

ADJUSTABLE LOW DROPOUT VOLTAGE REGULATOR

■ GENERAL DESCRIPTION

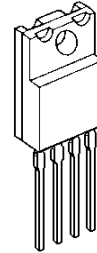
The NJM2397 is adjustable low dropout voltage regulator. The output current is up to 1.5A and dropout voltage is 0.2Vtyp. at $I_o=0.5A$.

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

■ FEATURE

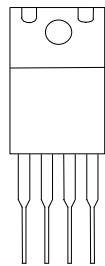
- Low Dropout Voltage $\Delta V_{I, O}=0.2V$ typ. at $I_o=0.5A$
- Output Current $I_o(\text{max.})=1.5A$
- Reference Voltage $V_{\text{ref}}=1.29V$ typ.
- Internal Short Circuit Current Limit
- Internal Thermal Overload Protection
- Bipolar Technology
- Package Outline TO-220F(4pin)

■ PACKAGE OUTLINE



NJM2397F

■ PIN CONFIGURATION

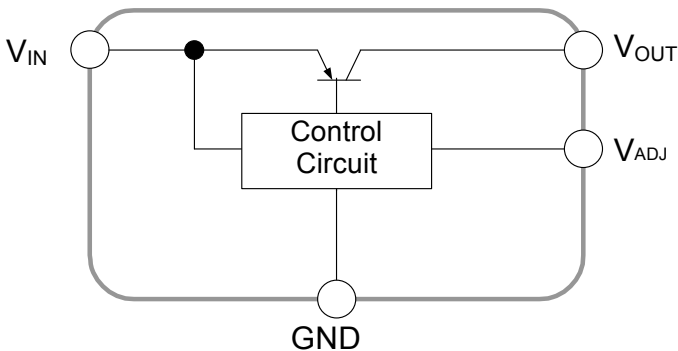


1 2 3 4
NJM2397F

PIN FUNCTION

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

■ EQUIVALENT CIRCUIT



NJM2397

■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

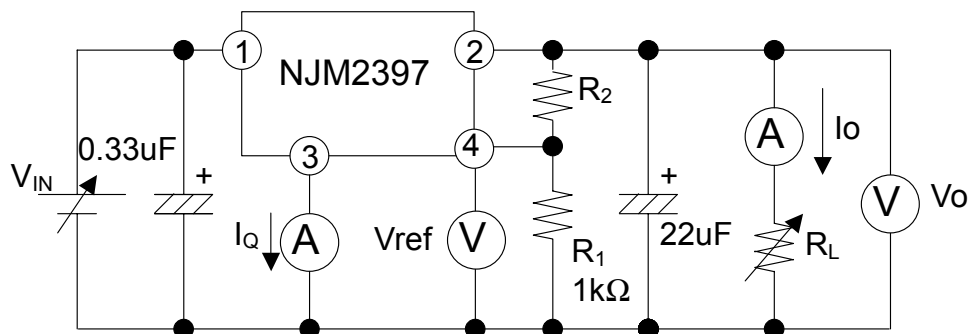
PARAMETER	SYMBOL	RATINGS	UNIT
Input Voltage	V_{IN}	+35	V
Adjust terminal Voltage	V_{ADJ}	+6	V
Output Current	I_o	1.5	A
Power Dissipation	P_D	18(Tc<50°C)	W
Operating Junction Temperature Range	T_j	-40 to +150	°C
Operating Temperature Range	T_{opr}	-40 to 85	°C
Storage Temperature Range	T_{stg}	-50 to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

