

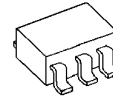
## 2OUTPUT LOW DROPOUT VOLTAGE REGULATOR

### ■GENERAL DESCRIPTION

The NJM2892 is a 2ch low dropout voltage regulator with ON/OFF Control in SOT-23 package.

It is suitable for camcorder, IC decoder, camera and other portable items.

### ■PACKAGE OUTLINE

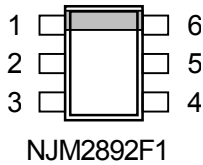


NJM2892F1

### ■FEATURES

- High Ripple Rejection      70dB typ. at f=1kHz
- Low Noise                      45 $\mu$ Vrms typ.
- Output capacitor with 1.0 $\mu$ F ceramic capacitor at  $V_o \geq 2.7V$
- Output Current                 $I_o(\text{max.}) = 100\text{mA} \times 2\text{ch}$
- High Precision Output         $\pm 1.0\%$
- Low Dropout Voltage         0.1V typ. at  $I_o = 60\text{mA}$
- ON/OFF Control
- Internal Thermal Overload Protection
- Internal Short Circuit Current Limit
- Bipolar Technology
- Package Outline                SOT-23-6

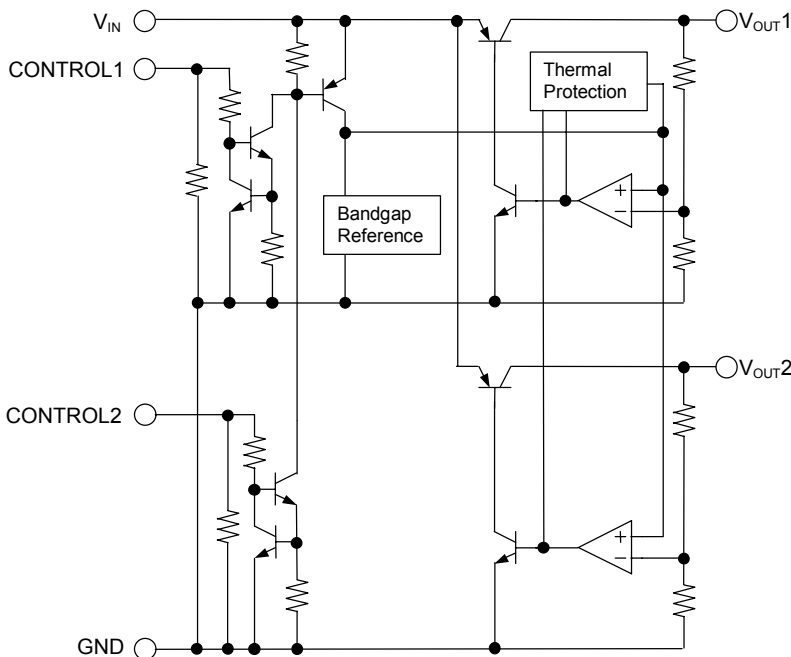
### ■PIN CONFIGURATION



#### PIN FUNCTION

1. $V_{OUT2}$	4. CONTROL1
2. GND	5. $V_{IN}$
3. $V_{OUT1}$	6. CONTROL2

### ■EQUIVALENT CIRCUIT



■ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Input Voltage	V <sub>IN</sub>	+14	V
Control Voltage	V <sub>CONT</sub>	+14(note1)	V
Power Dissipation	P <sub>D</sub>	200	mW
Operating Temperature	T <sub>opr</sub>	-40 to +85	°C
Storage Temperature	T <sub>stg</sub>	-40 to +125	°C

(note1)When input voltage is less than +14V, the absolute maximum control voltage is equal to the input voltage.

■REGULATED CHARACTERISTICS

(V<sub>IN</sub>=V<sub>o</sub>+1V, C<sub>IN</sub>=0.1μF, C<sub>o</sub>=1.0μF: V<sub>o</sub>≥2.7V (C<sub>o</sub>=2.2μF: V<sub>o</sub>≤2.6V), Ta=25°C)

