

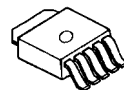
Low Dropout Voltage Regulator with Reset

■ GENERAL DISCRIPTION

The NJM2806 is a low dropout voltage regulator with reset function.

It provides up to 500mA of logic supply, and the reset function monitors input voltage of the regulator with 1% accuracy. It is suitable for local power supply and reset for small micro controller and other logic chips.

■ PACKAGE OUTLINE

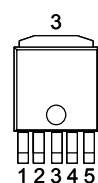


NJM2806DL2

■ FEATURES

- Output Voltage Accuracy $V_o = \pm 1.0\%$
- Reset Voltage Accuracy $V_{reset} = \pm 1.0\%$
- Reset Hold Time $t_d = 10\text{ms} \pm 1.0\text{ms}$
- Ripple Rejection 75dB typ. ($f=1\text{kHz}$)
- Quiescent Current $I_Q = 330\mu\text{A}$ (typ.)
- Input Voltage Monitor type
- Open Collector Output
- Internal Short Circuit Current Limit
- Internal Thermal Overload Protection
- Bipolar Technology
- Package Outline TO-252-5

■ PIN CONFIGURATION



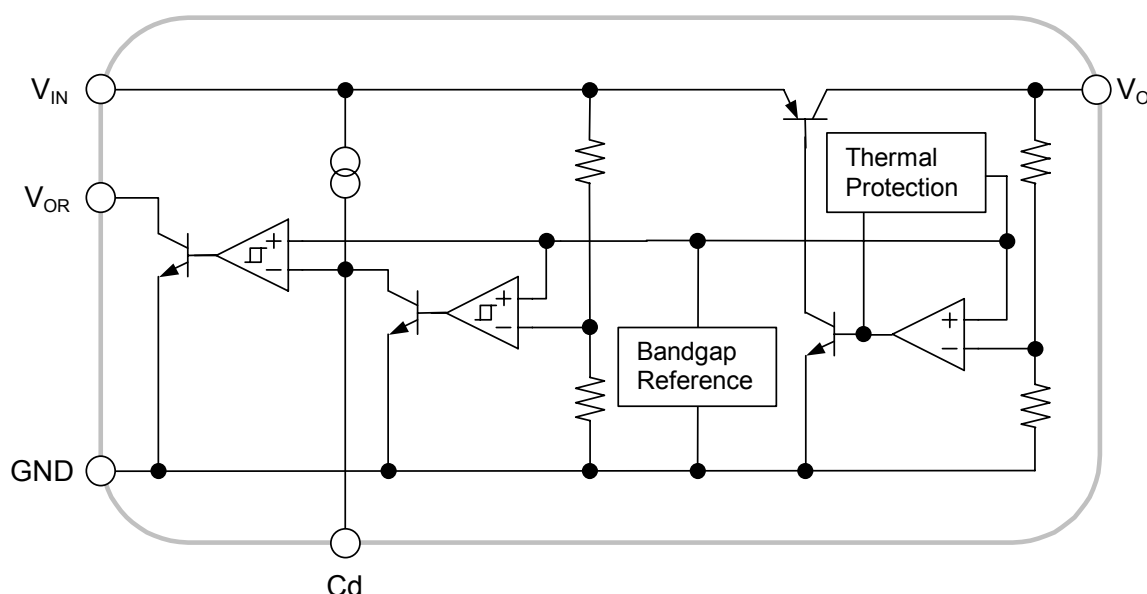
1. V_{OR}
2. V_{IN}
3. GND
4. V_O
5. C_d

NJM2806DL2

■ OUTPUT VOLTAGE/ DETECTION VOLTAGE

Device Name	Output Voltage	Detection Voltage
NJM2806DL2-2528	2.5V	2.8V
NJM2806DL2-3342	3.3V	4.2V

■ EQUIVALENT CIRCUIT



■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Input Voltage	V_{IN}	+14	V
Power Dissipation	P_D	8 (Tc=25°C)	W
		0.8(Ta≤25°C)	
Operating Temperature	Topr	-40~+85	°C
Storage Temperature	Tstg	-40~+125	°C