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

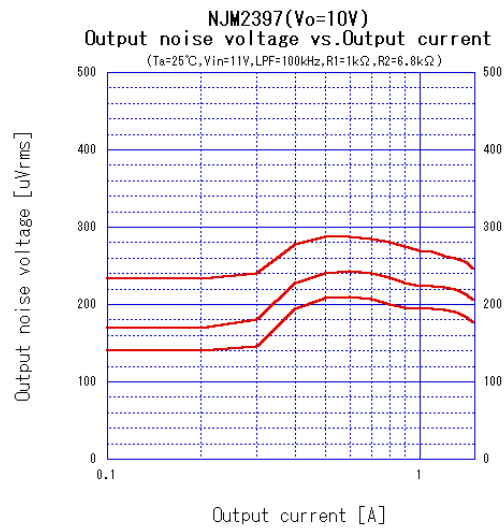
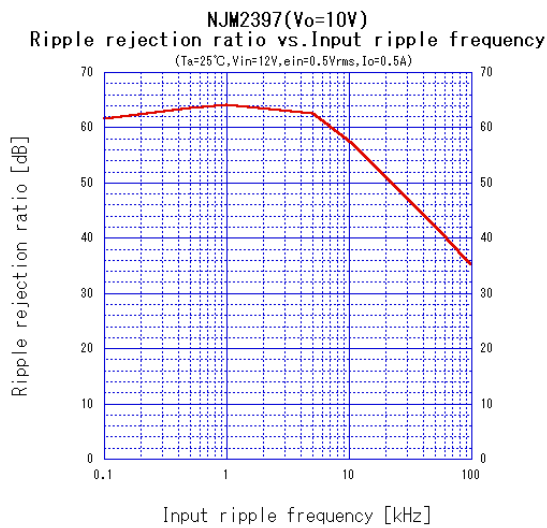
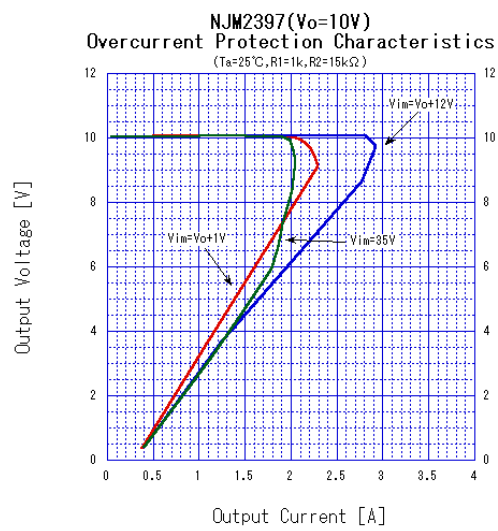
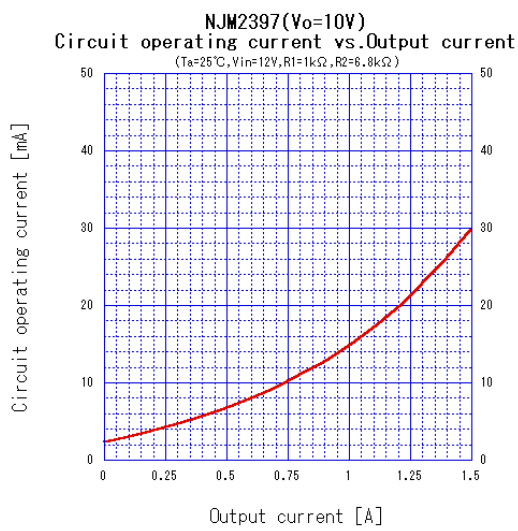
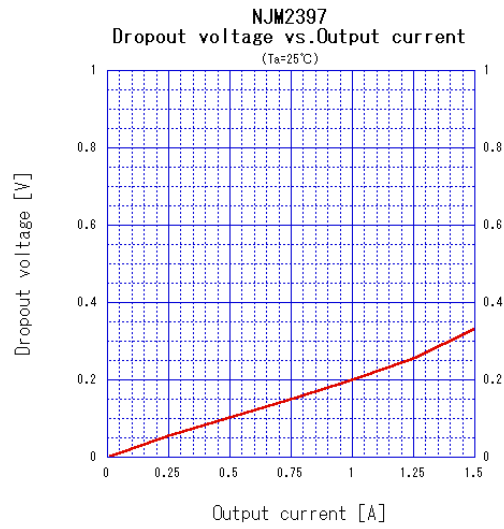
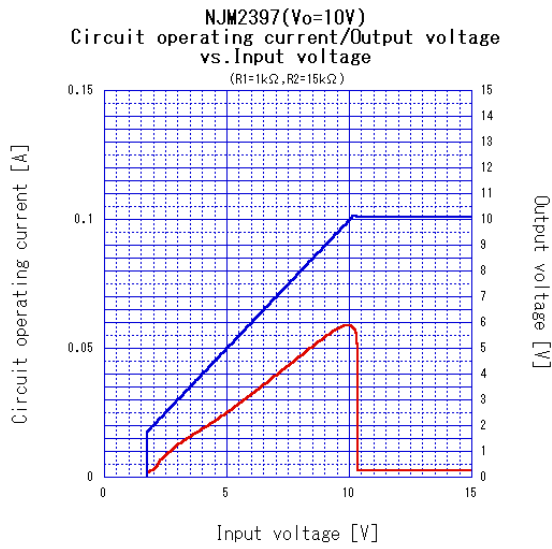
Measurement is to be conducted is pulse testing.

