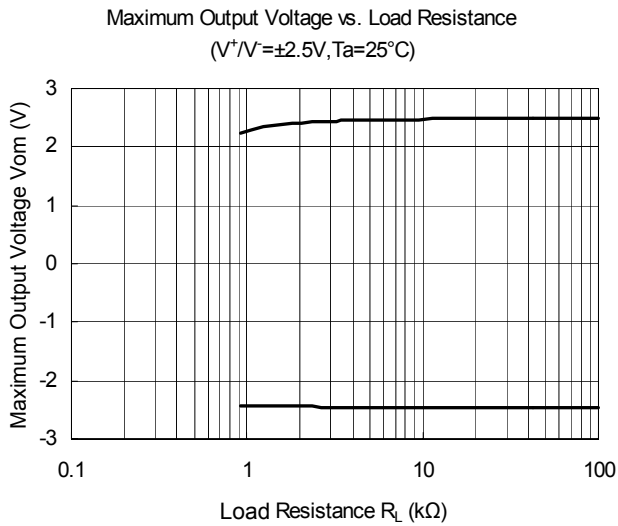
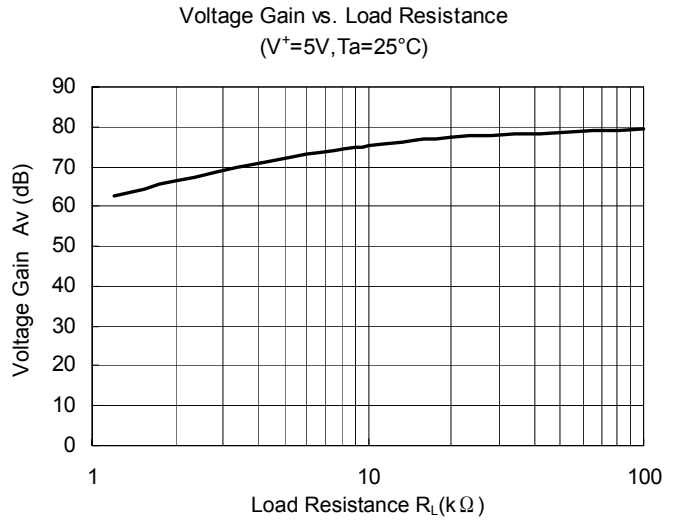
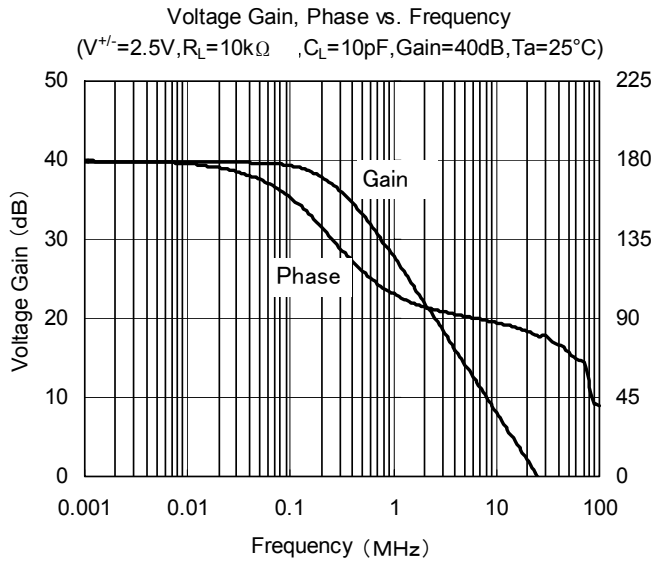
(note) When supply voltage is less than 15V, the absolute maximum input voltage is equal to the supply voltage.

■ ELECTRICAL CHARACTERISTICS (V⁺=5V, Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	V _{IO}	R _s =0Ω	-	1	10	mV
Input Offset Current	I _{IO}		-	0.2	0.5	μA
Input Bias Current	I _B		-	1	2.5	μA
Voltage Gain	A _V	R _L ≥10kΩ	60	75	-	dB
Input Common Mode Voltage Range	V _{ICM}		0 to 3.8	-	-	V
Common Mode Rejection Ratio	CMR		45	80	-	dB
Supply Voltage Rejection Ratio	SVR		50	75	-	dB
Maximum Output Voltage1	V _{OM} ⁺¹	R _L =4kΩ to GND	4.3	4.5	-	V
	V _{OM} ⁻¹		-	0.05	0.1	
Maximum Output Voltage 2	V _{OM} ⁺²	R _L =4kΩ to 2.5V	4.5	4.7	-	V
	V _{OM} ⁻²		-	0.1	0.5	
Output Source Current	I _{SOURCE}		1	2.5	-	mA
Output Sink Current	I _{SINK}		2.5	5	-	mA
Operating Current	I _{CC}	R _L =∞	-	4.2	5.5	mA
Slew Rate	SR		-	40	-	V/μs
Unity Gain Bandwidth	f _T		-	30	-	MHz

