

SINGLE SUPPLY HI-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

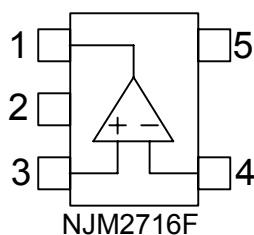


NJM2716F

■ FEATURES

- Single Supply
- Operating Voltage +2.7V to 12V
- Operating Current 5.5mA max.
- High Slew Rate 40V/μs typ.
- Bipolar Technology
- Package Outline MTP5

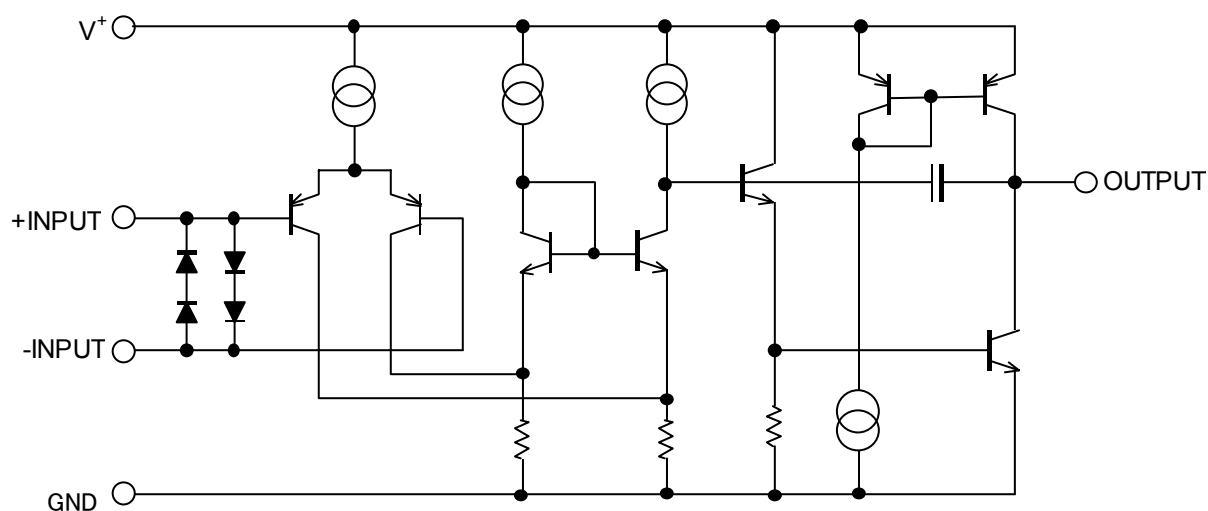
■ PIN CONFIGURATION



PIN FUNCTION

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

■ EQUIVALENT CIRCUIT



■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

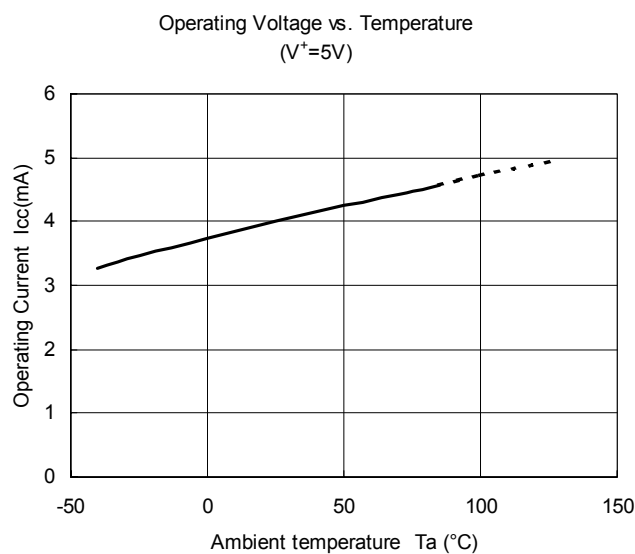