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	$\Delta V_o/\Delta V_{IN}$	$V_{IN}=V_o+1V\sim V_o+17V$	-	0.04	0.16	%/V
Load Regulation	$\Delta V_o/\Delta I_o$	$V_{IN}=V_o+2V$, $I_o=0A\sim 1.5A$	-	0.2	1.4	%/A
Average Temperature Coefficient of Output Voltage	$\Delta V_o/\Delta T$	$T_j=0\sim 125^\circ C$	-	± 0.02	-	%/°C
Quiescent Current	I_Q	$I_o=0A$	-	-	5	mA
Dropout Voltage	ΔV_{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

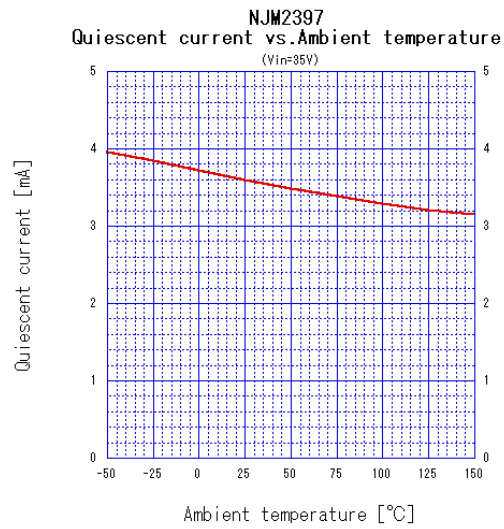
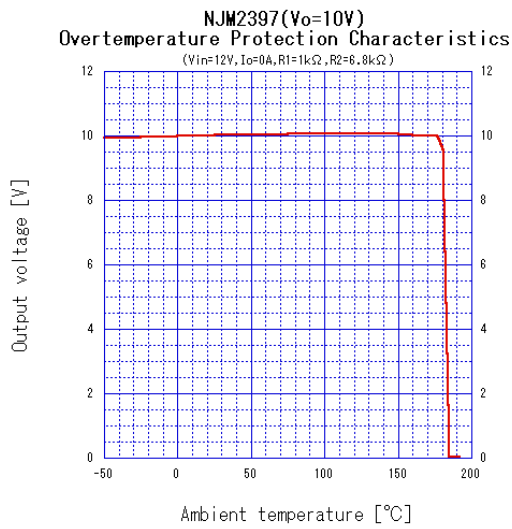
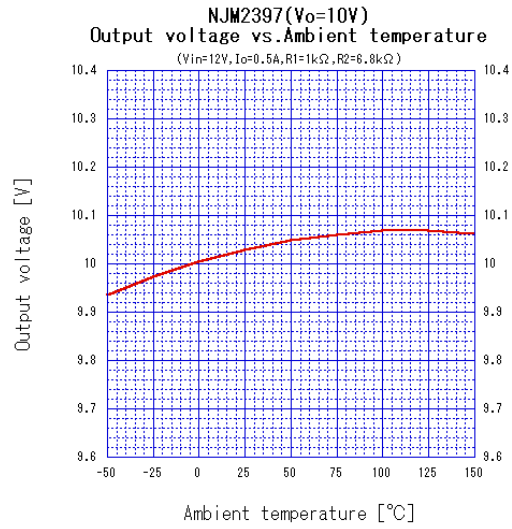
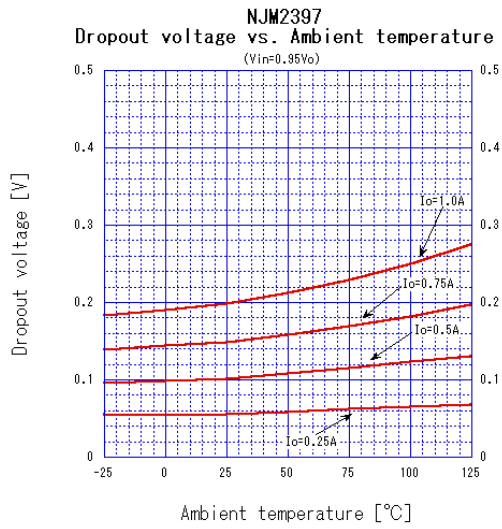


■ TYPICAL CHARACTERISTICS



NJM2397

■ TYPICAL CHARACTERISTICS



[CAUTION]

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