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ADJUSTABLE LOW DROPOUT VOLTAGE REGULATOR

■ GENERAL DESCRIPTION

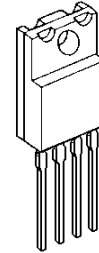
The NJM2397 is adjustable low dropout voltage regulator. The output current is up to 1.5A and dropout voltage is 0.2Vtyp. at $I_o=0.5A$.

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

■ FEATURE

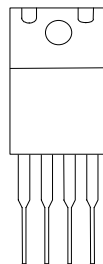
- Low Dropout Voltage $\Delta V_{I-O}=0.2V$ typ. at $I_o=0.5A$
- Output Current $I_o(max.)=1.5A$
- Reference Voltage $V_{ref}=1.29V$ typ.
- Internal Short Circuit Current Limit
- Internal Overvoltage Protection
- Internal Thermal Overload Protection
- Bipolar Technology
- Package Outline TO-220F(4pin)

■ PACKAGE OUTLINE



NJM2397F

■ PIN CONFIGURATION



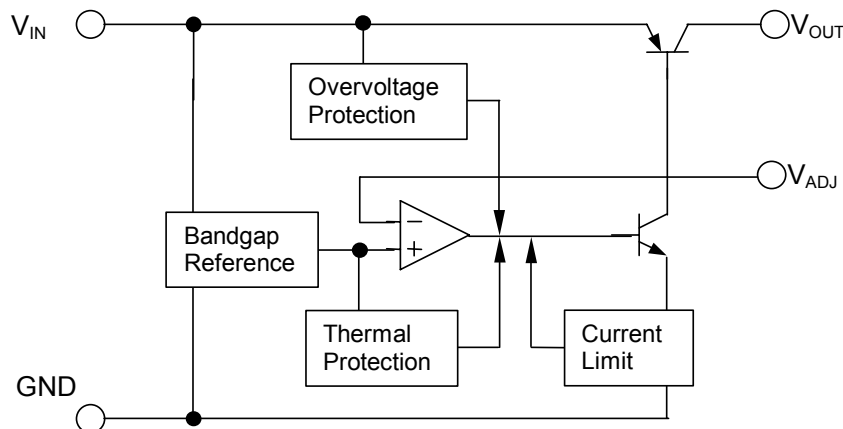
1 2 3 4

NJM2397F

PIN FUNCTION

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

■ EQUIVALENT CIRCUIT



NJM2397

■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

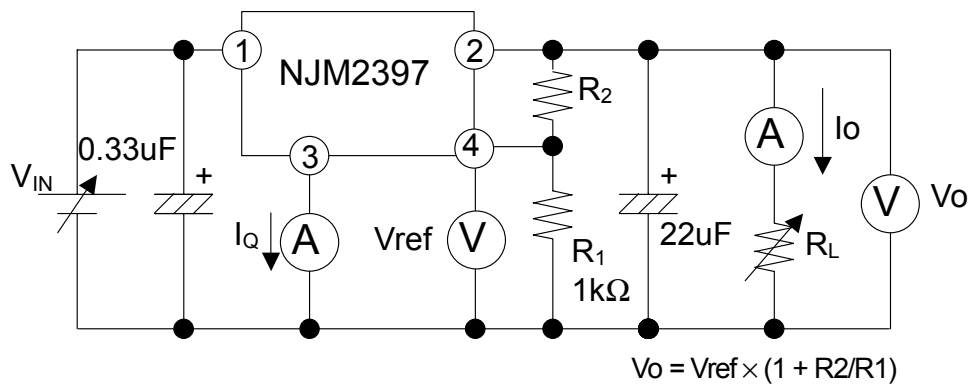
PARAMETER	SYMBOL	RATINGS	UNIT
Input Voltage	V _{IN}	+35	V
Adjust terminal Voltage	V _{ADJ}	+6	V
Output Current	I _o	1.5	A
Power Dissipation	P _D	18(Tc<50°C)	W
Operating Junction Temperature Range	T _j	-40 to +150	°C
Operating Temperature Range	Topr	-40 to 85	°C
Storage Temperature Range	Tstg	-50 to 150	°C

■ ELECTRICAL CHARACTERISTICS (V_{IN}=15V, V_o=10V, I_o=0.5A, R₁=1kΩ, C_{IN}=0.33uF, C_o=22uF, T_j=25°C)

