

Low Dropout Voltage Regulator

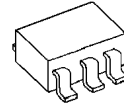
■ GENERAL DESCRIPTION

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

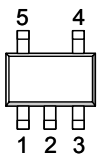


NJU7250F

■ 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

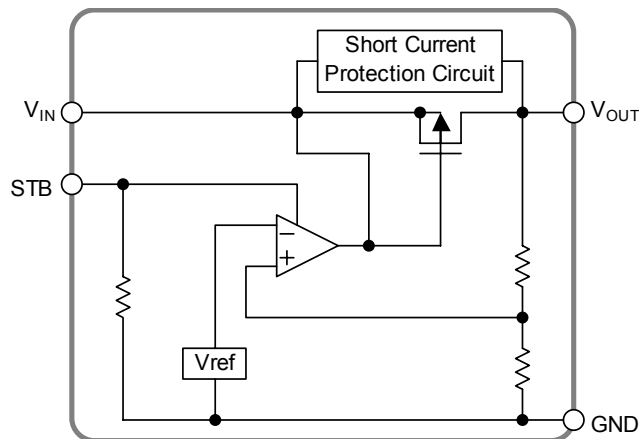


NJU7250F

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}=0.1μF, C_O=2.2μF, Ta=25°C)

Parameter	Symbol	Condition	MIN.	TYP.	MAX.	Unit
Output Voltage	V _O	V _{IN} = V _O +1V, 1mA ≤ I _O ≤ 30mA	-2.0%	-	+2.0%	V
Output Current	I _O	1.5 ≤ V _O ≤ 1.7, V _{IN} = V _O +1V	100	-	-	mA
		1.8 ≤ V _O ≤ 5.0, V _{IN} = V _O +1V	150	-	-	
Dropout Voltage	ΔV _{IO}	2.5 ≤ V _O ≤ 2.7, I _O = 100mA	-	0.24	0.35	
		2.8 ≤ V _O ≤ 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	ΔV _O /ΔI _O	V _{IN} = V _O +1V, 1mA ≤ I _O ≤ 80mA	-	12	40	mV
Line Regulation	ΔV _O /(ΔV _{IN} · V _O)	V _{IN} = V _O +0.5V~8V, I _O = 30mA	-	0.05	0.20	%/V
Output Voltage Temperature Coefficient	ΔV _O /ΔT	-40 ≤ Ta ≤ +85°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	MΩ
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	-	μV/rms

[CAUTION]

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