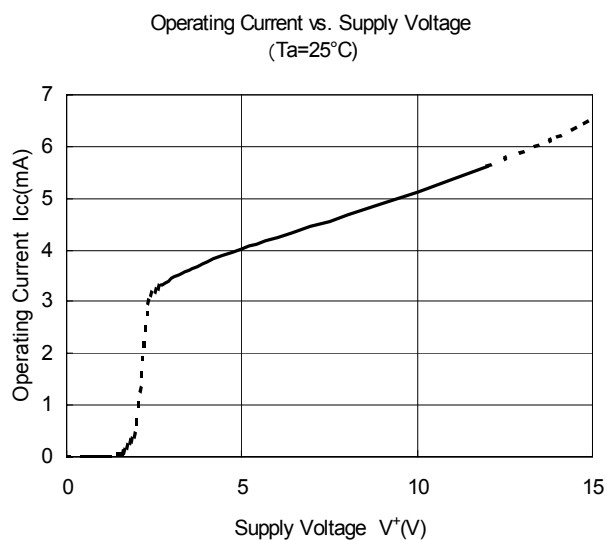
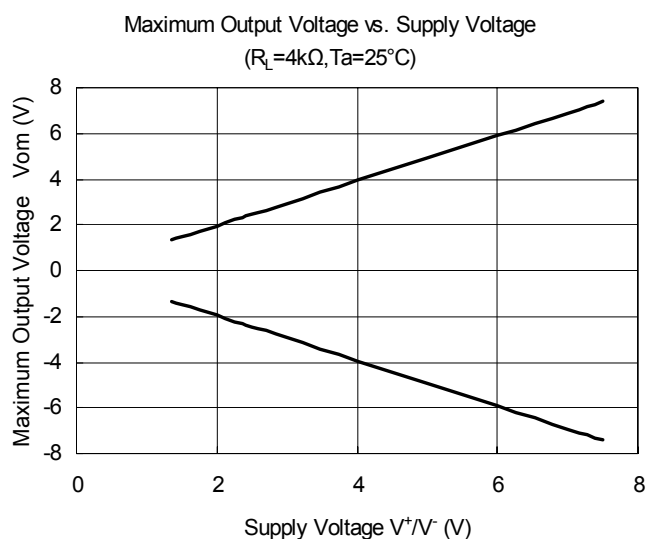
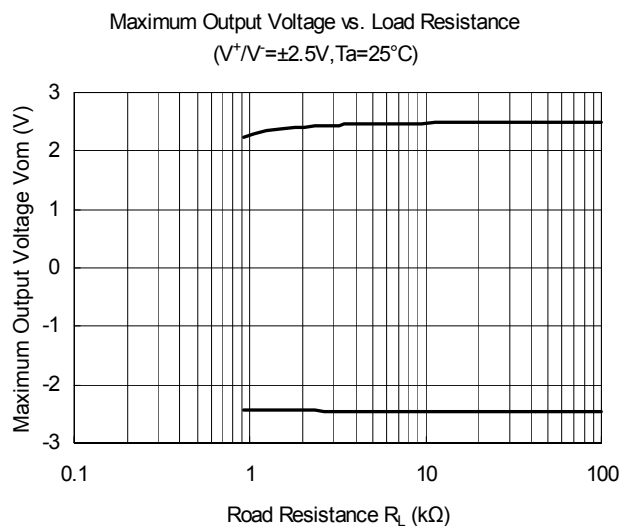
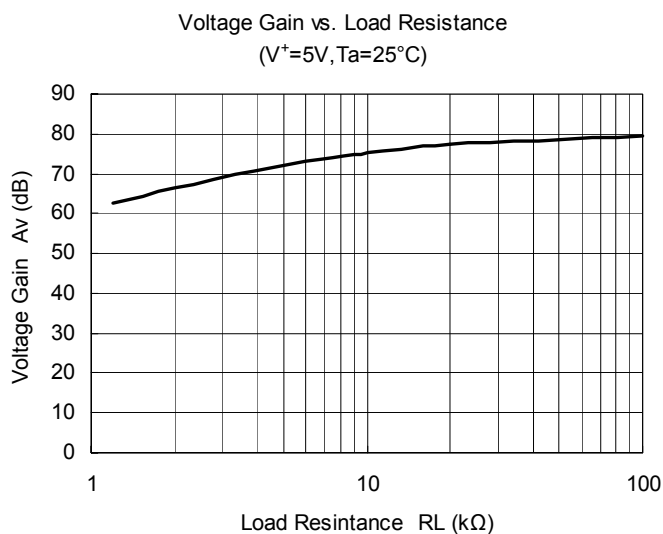
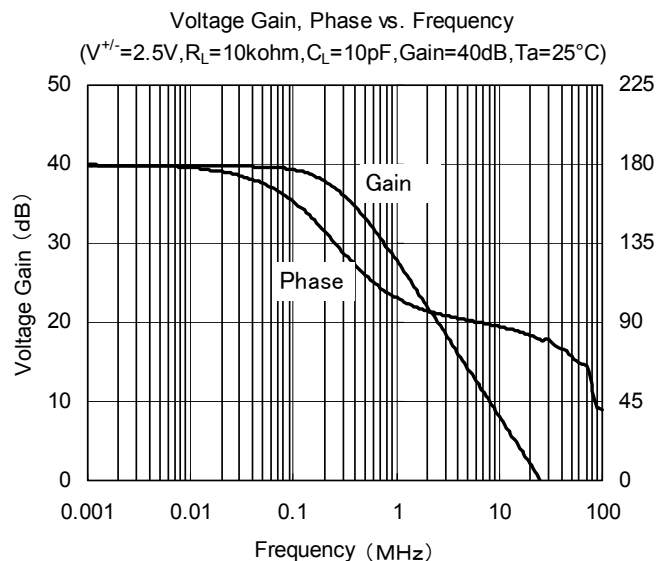
PARAMETER	SYMBOL	RATINGS	UNIT
Supply Voltage	V^+	15.0	V
Power Dissipation	P_D	200	mW
Differential Input Voltage	V_{ID}	± 3	V
Input Voltage	V_{IC}	-0.3 to +15 (note)	V
Output Sink Current	I_{SINK}	10	mA
Operating Temperature Range	T_{opr}	-40 to +85	°C
Storage Temperature Range	T_{stg}	-40 to +125	°C