■ ELECTRICAL CHARACTERISTICS

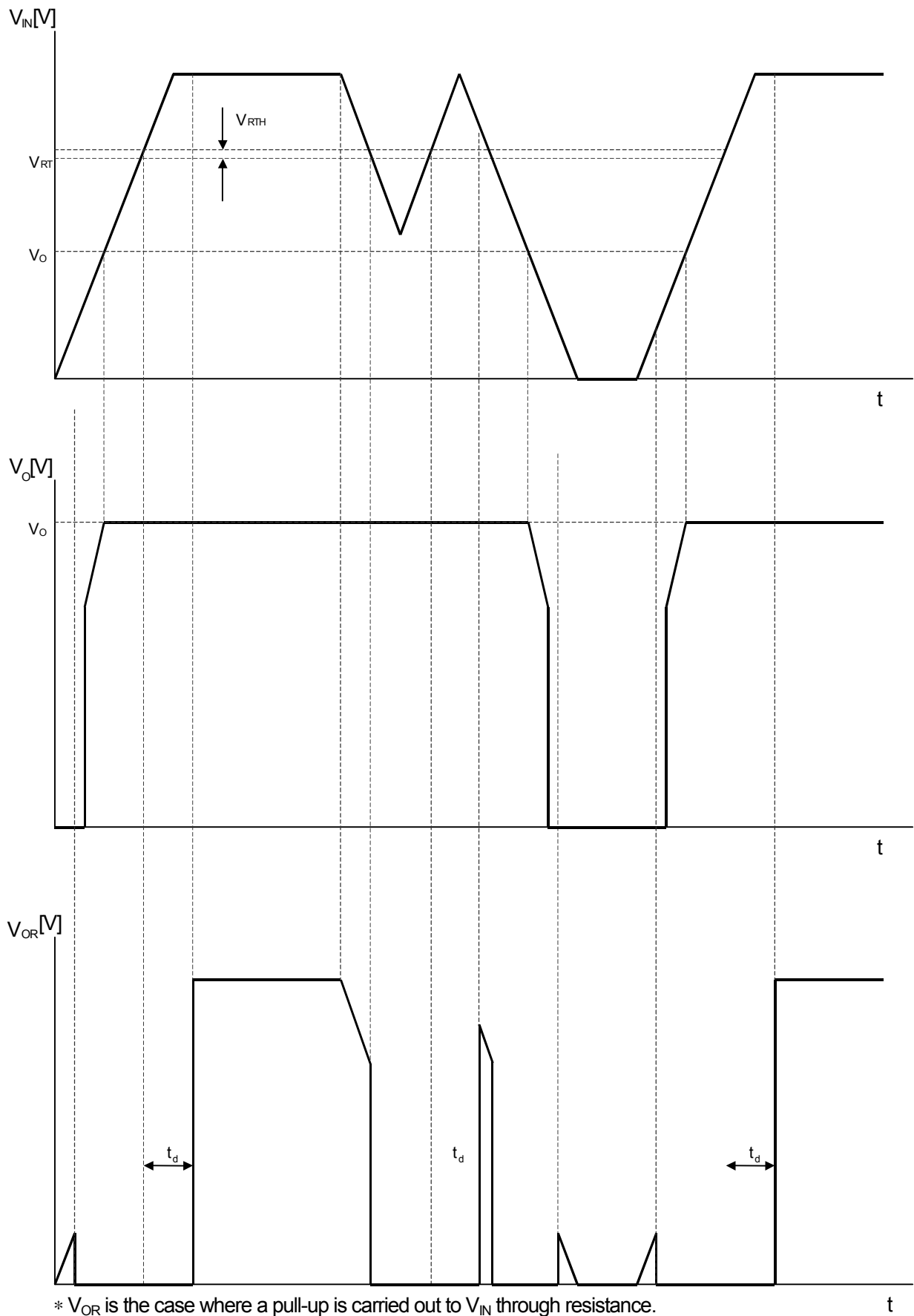
($V_{IN}=V_O+1V$, $C_{IN}=0.1\mu F$, $C_O=2.2\mu F$ ($V_O\leq 2.6V$: $C_O=4.7\mu F$) Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Quiescent Current	I_Q	$V_{IN}=V_O+2V$, $I_O=0mA$	—	330	430	μA
Regulator Block						
Output Voltage	V_O	$I_O=30mA$	-1.0%	—	+1.0%	V
Output Current	I_O	$V_O=0.3V$	500	650	—	mA
Line Regulation	$\Delta V_O/\Delta V_{IN}$	$V_{IN}=V_O+1V$ ~ V_O+6V , $I_O=30mA$	—	—	0.10	%/V
Load Regulation	$\Delta V_O/\Delta I_O$	$I_O=0$ ~ $500mA$	—	—	0.03	%/mA
Dropout Voltage	ΔV_{I_O}	$I_O=300mA$	—	0.18	0.28	V
Ripple Rejection	RR	$e_{in}=200mV_{rms}$, $f=1kHz$, $I_O=10mA$, $V_O=3V$ Version	—	75	—	dB
Output Voltage Temperature Coefficient	$\Delta V_O/\Delta T$	Ta=0~85°C, $I_O=10mA$	—	±50	—	ppm/°C
Output Noise Voltage	V_{NO}	$f=10Hz$ ~ $100kHz$, $I_O=10mA$, $V_O=3V$ Version	—	45	—	μV_{rms}
Reset Block						
Voltage Detection	V_{RT}	$V_{IN}=H\rightarrow L$	-1.0%	—	+1.0%	V
Hysteresis Voltage	V_{RTH}	$V_{IN}=H\rightarrow L\rightarrow H$	$V_{RT}\times 3$	$V_{RT}\times 5$	$V_{RT}\times 8$	mV
Low Level Output Voltage	R_{ORL}	$V_{IN}=V_{RT}-0.5V$, $R_L=100k\Omega$	—	100	300	mV
Output Leak Current	I_{ORH}	$V_{IN}=V_{RT}+0.5V$	—	—	0.1	μA
On time Output Current	I_{ORL}	$V_{IN}=V_{RT}-0.5V$, $R_L=0\Omega$	5	—	—	mA
Reset Output Delay Time	t_d	$V_{IN}=(V_{RT}-0.5V)\rightarrow (V_{RT}+0.5V)$, $C_d=0.1\mu F$	9	10	11	mS
Operation Voltage Limit	V_{OPL}	$V_{ORL}=0.4V$	—	0.9	—	V