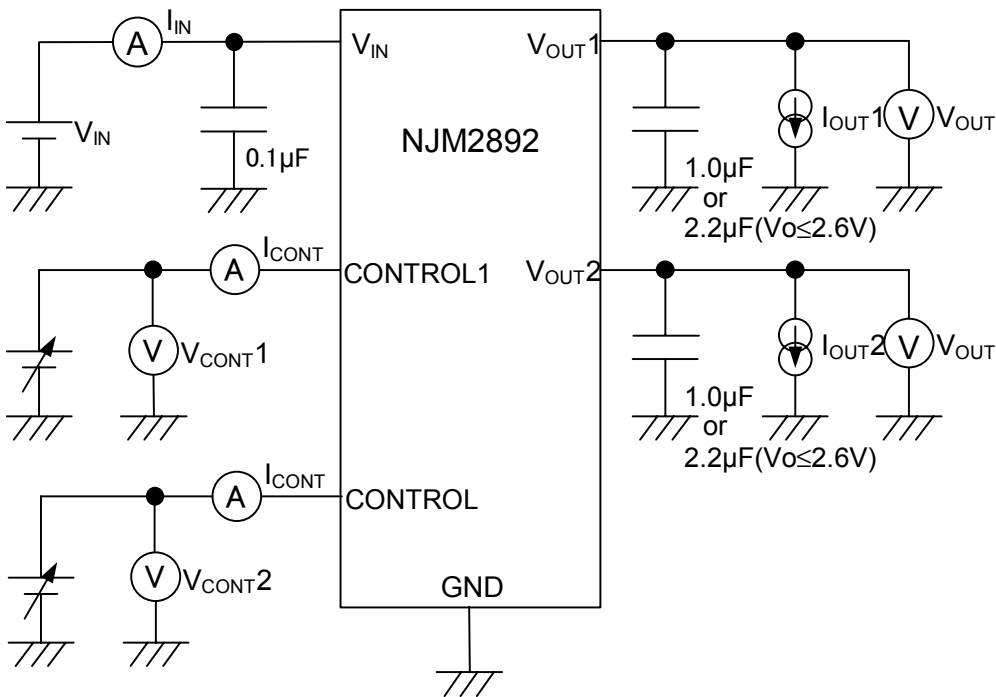
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Voltage	V <sub>o</sub>	I <sub>o</sub> =30mA	-1.0%	-	+1.0%	V
Quiescent Current1	I <sub>Q1</sub>	V <sub>CONT1</sub> =V <sub>IN</sub> , V <sub>CONT2</sub> =0V or V <sub>CONT2</sub> =V <sub>IN</sub> , V <sub>CONT1</sub> =0V I <sub>o</sub> =0mA, expect I <sub>cont</sub>	-	140	220	μA
Quiescent Current2	I <sub>Q2</sub>	V <sub>CONT1</sub> =V <sub>CONT2</sub> =V <sub>IN</sub> I <sub>o</sub> =0mA, expect I <sub>cont</sub>	-	240	370	μA
Quiescent Current at Control OFF	I <sub>Q(OFF)</sub>	V <sub>CONT</sub> =0V	-	-	100	nA
Output Current	I <sub>o</sub>	V <sub>o</sub> -0.3V	100	130	-	mA
Line Regulation	ΔV <sub>o</sub> /ΔV <sub>IN</sub>	V <sub>IN</sub> =V <sub>o</sub> +1V to V <sub>o</sub> +6V, I <sub>o</sub> =30mA	-	-	0.10	%/V
Load Regulation	ΔV <sub>o</sub> /ΔI <sub>o</sub>	I <sub>o</sub> =0 to 60mA	-	-	0.03	%/mA
Dropout Voltage	ΔV <sub>ΓO</sub>	I <sub>o</sub> =60mA	-	0.10	0.18	V
Ripple Rejection	RR	e <sub>in</sub> =200mVrms, f=1kHz, I <sub>o</sub> =10mA, V <sub>o</sub> =3V	-	70	-	dB
Average Temperature Coefficient of Output Voltage	ΔV <sub>o</sub> /ΔTa	Ta=0~85°C, I <sub>o</sub> =10mA	-	±50	-	ppm/°C
Output Noise Voltage	V <sub>NO</sub>	f=10Hz to 80kHz, I <sub>o</sub> =10mA, V <sub>o</sub> =3V	-	45	-	μVrms
Control Voltage for ON-state	V <sub>CONT(ON)</sub>		1.6	-	-	V
Control Voltage for OFF-state	V <sub>CONT(OFF)</sub>		-	-	0.6	V

(note2) Please confirm the specification separately because some parameters depend on output voltage.

