

## ADJUSTABLE LOW DROPOUT VOLTAGE REGULATOR

### ■ GENERAL DESCRIPTION

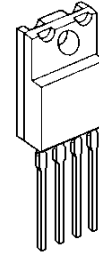
The NJM2397 is adjustable low dropout voltage regulator. The output current is up to 1.5A and dropout voltage is 0.2Vtyp. at  $I_o=0.5A$ .

The NJM2397 is suitable for power module, TV, Display, car stereo and low power applications.

### ■ FEATURE

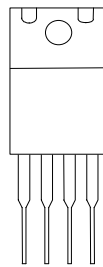
- Low Dropout Voltage                     $\Delta V_{I-O}=0.2V$  typ. at  $I_o=0.5A$
- Output Current                          $I_o(\max.)=1.5A$
- Reference Voltage                       $V_{ref}=1.29V$  typ.
- Internal Short Circuit Current Limit
- Internal Overvoltage Protection
- Internal Thermal Overload Protection
- Bipolar Technology
- Package Outline                        TO-220F(4pin)

### ■ PACKAGE OUTLINE



NJM2397F

### ■ PIN CONFIGURATION



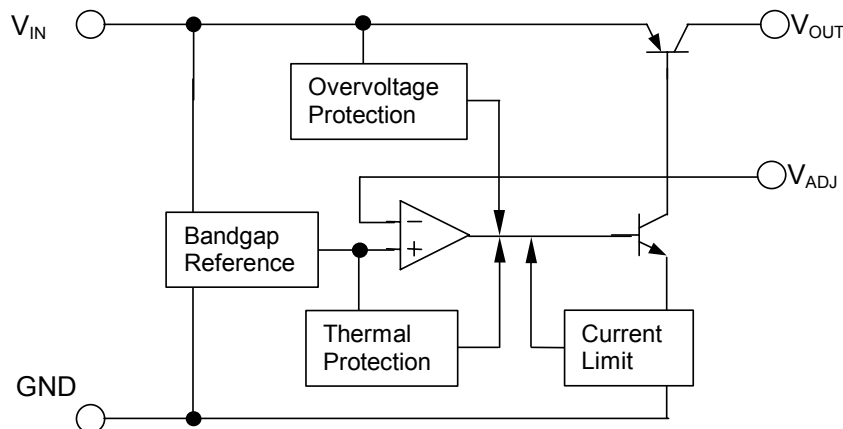
1 2 3 4

NJM2397F

### PIN FUNCTION

1.  $V_{IN}$
2.  $V_{OUT}$
3. GND
4. ADJ

### ■ EQUIVALENT CIRCUIT



# NJM2397

## ■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

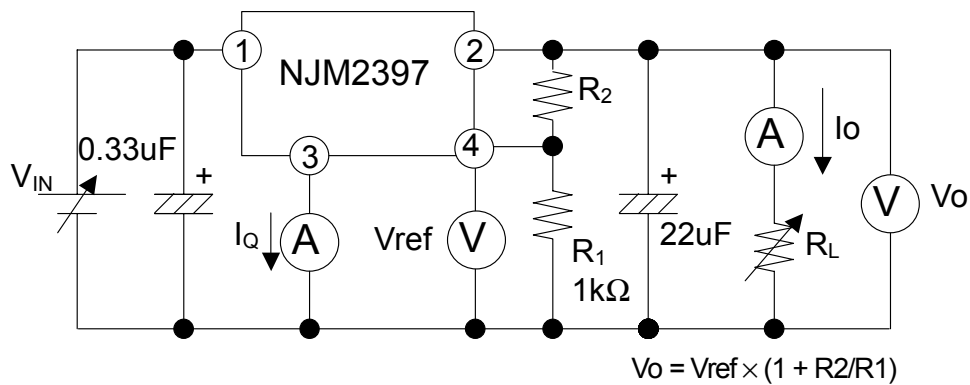
PARAMETER	SYMBOL	RATINGS	UNIT
Input Voltage	V <sub>IN</sub>	+35	V
Adjust terminal Voltage	V <sub>ADJ</sub>	+6	V
Output Current	I <sub>o</sub>	1.5	A
Power Dissipation	P <sub>D</sub>	18(Tc<50°C)	W
Operating Junction Temperature Range	T <sub>j</sub>	-40 to +150	°C
Operating Temperature Range	Topr	-40 to 85	°C
Storage Temperature Range	Tstg	-50 to 150	°C

## ■ ELECTRICAL CHARACTERISTICS (V<sub>IN</sub>=15V, V<sub>o</sub>=10V, I<sub>o</sub>=0.5A, R<sub>1</sub>=1kΩ, C<sub>IN</sub>=0.33uF, C<sub>o</sub>=22uF, T<sub>j</sub>=25°C)

