

LOW DROPOUT VOLTAGE REGULATOR WITH ON/OFF CONTROL

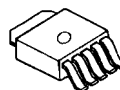
■ GENERAL DESCRIPTION

The NJM2386 is a low dropout voltage regulator with ON/OFF control.

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

The NJM2386 is suitable for power module, TV, Display, car stereo and low power applications.

■ PACKAGE OUTLINE

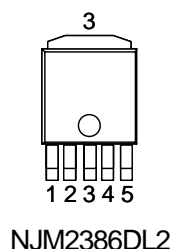


NJM2386DL2

■ FEATURE

- Low Dropout Voltage $\Delta V_{I-O}=0.2V$ typ. at $I_o=0.5A$
- Output Current $I_o(\text{max.})=1.0A$
- ON/OFF Control
- Internal Short Circuit Current Limit
- Internal Thermal Overload Protection
- Bipolar Technology
- Package Outline TO-252-5

■ PIN CONFIGURATION



NJM2386DL2

PIN FUNCTION

1. V_{IN}
2. ON/OFF CONTROL "H" or OPEN: ON
"L": OFF
3. V_{OUT}
4. N.C.
5. GND

■ OUTPUT VOLTAGE RANK LIST

Device Name	V_{OUT}
NJM2386DL2-33(*)	3.3V
NJM2386DL2-05	5.0V
NJM2386DL2-63(*)	6.3V
NJM2386DL2-08(*)	8.0V
NJM2386DL2-09(*)	9.0V
NJM2386DL2-12	12.0V

(*): Under Development

NJM2386

■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Input Voltage	V_{IN}	+35	V
Control Voltage	V_{CONT}	+35(*note 1)	V
Output Current	I_o	1.0	A
Power Dissipation	P_D	$10(T_c=25^\circ C) / 1(T_a \leq 25^\circ C)$	W
Operating Junction Temperature Range	T_j	-40 ~ +150	°C
Operating Temperature Range	T_{opr}	-40 ~ +85	°C
Storage Temperature Range	T_{stg}	-50 ~ +150	°C

(*note 1): When input voltage is less than +35V, the absolute maximum control voltage is equal to the input voltage.

■ ELECTRICAL CHARACTERISTICS ($I_o=0.5A$, $C_{IN}=0.33\mu F$, $C_o=22\mu F$, $T_j=25^\circ C$)

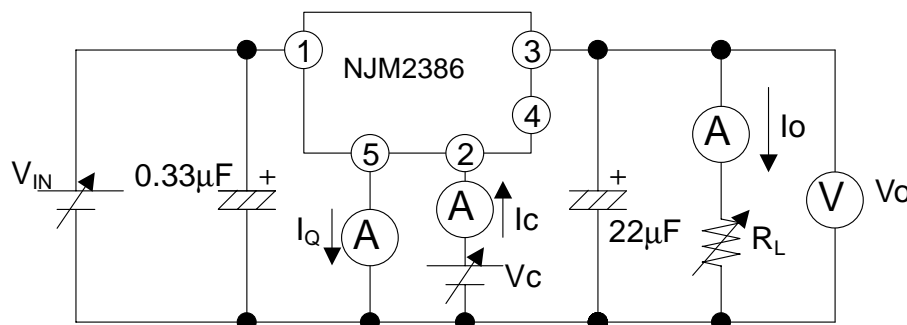
Measurement is to be conducted is pulse testing.

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNIT	
Output Voltage	V_o	$V_{IN}=V_o+1V$	-2%	-	+2%	V	
Line Regulation	ΔV_o-V_{IN}	$V_{IN}=V_o+1V \sim V_o+17V$	-	0.04	0.16	%/V	
Load Regulation	ΔV_o-I_o	$V_{IN}=V_o+2V, I_o=0A \sim 1.0A$	-	0.2	1.4	%/A	
Average Temperature Coefficient of Output Voltage	$\Delta V_o/\Delta T$	$T_j=0$ to $125^\circ C$	-	± 0.02	-	%/°C	
Standby 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	$V_{IN}=V_o+2V$ $e_{in}=0.5V_{rms}, f=120Hz$	NJM2386DL2-33(*)	54	67	-	dB
			NJM2386DL2-05	54	67	-	
			NJM2386DL2-63(*)	54	67	-	
			NJM2386DL2-08(*)	52	65	-	
			NJM2386DL2-09(*)	52	65	-	
			NJM2386DL2-12	50	63	-	
ON Control Voltage(*note 2)	$V_{CONT(ON)}$		2.0	-	-	V	
OFF Control Voltage	$V_{CONT(OFF)}$		-	-	0.4	V	
ON Control Current	$I_{CONT(ON)}$	$V_C=2.7V$	-	-	20	μA	
OFF Control Current	$I_{CONT(OFF)}$	$V_C=0.4V$	-	-	-20	μA	

(*note 2): When ON/OFF CONTROL Terminal is open, Output Voltage is ON

(*): Under Development

■ TEST CIRCUIT



[CAUTION]

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