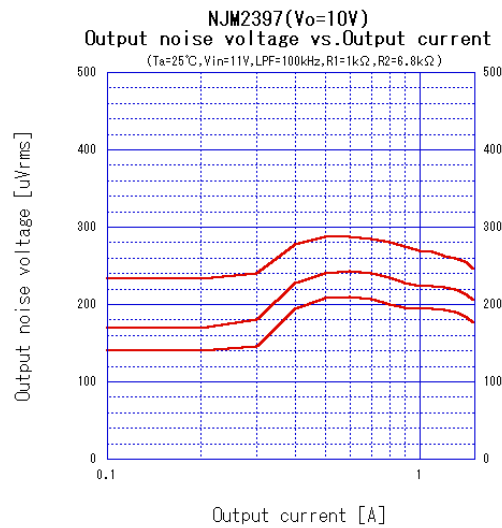
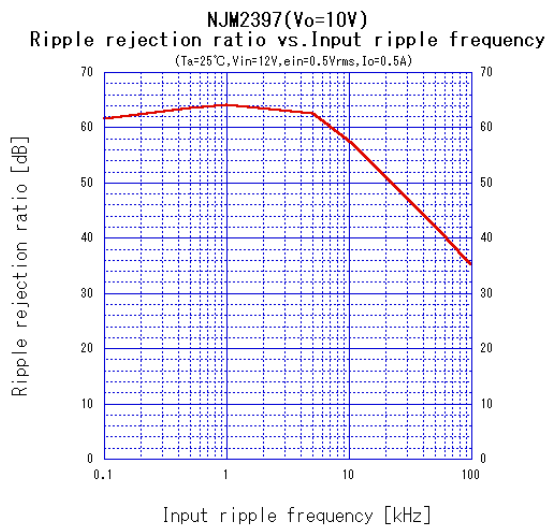
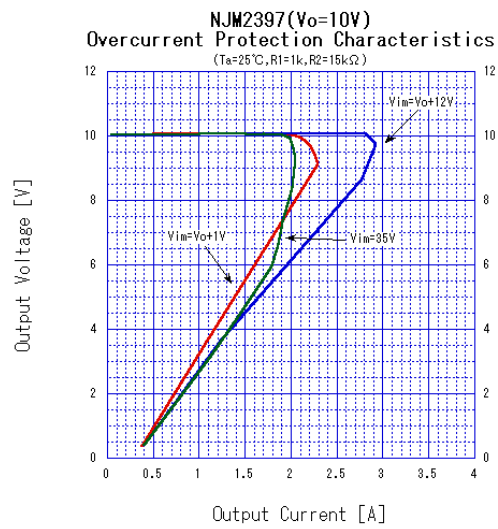
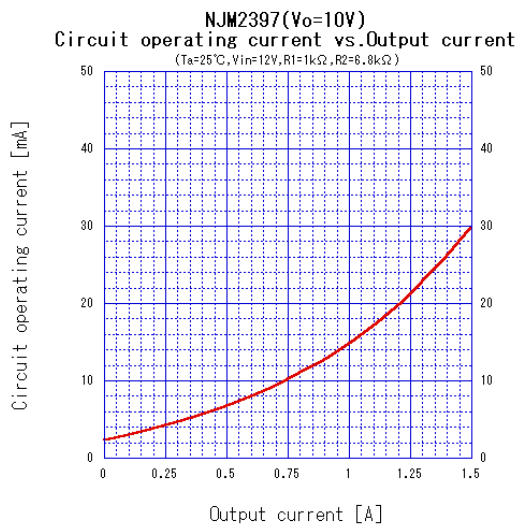
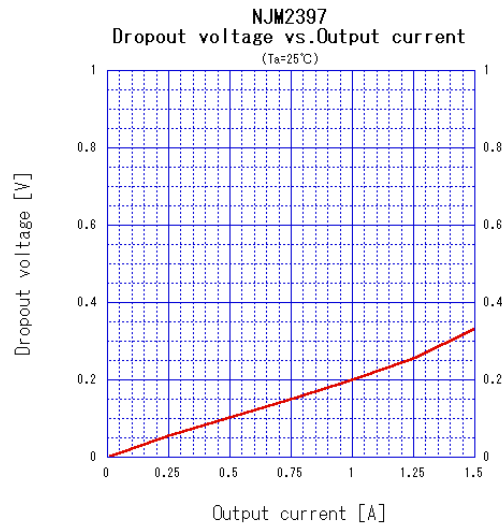
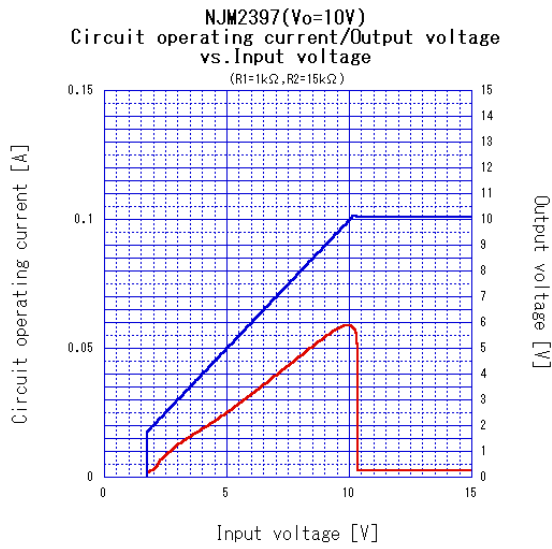
Measurement is to be conducted is pulse testing.

