

## ADJUSTABLE LOW DROPOUT VOLTAGE REGULATOR

### ■ GENERAL DESCRIPTION

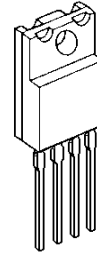
The NJM2397 is adjustable low dropout voltage regulator. The output current is up to 1.5A and dropout voltage is 0.2Vtyp. at  $I_o=0.5A$ .

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

### ■ FEATURE

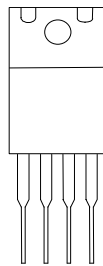
- Low Dropout Voltage       $\Delta V_{I-O}=0.2V$  typ. at  $I_o=0.5A$
- Output Current               $I_o(max.)=1.5A$
- Reference Voltage           $V_{ref}=1.29V$  typ.
- Internal Short Circuit Current Limit
- Internal Thermal Overload Protection
- Bipolar Technology
- Package Outline             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

### ■ PACKAGE OUTLINE



NJM2397F

### ■ PIN CONFIGURATION



1 2 3 4

NJM2397F

### PIN FUNCTION

1. IN
2. OUT
3. GND
4. ADJ

### ■ ABSOLUTE MAXIMUM RATINGS

( $T_a=25^{\circ}C$ )

PARAMETER	SYMBOL	RATINGS	UNIT
Input Voltage	$V_{IN}$	+35	V
Adjust terminal Voltage	$V_{ADJ}$	+6	V
Output Current	$I_o$	1.5	A
Power Dissipation	$P_D$	18( $T_c<50^{\circ}C$ )	W
Operating Junction Temperature Range	$T_j$	-40 to +150	$^{\circ}C$
Operating Temperature Range	$T_{opr}$	-40 to +85	$^{\circ}C$
Storage Temperature Range	$T_{stg}$	-50 to +150	$^{\circ}C$

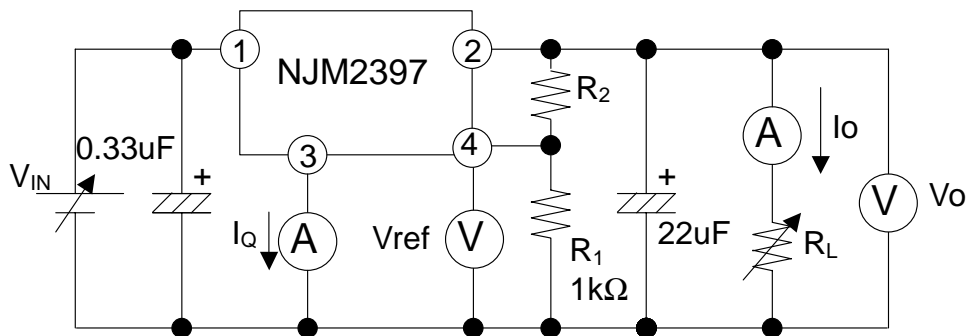
# NJM2397

■ ELECTRICAL CHARACTERISTICS ( $V_{IN}=15V$ ,  $V_o=10V$ ,  $I_o=0.5A$ ,  $R_1=1k\Omega$ ,  $C_{IN}=0.33\mu F$ ,  $C_o=22\mu F$ ,  $T_j=25^\circ C$ )

