

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 typ.
- Output Current 150mA
- High Precision Output Voltage $V_o \pm 2\%$
- Low Dropout Voltage 0.2V typ. @ $I_o=100$ mA, $2.8V \leq V_o \leq 3.3V$
- Standby Function
- Short Current Protection Circuit
- C-MOS Technology
- Package Outline MTP5

■ OUTPUT VOLTAGE LINE-UP

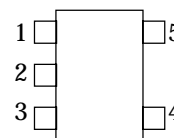
Device Name	V_{OUT}
NJU7250F25	2.5V
NJU7250F27	2.7V
NJU7250F28	2.8V
NJU7250F29	2.9V

Device Name	V_{OUT}
NJU7250F30	3.0V
NJU7250F32	3.2V
NJU7250F33	3.3V

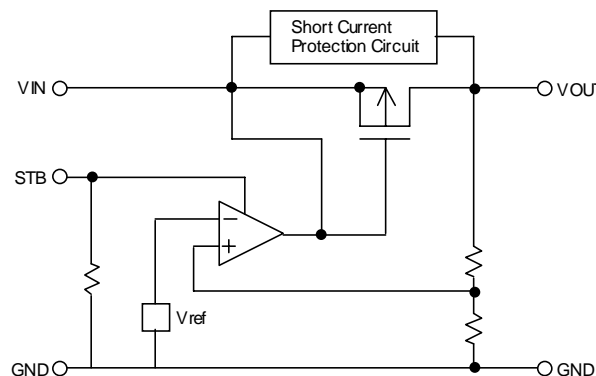
■ TERMINAL DESCRIPTION

No.	Symbol	Function
1	V_{IN}	Input
2	GND	GND
3	STB	H: Regulation L: Standby, Output off
4	NC	Non Connection
5	V_{OUT}	Output

■ PIN CONFIGURATION



■ EQUIVALENT CIRCUIT



■ 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_{OUT}	GND-0.3 ~ $V_{IN}+0.3$	V
Output Current	I_{OUT}	200	mA
Power Dissipation	P_D	250	mW
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +150	°C

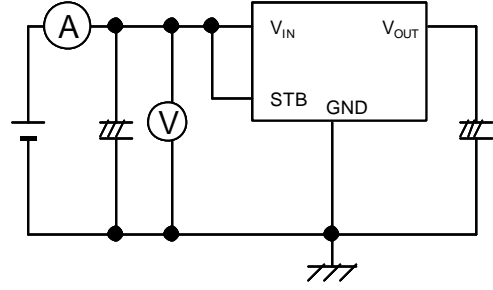
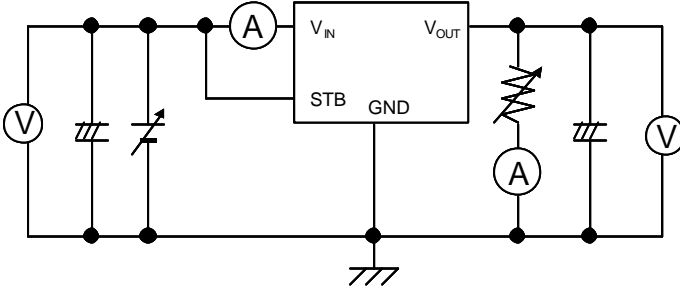
■ ELECTRICAL CHARACTERISTICS

 (C_{IN}=0.1μF, C_O=2.2μF, Ta=25°C)

