

ADJUSTABLE LOW DROPOUT VOLTAGE REGULATOR

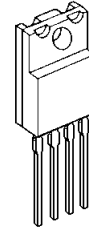
■ GENERAL DESCRIPTION

The NJM2389 is an adjustable low dropout voltage regulator.

The output current is up to 1.0A and dropout voltage is 0.2V typ. at $I_o=0.5A$.

The NJM2389 is suitable for power module, TV, Display, car stereo and low power applications.

■ PACKAGE OUTLINE

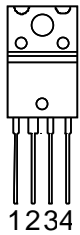


NJM2389F

■ FEATURE

- Low Dropout Voltage $\Delta V_{I-O}=0.2V$ typ. at $I_o=0.5A$
- Output Current $I_o(max.)=1.0A$
- Reference Voltage $V_{ref}=1.26V \pm 2\%$
- Internal Short Circuit Current Limit
- Internal Thermal Overload Protection
- Bipolar Technology
- Package Outline TO-220F-4

■ PIN CONFIGURATION



NJM2389F

PIN FUNCTION

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

NJM2389

■ 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	1.0	A
Power Dissipation	P _D	18(Tc<50°C)	W
Operating Junction Temperature Range	T _J	-40 ~ +150	°C
Operating Temperature Range	Topr	-40 ~ +85	°C
Storage Temperature Range	Tstg	-50 ~ +150	°C

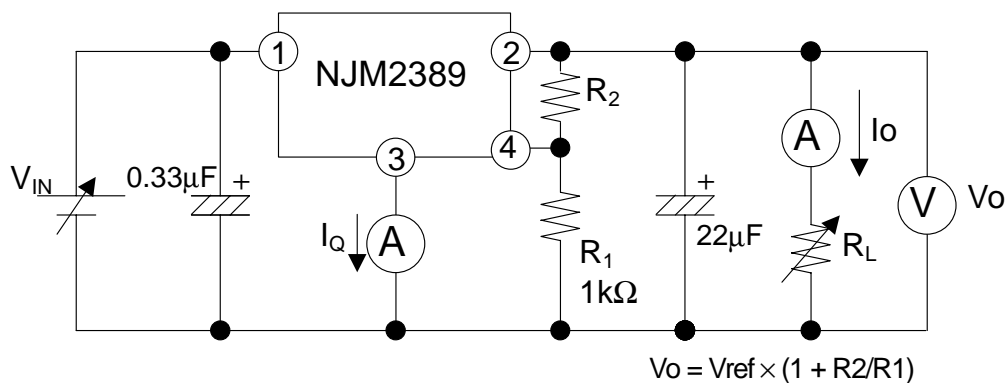
■ ELECTRICAL CHARACTERISTICS

(V_{IN}=15V, V_O=10V, I_o=0.5A, R₁=1kΩ, C_{IN}=0.33μF, C_o=22μF, T_J=25°C)

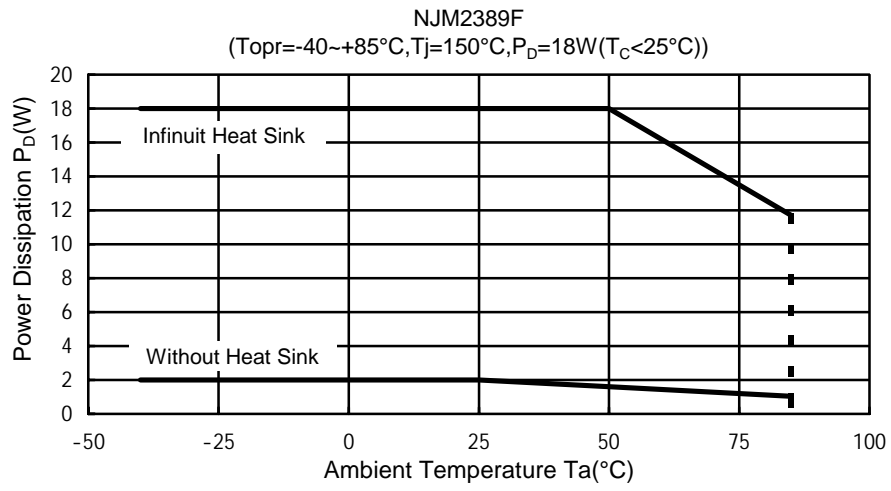
Measurement is to be conducted is pulse testing.

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Input Voltage	V _{IN}		-2%	-	+2%	V
Output Voltage	V _O					
Reference Voltage	V _{ref}		1.235	1.26	1.285	
Line Regulation	ΔV _o -V _{IN}	V _{IN} =V _O +1V ~ V _O +17V	-	0.04	0.16	%/V
Load Regulation	ΔV _o -I _o	V _{IN} =V _O +2V, I _o =0A ~ 1.0A	-	0.2	1.4	%/A
Average Temperature Coefficient of Output Voltage	ΔV _o /ΔT	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} =0.5V _{rms} f=120Hz	52	65	-	dB

■ TEST CIRCUIT



POWER DISSIPATION vs. AMBIENT TEMPERATURE



[CAUTION]

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