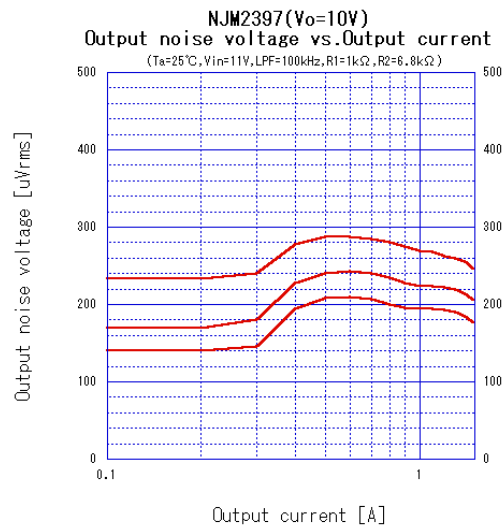
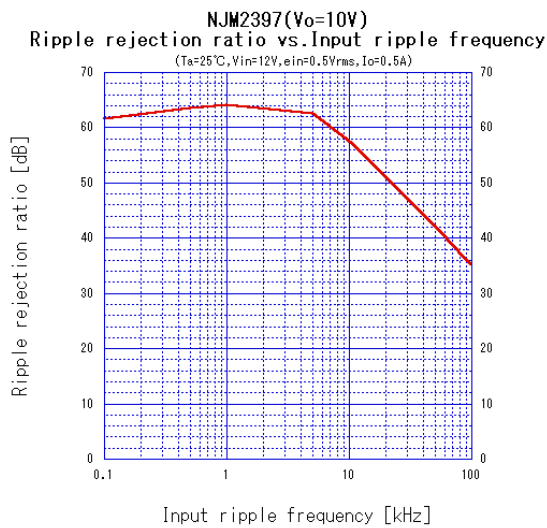
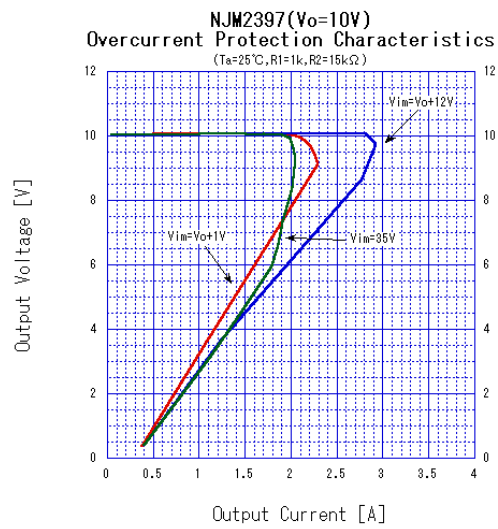
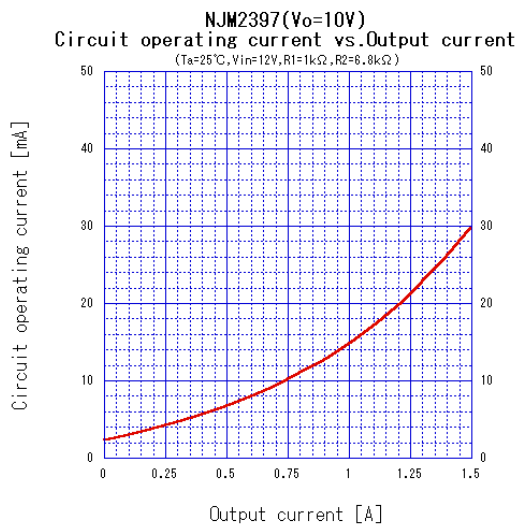
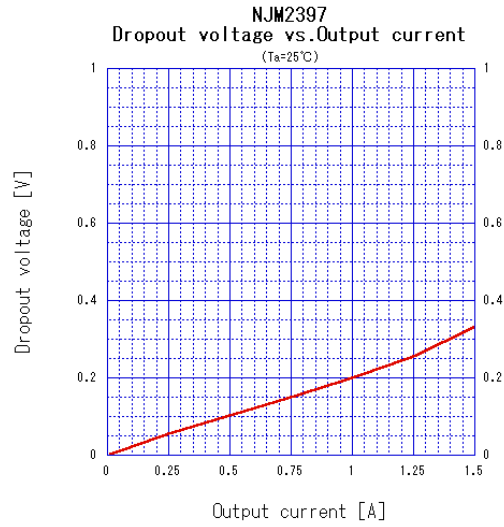
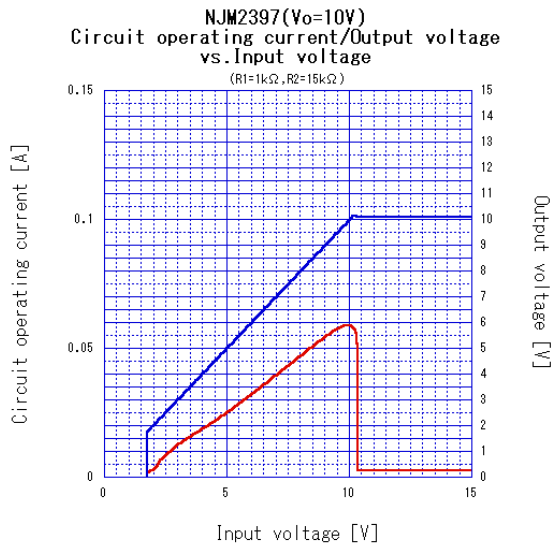
Measurement is to be conducted is pulse testing.