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

■ ELECTRICAL CHARACTERISTICS ($V^+=5V, T_a=25^\circ C$)

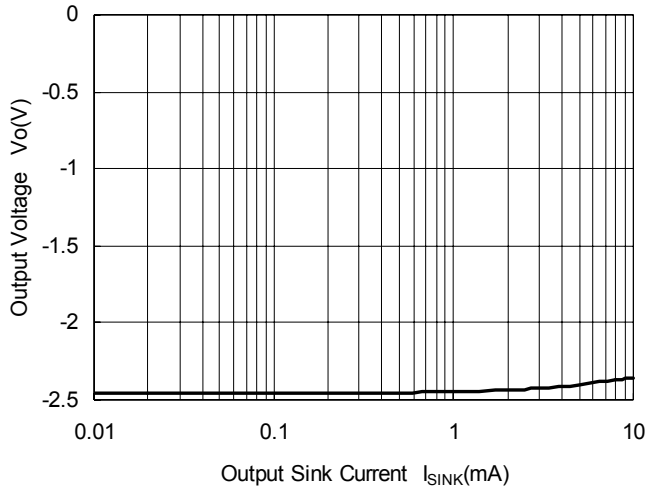
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Input Offset Voltage	V_{IO}	$R_s=0\Omega$	-	1	10	mV
Input Offset Current	I_{IO}		-	0.2	0.5	μA
Input Bias Current	I_B		-	1	2.5	μA
Voltage Gain	A_V	$R_L \geq 10k\Omega$	60	75	-	dB
Input Common Mode Voltage Range	V_{ICM}		0 to 3.8	-	-	V
Common Mode Rejection Ratio	CMR		45	80	-	dB
Supply Voltage Rejection Ratio	SVR		50	75	-	dB
Maximum Output Voltage1	V_{OM}^{+1}	$R_L=4k\Omega$ to GND	4.3	4.5	-	V
	V_{OM}^{-1}		-	0.05	0.1	
Maximum Output Voltage 2	V_{OM}^{+2}	$R_L=4k\Omega$ 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}	$R_L=\infty$	-	4.2	5.5	mA
Slew Rate	SR		-	40	-	V/ μs
Unity Gain Bandwidth	f_T		-	30	-	MHz

