

Low Dropout Voltage Regulator

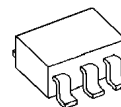
■ GENERAL DESCRIPTION

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

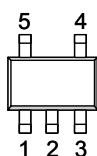


NJU7250F

■ FEATURES

- Low Operating Current 35 μ 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

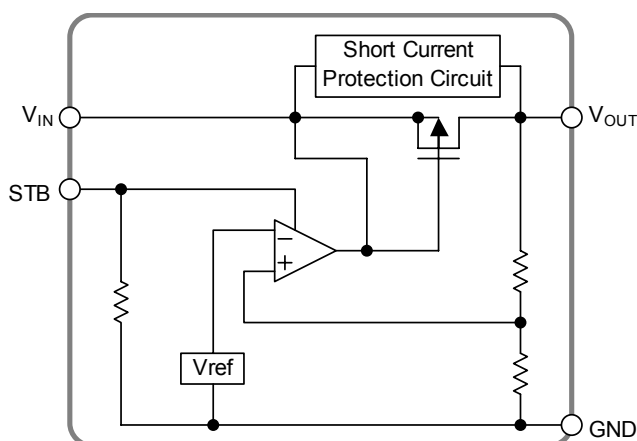


NJU7250F

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_{IN}	+9	V
Control Voltage	V_{CONT}	GND-0.3~ $V_{IN}+0.3$	V
Output Voltage	V_O	GND-0.3~ $V_{IN}+0.3$	V
Output Current	I_O	200	mA
Power Dissipation	P_D	250(*1)	mW
		500(*2)	
Operating Temperature	T_{opr}	- 40~+85	°C
Storage Temperature	T_{stg}	- 40~+150	°C

(*1): Device itself.

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

■ ELECTRICAL CHARACTERISTICS ($C_{IN}=0.1\mu F$, $C_O=2.2\mu F$, $T_a=25^\circ C$)

Parameter	Symbol	Condition	MIN.	TYP.	MAX.	Unit
Output Voltage	V_O	$V_{IN} = V_O + 1V$, $1mA \leq I_O \leq 30mA$	-2.0%	-	+2.0%	V
Output Current	I_O	$1.5 \leq V_O \leq 1.7$, $V_{IN} = V_O + 1V$	100	-	-	mA
		$1.8 \leq V_O \leq 5.0$, $V_{IN} = V_O + 1V$	150	-	-	
Dropout Voltage	ΔV_{IO}	$2.5 \leq V_O \leq 2.7$, $I_O = 100mA$	-	0.24	0.35	
		$2.8 \leq V_O \leq 3.3$, $I_O = 100mA$	-	0.20	0.30	
Operating Current	I_Q	$V_{IN} = V_O + 1V$, $V_{CONT(ON)} = V_{IN}$	-	35	70	μA
Standby Current	$I_{Q(OFF)}$	$V_{IN} = V_O + 1V$, $V_{CONT(OFF)} = GND$	-	0.1	1.0	μA
Load Regulation	$\Delta V_O / \Delta I_O$	$V_{IN} = V_O + 1V$, $1mA \leq I_O \leq 80mA$	-	12	40	mV
Line Regulation	$\Delta V_O / (\Delta V_{IN} \cdot V_O)$	$V_{IN} = V_O + 0.5V \sim 8V$, $I_O = 30mA$	-	0.05	0.20	%/V
Output Voltage Temperature Coefficient	$\Delta V_O / \Delta T$	$-40 \leq T_a \leq +85^\circ C$, $I_O = 10mA$	-	± 100	-	ppm/°C
Input Voltage	V_{IN}		-	-	8	V
Short Current Limit	I_{LIM}	$V_O = 0V$	-	50	-	mA
Pull-down Resistance	RPD		2.5	5	10	M Ω
H Level Control Voltage	$V_{CONT(ON)}$		1.5	-	V_{IN}	V
L Level Control Voltage	$V_{CONT(OFF)}$		0	-	0.25	V
Output Noise Voltage	V_{NO}	$f=10Hz$	-	30	-	$\mu V/rms$

[CAUTION]

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