■OUTPUT VOLTAGE RANK LIST

Device Name	VOUT	
	CH1	CH2
NJM2892F1-2121	2.1V	2.1V
NJM2892F1-0303	3.0V	3.0V
NJM2892F1-0521	5.0V	2.1V

■TEST CIRCUIT

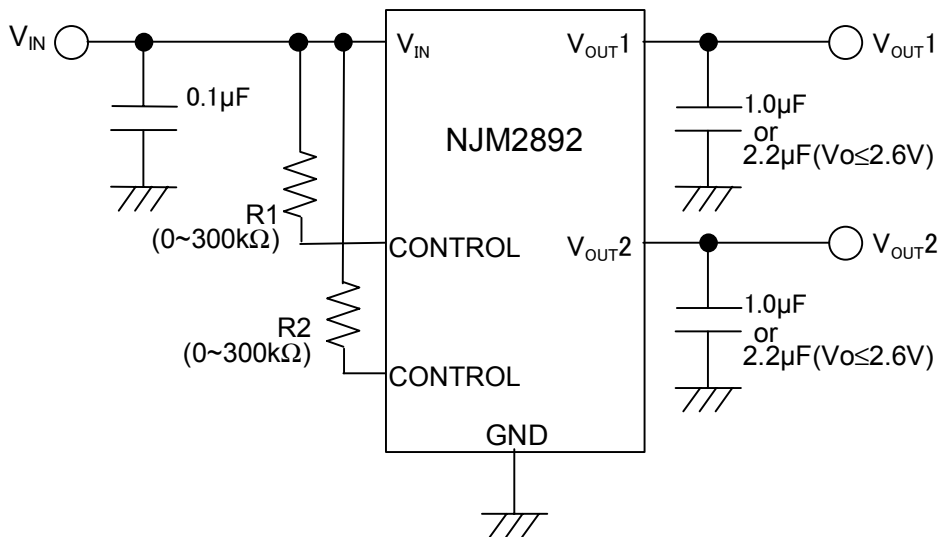


## ■ TYPICAL APPLICATION

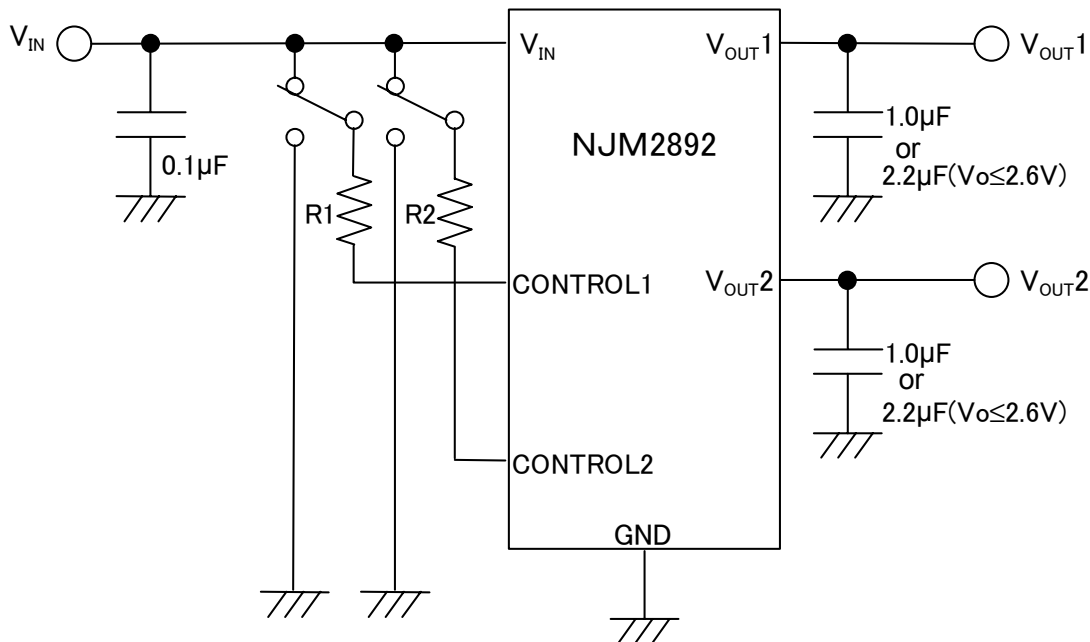
(1) In the case where ON/OFF Control is not required:

Connect control terminal to VIN terminal

In case a resistance "R" is used, the quiescent current will be decreased. However, the but minimum operating voltage will be increase as well. Please refer to a figure of Output Voltage vs. Control Voltage.



(2) In use of ON/OFF Control:



In case the control terminal is "H", the output is enabled.  
The control terminal is "L" or "open", the output is disabled.

**[CAUTION]**

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