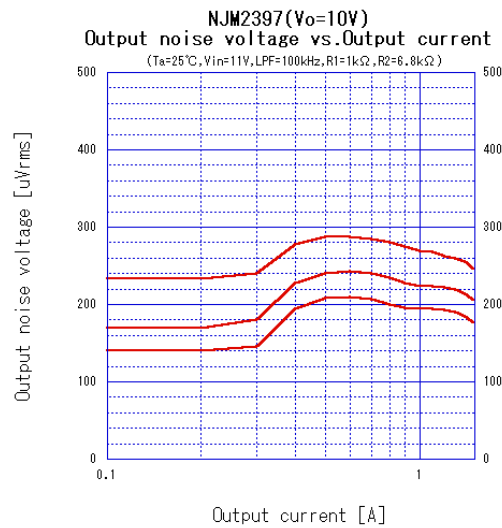
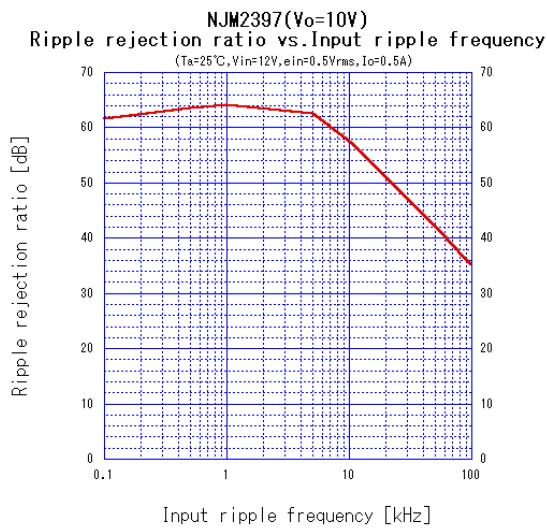
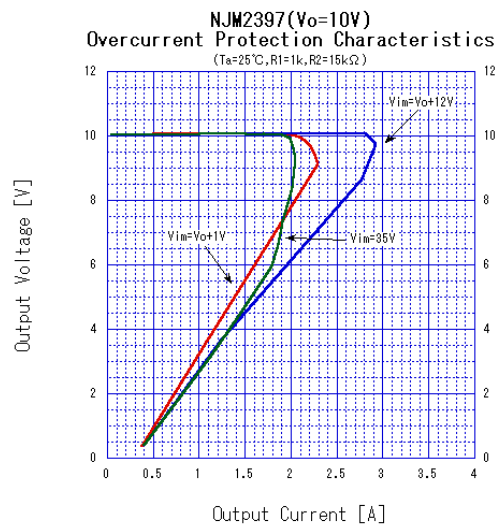
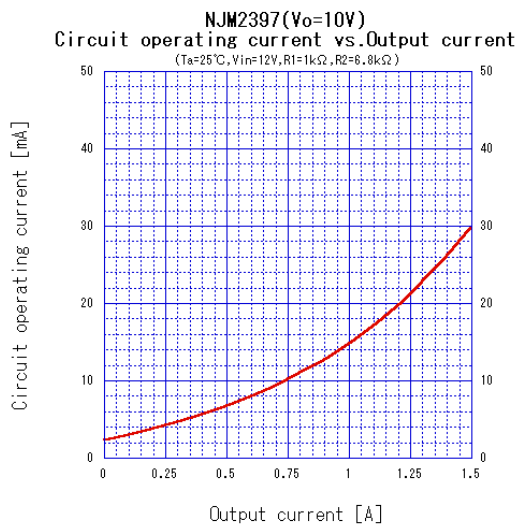
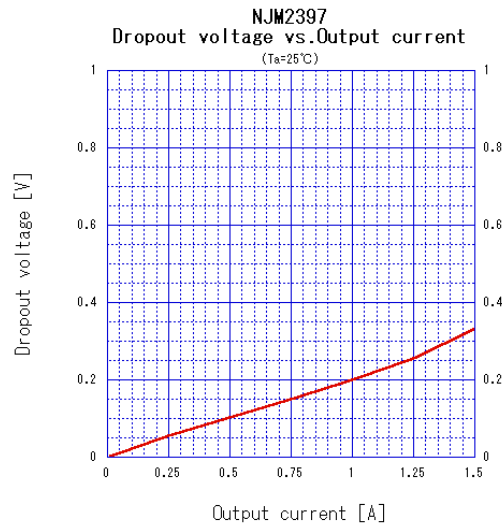
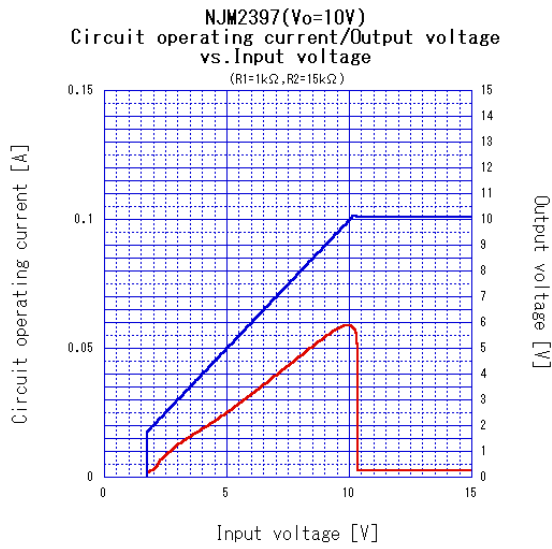
Measurement is to be conducted is pulse testing.

