Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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HIGH PRECISION AND HIGH OUTPUT CURRENT
C-MOS 3-TERMINAL VOLTAGE REGULATOR

■ GENERAL DESCRIPTION

The **NJU7222 series** is a high precision output voltage (±2%) and high output current C-MOS 3-terminal positive voltage regulator which contains internal accurate voltage reference, error amplifier, control transistor, output voltage setting resistor and short current protection circuit.

The regulation voltage is fixed by internal circuits and the following line-up of different output voltage versions are available.
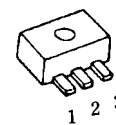
The short current protection circuit prevents destruction of a element by careless great current output in short circuit.

The **NJU7222 series** is suitable for battery operated items and battery back-up systems because of low operating current and low dropout voltage.

■ FEATURES

- High Precision Output Voltage   ±2%
- High Output Current I_O = 100mA
- Low Operating Current   20μA typ
- Low Dropout Voltage ΔV_{IO} < 0.6V @I_O = 100mA
- Wide Operating Voltage Range
- Small Temperature Coefficient of Output Voltage
- Short Current Protection Circuit
- Package Outline   TO-92/SOT-89
- C-MOS Technology

■ PACKAGE OUTLINE

NJU7222L   **NJU7222U**

■ TERMINAL DESCRIPTION

No.	Description
1	GND
2	Input
3	Output

■ OUTPUT VOLTAGE LINE-UP

Output Voltage	TO-92 Type	SOT-89 Type
+3.0V	NJU7222L30	NJU7222U30
+3.3V	NJU7222L33	NJU7222U33
+5.0V	NJU7222L50	NJU7222U50

Note1) The SOT-89 type name is different from the marking, so it refer to attached paper correspondence table.

■ EQUIVALENT CIRCUIT
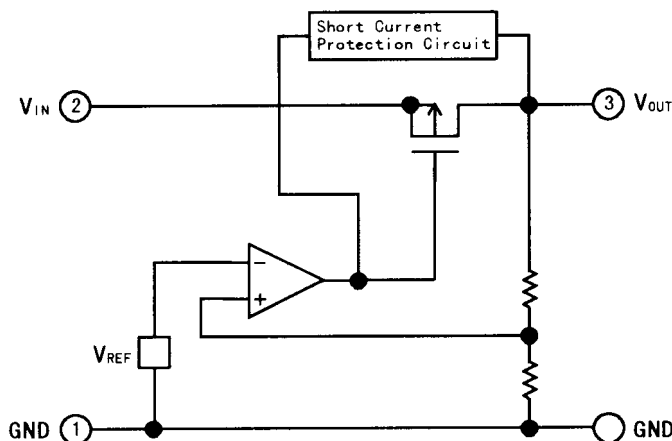
NJU7222 Series

■ ABSOLUTE MAXIMUM RATINGS

$(T_a = 25°C)$

PARAMETER	SYMBOL	RATINGS	UNIT
Input Voltage	V_{IN}	15	V
Output Voltage	V_{OUT}	GND-0.3 to V_{IN}+0.3	V
Output Current	I_{OUT}	200	mA
Power Dissipation	P_D	500 (TO-92) 300 (SOT-89)	mW
Operating Temperature Range	T_{opr}	-25 to + 75	°C
Storage Temperature Range	T_{stg}	-40 to +125	°C

■ ELECTRICAL CHARACTERISTICS

+3.0V Version

$(C_{IN} = C_O = 0.1\mu F, T_a = 25°C)$

PARAMETER	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Output Voltage	V_{OUT}	V_{IN} = 5.0V, I_{OUT} = 70mA	2.85	3.00	3.15	V
Dropout Voltage	ΔV_{IO}	I_{OUT} = 50mA	-	0.4	0.6	V
Input Voltage	V_{IN}		-	-	14	V
Operating Current	I_{DD1}	V_{IN} = 5.0V	-	20	30	µA
Load Regulation	$\dfrac{\Delta V_{OUT}}{\Delta I_{OUT}}$	V_{IN} = 5.0V, I_{OUT} = 1 to 100mA	-	120	160	mV
Line Regulation	$\dfrac{\Delta V_{OUT}}{\Delta V_{IN} \cdot V_{OUT}}$	V_{IN} = 4.0 to 12.0V	-	0.1	-	%/V

+3.3V Version

$(C_{IN} = C_O = 0.1\mu F, T_a = 25°C)$

PARAMETER	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Output Voltage	V_{OUT}	V_{IN} = 5.3V, I_{OUT} = 70mA	3.135	3.300	3.465	V
Dropout Voltage	ΔV_{IO}	I_{OUT} = 50mA	-	0.4	0.6	V
Input Voltage	V_{IN}		-	-	14	V
Operating Current	I_{DD1}	V_{IN} = 5.3V	-	20	30	µA
Load Regulation	$\dfrac{\Delta V_{OUT}}{\Delta I_{OUT}}$	V_{IN} = 5.3V, I_{OUT} = 1 to 100mA	-	120	160	mV
Line Regulation	$\dfrac{\Delta V_{OUT}}{\Delta V_{IN} \cdot V_{OUT}}$	V_{IN} = 4.3 to 12.0V	-	0.1	-	%/V

+5.0V Version

$(C_{IN} = C_O = 0.1\mu F, T_a = 25°C)$

PARAMETER	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Output Voltage	V_{OUT}	V_{IN} = 7.0V, I_{OUT} = 70mA	4.75	5.00	5.25	V
Dropout Voltage	ΔV_{IO}	I_{OUT} = 100mA	-	0.3	0.6	V
Input Voltage	V_{IN}		-	-	14	V
Operating Current	I_{DD1}	V_{IN} = 7.0V	-	20	30	µA
Load Regulation	$\dfrac{\Delta V_{OUT}}{\Delta I_{OUT}}$	V_{IN} = 7.0V, I_{OUT} = 1 to 100mA	-	120	160	mV
Line Regulation	$\dfrac{\Delta V_{OUT}}{\Delta V_{IN} \cdot V_{OUT}}$	V_{IN} = 6.0 to 12.0V	-	0.1	-	%/V

■ MEASUREMENT CIRCUIT
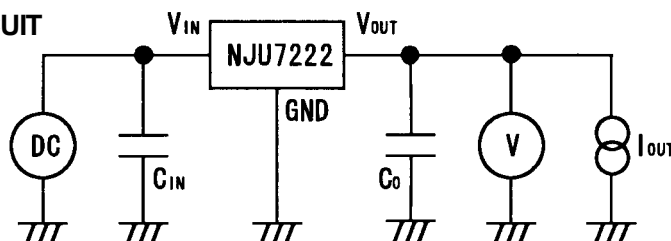
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