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Input Voltage	$V_{IN}$		3.8	-	35	V
Output Voltage	$V_o$		1.5	-	20	V
Reference Voltage	$V_{ref}$		1.238	1.29	1.342	V
Line Regulation	$\Delta V_o - V_{IN}$	$V_{IN}=V_o+1V \sim V_o+17V$	-	0.04	0.16	%/V
Load Regulation	$\Delta V_o - I_o$	$V_{IN}=V_o+2V$ , $I_o=0A \sim 1.5A$	-	0.2	1.4	%/A
Average Temperature Coefficient of Output Voltage	$\Delta V_o / \Delta T$	$T_j=0 \sim 125^\circ C$	-	$\pm 0.02$	-	%/°C
Quiescent Current	$I_Q$	$I_o=0A$	-	-	5	mA
Dropout Voltage	$\Delta V_{I,O}$	$I_o=0.5A$	-	0.2	0.5	V
Ripple Rejection	RR	$V_{in}=V_o+2V$ , $e_{in}=0.5V_{rms}$ , $f=120Hz$	45	55	-	dB

## ■ TEST CIRCUIT

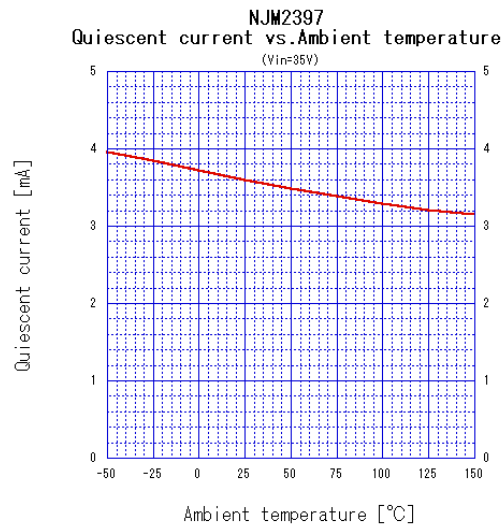
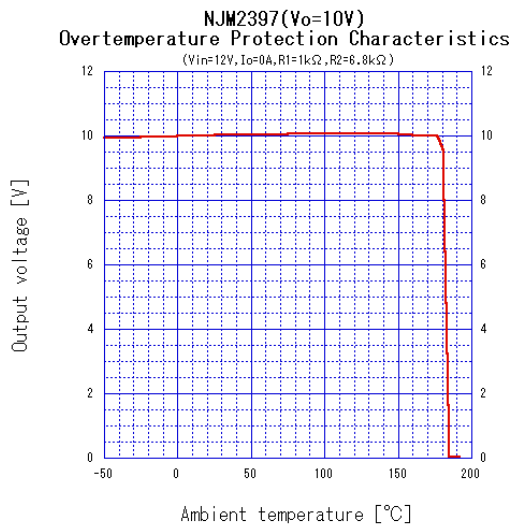
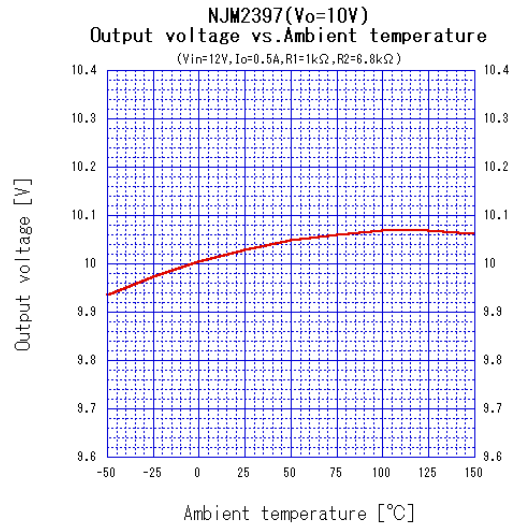
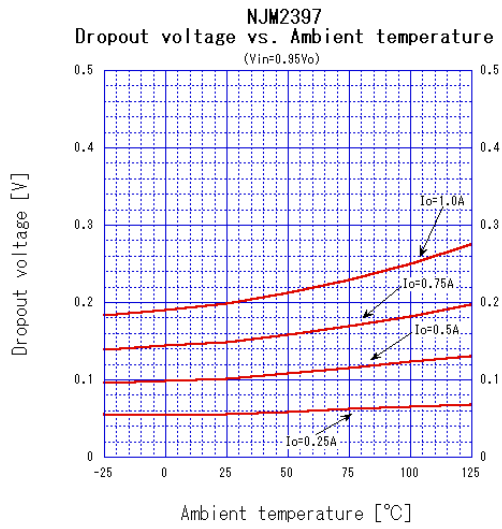


## TYPICAL CHARACTERISTICS



# NJM2397

## TYPICAL CHARACTERISTICS



**[CAUTION]**

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