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Input Voltage	V <sub>IN</sub>		3.8	-	35	V
Output Voltage	V <sub>o</sub>		1.5	-	20	V
Reference Voltage	V <sub>ref</sub>		1.238	1.29	1.342	V
Line Regulation	$\Delta V_o / \Delta V_{IN}$	V <sub>IN</sub> =V <sub>o</sub> +1V~V <sub>o</sub> +17V	-	0.04	0.16	%/V
Load Regulation	$\Delta V_o / \Delta I_o$	V <sub>IN</sub> =V <sub>o</sub> +2V, I <sub>o</sub> =0A~1.5A	-	0.2	1.4	%/A
Average Temperature Coefficient of Output Voltage	$\Delta V_o / \Delta T$	T <sub>j</sub> =0~125°C	-	±0.02	-	%/°C
Quiescent Current	I <sub>Q</sub>	I <sub>o</sub> =0A	-	-	5	mA
Dropout Voltage	$\Delta V_{I_o}$	I <sub>o</sub> =0.5A	-	0.2	0.5	V
Ripple Rejection	RR	V <sub>in</sub> =V <sub>o</sub> +2V, e <sub>in</sub> =0.5Vrms, f=120Hz	45	55	-	dB

## ■ TEST CIRCUIT

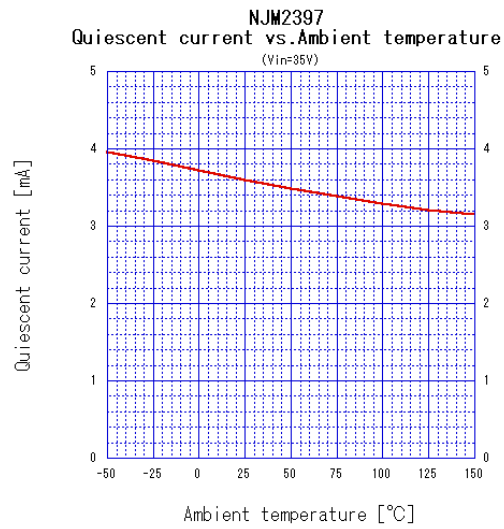
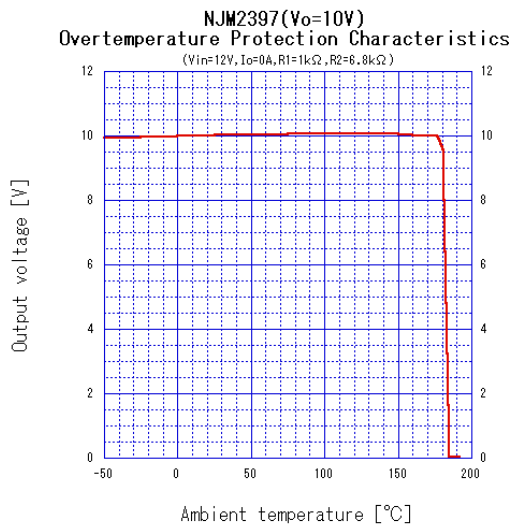
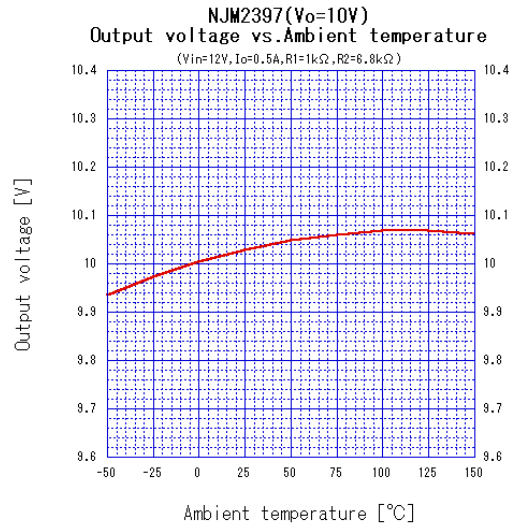
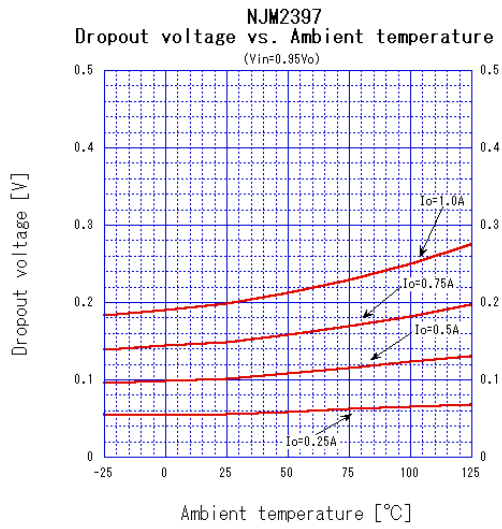


## ■ TYPICAL CHARACTERISTICS



# NJM2397

## ■ TYPICAL CHARACTERISTICS



**[CAUTION]**

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