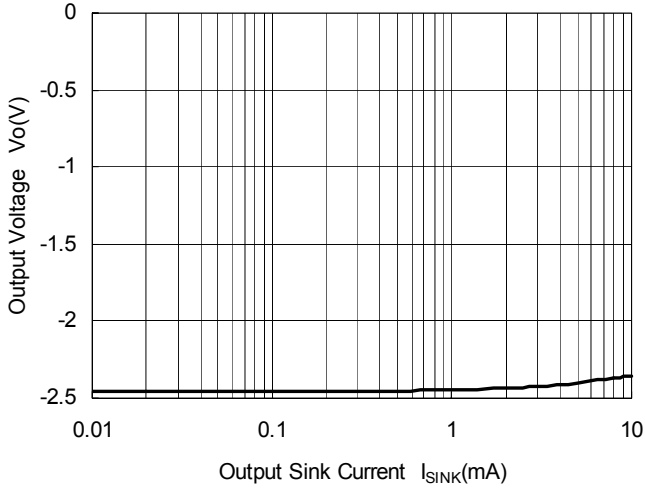
Ver.5

■ TYPICAL CHARACTERISTICS

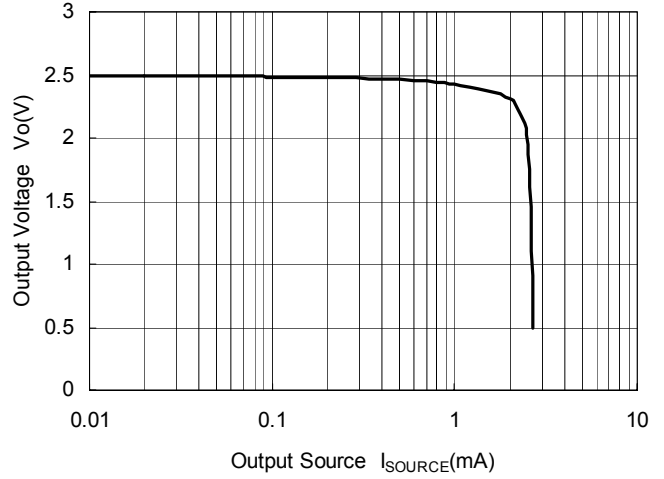


TYPICAL CHARACTERISTICS

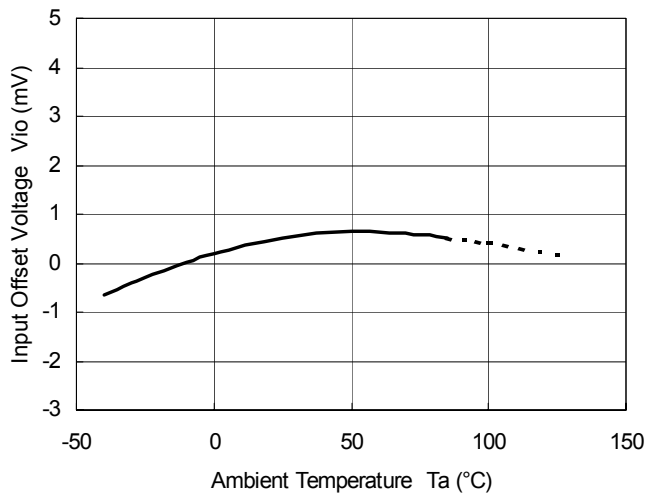
Output Voltage vs. Output Sink Current
($V^+/V^- = \pm 2.5V, T_a = 25^\circ C$)



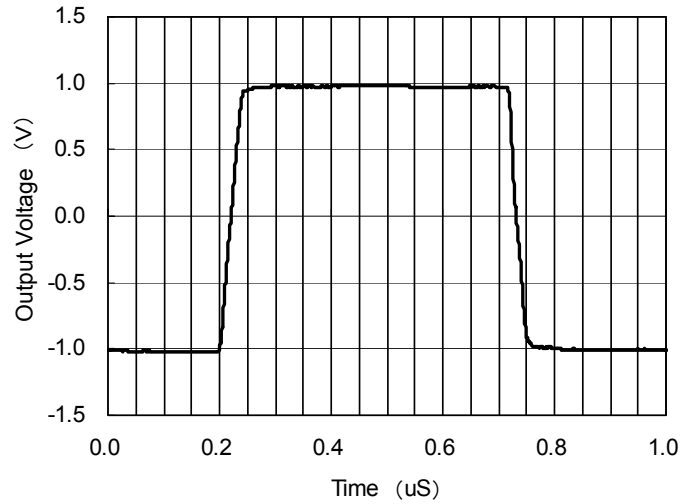
Output Voltage vs. Output Source Current
($V^+/V^- = \pm 2.5V, T_a = 25^\circ C$)



Input Offset Voltage vs. Temperature
($V^+ = 5V$)



Output Voltage vs. Time
($V^+/V^- = \pm 2.5V, V_{in} = 2V_{pp}, f = 1MHz, R_L = 10k\Omega, C_L = 10pF, A_v = 0dB$)



MEMO

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