TYPICAL CHARACTERISTICS

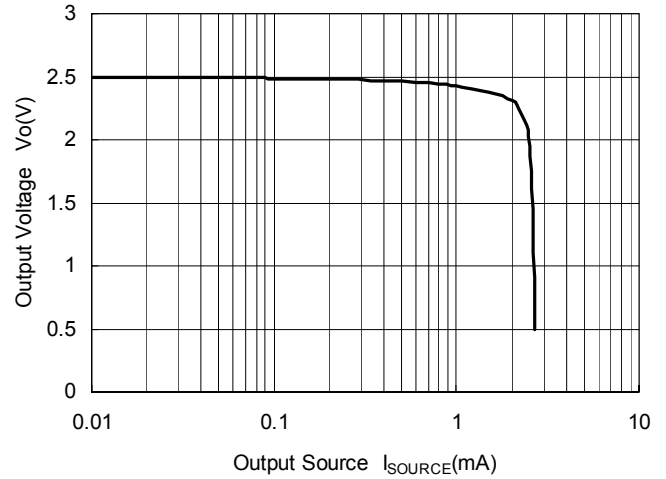


TYPICAL CHARACTERISTICS

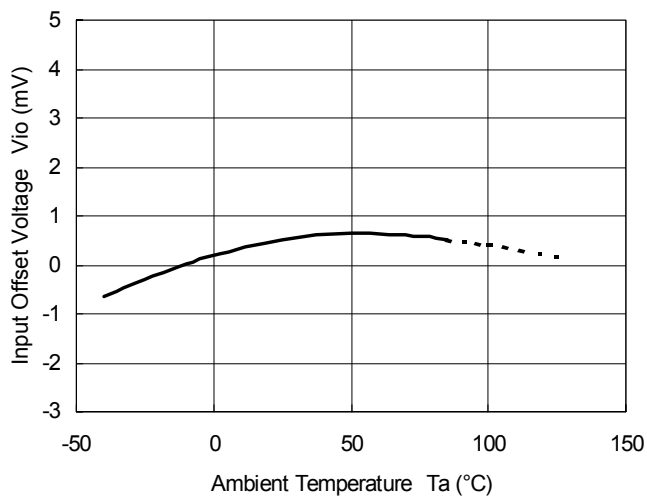
Output Voltage vs. Output Sink Current
($V^+/V^- = \pm 2.5V$, $T_a = 25^\circ C$)



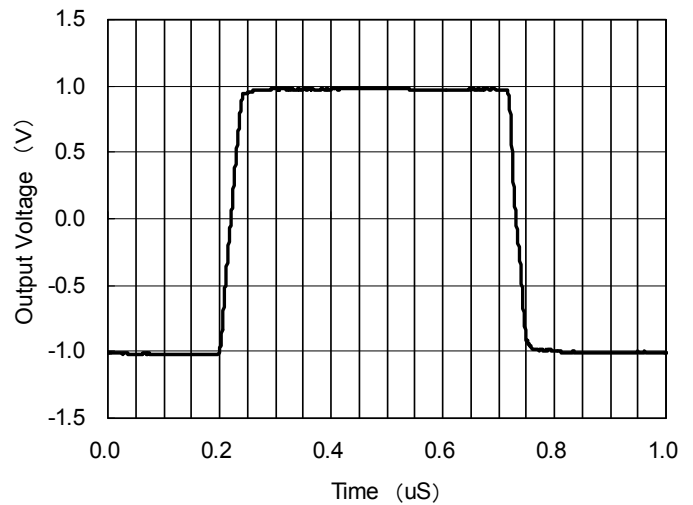
Output Voltage vs. Output Source Current
($V^+/V^- = \pm 2.5V$, $T_a = 25^\circ C$)



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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