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~V _o +17V	-	0.04	0.16	%/V
Load Regulation	$\Delta V_o / \Delta I_o$	V _{IN} =V _o +2V, I _o =0A~1.5A	-	0.2	1.4	%/A
Average Temperature Coefficient of Output Voltage	$\Delta V_o / \Delta T$	T _j =0~125°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} =0.5Vrms, f=120Hz	45	55	-	dB

■ TEST CIRCUIT

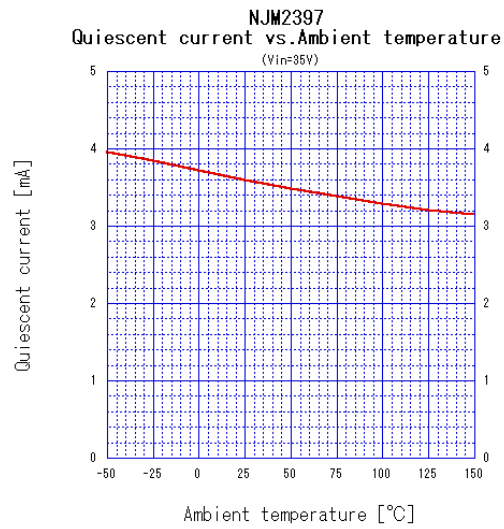
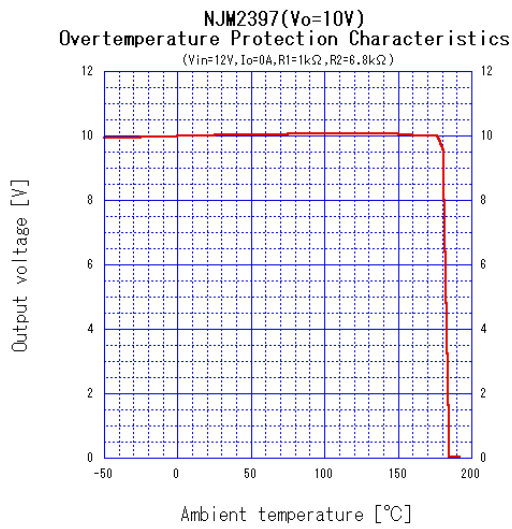
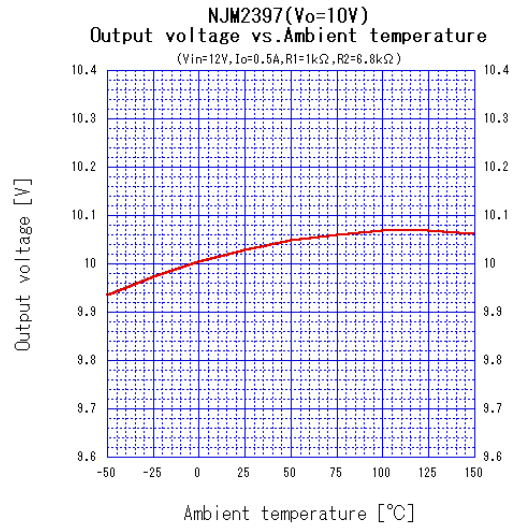
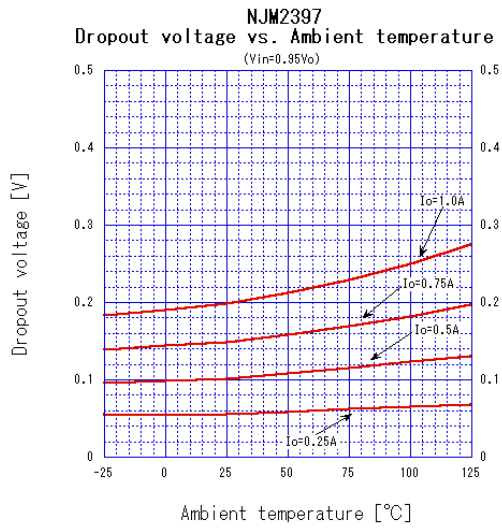


■ TYPICAL CHARACTERISTICS



NJM2397

■ TYPICAL CHARACTERISTICS



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