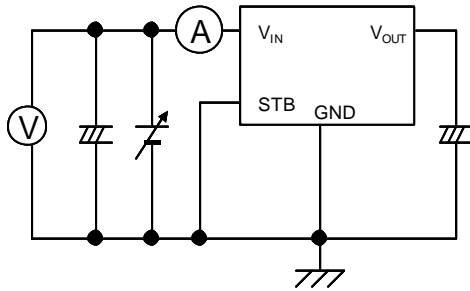
Parameter	Symbol	Condition	MIN.	TYP.	MAX.	Unit
Output Voltage	V_O	$V_{IN}=V_O+1V, 1mA \leq I_O \leq 30mA$	-2%		+2%	V
Output Current	I_O	$1.5 \leq V_O \leq 1.7, V_{IN}=V_O+1V$	100			mA
		$1.8 \leq V_O \leq 5.0, V_{IN}=V_O+1V$	150			
Dropout Voltage	ΔV_{IO}	$V_O=1.5V, I_O=100mA$	0.5			V
		$V_O=1.6V, I_O=100mA$	0.4			
		$V_O=1.7V, I_O=100mA$	0.3			
		$1.8 \leq V_O \leq 1.9, I_O=100mA$		0.60	1.40	
		$2.0 \leq V_O \leq 2.4, I_O=100mA$		0.35	0.70	
		$2.5 \leq V_O \leq 2.7, I_O=100mA$		0.24	0.35	
		$2.8 \leq V_O \leq 3.3, I_O=100mA$		0.20	0.30	
		$3.4 \leq V_O \leq 5.0, I_O=100mA$		0.17	0.26	
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	$\frac{\Delta V_O}{\Delta V_{IN} \cdot V_{OUT}}$	$V_{IN}=V_O+0.5V \sim 8V, I_O=30mA$		0.05	0.2	%/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	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~100kHz		30		μV/rms

v TEST CIRCUIT

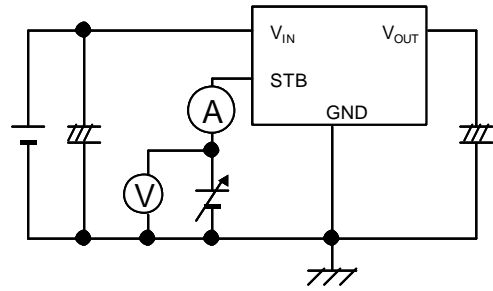
1. Output Voltage, Output Current, Dropout Voltage, Operating Current, Line Regulation, Line Regulation, Output Voltage Temperature Coefficient, Short Current Limit
2. Input Voltage



3. Standby Current



4. H Level Control Voltage, L Level Control Voltage, Pull-down Resistance



[CAUTION]
 The specifications on this databook are only given for information, without any guarantee as regards either mistakes or omissions. The application circuits in this databook are described only to show representative usages of the product and not intended for the guarantee or permission of any right including the industrial rights.

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [LDO Voltage Regulators](#) category:

Click to view products by [Nisshinbo](#) manufacturer:

Other Similar products are found below :

[AP7363-SP-13](#) [L79M05TL-E](#) [PT7M8202B12TA5EX](#) [TCR3DF185,LM\(CT](#) [TCR3DF24,LM\(CT](#) [TCR3DF285,LM\(CT](#) [TCR3DF31,LM\(CT](#)
[TCR3DF45,LM\(CT](#) [MP2013GQ-33-Z](#) [059985X](#) [NCP4687DH15T1G](#) [701326R](#) [TCR2EN28,LF\(S](#) [NCV8170AXV250T2G](#)
[TCR3DF27,LM\(CT](#) [TCR3DF19,LM\(CT](#) [TCR3DF125,LM\(CT](#) [TCR2EN18,LF\(S](#) [AP2112R5A-3.3TRG1](#) [AP7315-25W5-7](#)
[IFX30081LDVGRNXUMA1](#) [NCV47411PAAJR2G](#) [AP2113KTR-G1](#) [AP2111H-1.2TRG1](#) [ZLDO1117QK50TC](#) [AZ1117IH-1.8TRG1](#)
[AZ1117ID-ADJTRG1](#) [TCR3DG12,LF](#) [MIC5514-3.3YMT-T5](#) [MIC5512-1.2YMT-T5](#) [MIC5317-2.8YM5-T5](#) [SCD7912BTG](#)
[NCP154MX180270TAG](#) [SCD33269T-5.0G](#) [NCV8170BMX330TCG](#) [NCV8170AMX120TCG](#) [NCP706ABMX300TAG](#)
[NCP153MX330180TCG](#) [NCP114BMX075TCG](#) [MC33269T-3.5G](#) [CAT6243-ADJCMT5T](#) [TCR3DG33,LF](#) [AP2127N-1.0TRG1](#)
[TCR4DG35,LF](#) [LT1117CST-3.3](#) [LT1117CST-5](#) [TAR5S15U\(TE85L,F\)](#) [TAR5S18U\(TE85L,F\)](#) [TCR3UG19A,LF](#) [TCR4DG105,LF](#)