(*note 1) The above specification is a common specification for all output voltages.

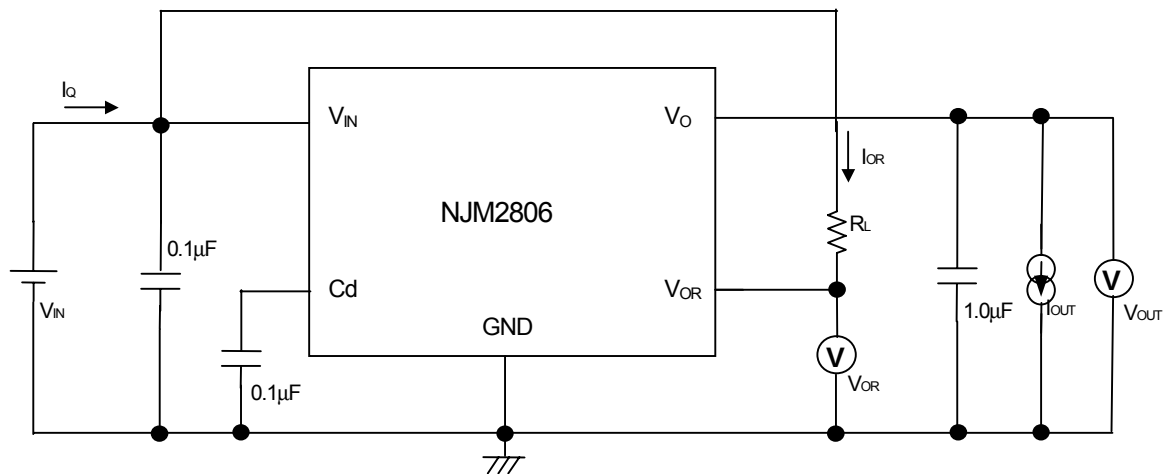
Therefore, it may be different from the individual specification for a specific output voltage.

■ TIMING CHART

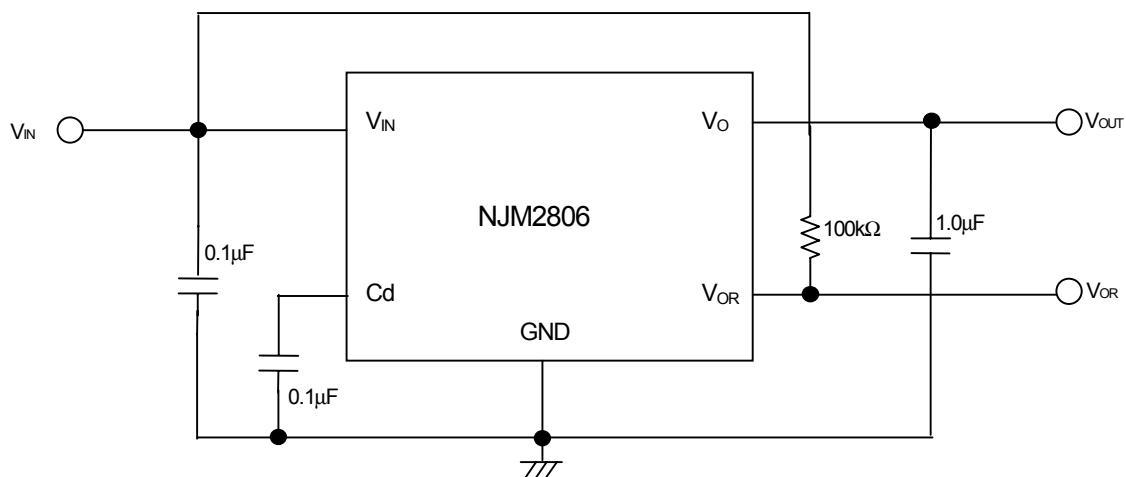


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■ TEST CIRCUIT



■ TYPICAL APPLICATIONS



[CAUTION]

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