

## Low Dropout Voltage Regulator

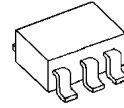
### ■ GENERAL DESCRIPTION

The NJU7250 series is low dropout voltage and high precision positive voltage regulator with ON/OFF control.

This IC is suitable for the battery items because of low operating current and 150mA output current.

Furthermore, this series is packaged with MTP5.

### ■ PACKAGE OUTLINE

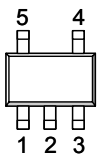


NJU7250F

### ■ FEATURES

- Low Operating Current            35 $\mu$ A
- Output Current                    150mA
- High Precision Output             $V_o \pm 2\%$
- Low Dropout Voltage            0.2V typ. @ $I_o=100\text{mA}$ ,  $2.8 \leq V_o \leq 3.3\text{V}$
- Standby Function                Active High
- Short Current Protection
- C-MOS Technology
- Package Outline                 SOT-23-5

### ■ PIN CONFIGURATION

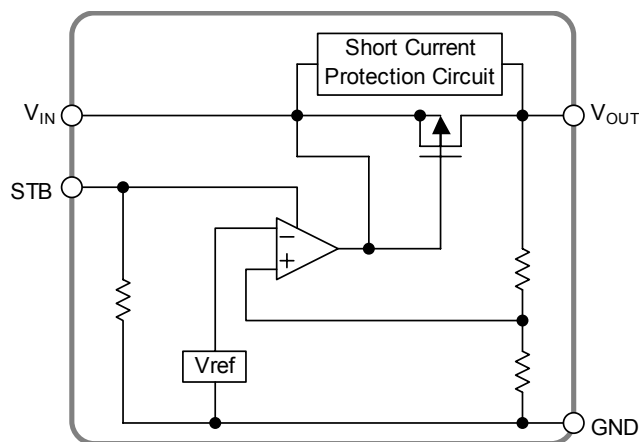


NJU7250F

#### Pin Function

1.  $V_{IN}$
2. GND
3. STB(Active High)
4. NC
5.  $V_{OUT}$

### ■ EQUIVALENT CIRCUIT



# NJU7250

## ■ OUTPUT VOLTAGE RANK LIST

Device Name	Output Voltage
NJU7250F25	2.5V
NJU7250F27	2.7V
NJU7250F28	2.8V
NJU7250F29	2.9V
NJU7250F30	3.0V
NJU7250F32	3.2V
NJU7250F33	3.3V

## ■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Input Voltage	V <sub>IN</sub>	+9	V
Control Voltage	V <sub>CONT</sub>	GND-0.3~ V <sub>IN</sub> +0.3	V
Output Voltage	V <sub>O</sub>	GND-0.3~ V <sub>IN</sub> +0.3	V
Output Current	I <sub>O</sub>	200	mA
Power Dissipation	P <sub>D</sub>	250(*1)	mW
		500(*2)	
Operating Temperature	T <sub>opr</sub>	- 40~+85	°C
Storage Temperature	T <sub>stg</sub>	- 40~+150	°C

(\*1): Device itself.

(\*2): Mounted on glass epoxy board based on EIA/JEDEC. (114.3x76.2x1.6mm: 2Layers)

## ■ ELECTRICAL CHARACTERISTICS (C<sub>IN</sub>=0.1μF, C<sub>O</sub>=2.2μF, Ta=25°C)

Parameter	Symbol	Condition	MIN.	TYP.	MAX.	Unit
Output Voltage	V <sub>O</sub>	V <sub>IN</sub> = V <sub>O</sub> +1V, 1mA ≤ I <sub>O</sub> ≤ 30mA	-2.0%	-	+2.0%	V
Output Current	I <sub>O</sub>	1.5 ≤ V <sub>O</sub> ≤ 1.7, V <sub>IN</sub> = V <sub>O</sub> +1V	100	-	-	mA
		1.8 ≤ V <sub>O</sub> ≤ 5.0, V <sub>IN</sub> = V <sub>O</sub> +1V	150	-	-	
Dropout Voltage	ΔV <sub>IO</sub>	2.5 ≤ V <sub>O</sub> ≤ 2.7, I <sub>O</sub> = 100mA	-	0.24	0.35	
		2.8 ≤ V <sub>O</sub> ≤ 3.3, I <sub>O</sub> = 100mA	-	0.20	0.30	
Operating Current	I <sub>Q</sub>	V <sub>IN</sub> = V <sub>O</sub> +1V, V <sub>CONT(ON)</sub> = V <sub>IN</sub>	-	35	70	μA
Standby Current	I <sub>Q(OFF)</sub>	V <sub>IN</sub> = V <sub>O</sub> +1V, V <sub>CONT(OFF)</sub> = GND	-	0.1	1.0	μA
Load Regulation	ΔV <sub>O</sub> /ΔI <sub>O</sub>	V <sub>IN</sub> = V <sub>O</sub> +1V, 1mA ≤ I <sub>O</sub> ≤ 80mA	-	12	40	mV
Line Regulation	ΔV <sub>O</sub> /(ΔV <sub>IN</sub> · V <sub>O</sub> )	V <sub>IN</sub> = V <sub>O</sub> +0.5V~8V, I <sub>O</sub> = 30mA	-	0.05	0.20	%/V
Output Voltage Temperature Coefficient	ΔV <sub>O</sub> /ΔT	-40 ≤ Ta ≤ +85°C, I <sub>O</sub> = 10mA	-	±100	-	ppm/°C
Input Voltage	V <sub>IN</sub>		-	-	8	V
Short Current Limit	I <sub>LIM</sub>	V <sub>O</sub> = 0V	-	50	-	mA
Pull-down Resistance	RPD		2.5	5	10	MΩ
H Level Control Voltage	V <sub>CONT(ON)</sub>		1.5	-	V <sub>IN</sub>	V
L Level Control Voltage	V <sub>CONT(OFF)</sub>		0	-	0.25	V
Output Noise Voltage	V <sub>NO</sub>	f = 10Hz	-	30	-	μV/rms

**[CAUTION]**

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