

HIGH PRECISION C-MOS 2-OUTPUT POSTIVE VOLTAGE REGULATOR

PRELIMINARY

GENERAL DESCRIPTION

The NJU7224 series is a high precision 2-output voltage ($\pm 2\%$) C-MOS positive voltage regulator which contains dual system of internal accurate voltage reference, error amplifier, control transistor output voltage setting resistor and strobe circuit.

The regulation voltage is fixed by internal circuits and two types of voltage outputs are available.

The strobe circuit which control the regulation voltage output On / Off, effectiveness is programmable.

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

PACKAGE OUTLINE



NJU7224XM

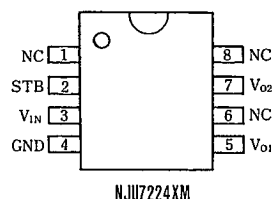


NJU7224XV

FEATURES

- Positive Voltage Two-Output (Programmable)
- Low Stand-By Current (5 μ A MAX)
- High Precision Output Voltage ($\pm 2\%$)
- Wide Operating Voltage 3.0V ~ 12.0V
- Low Dropout Voltage ($\Delta V_{IO} < 0.6V$, $I_O = 40mA$)
- Small Temperature Coefficient of Output Voltage
- Build-In Strobe Circuit
- Strobe Function Programmable
- Package Outline DMP8/SSOP8
- C-MOS Technology

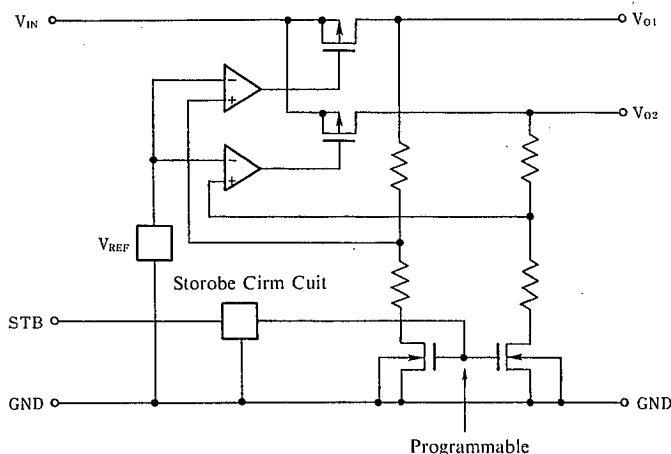
PIN CONFIGURATION



SERIES REFERENCE

VERSION	V ₀₁ [V]	V ₀₂ [V]	STB "H" or Open
NJU7224A	3.0	5.0	V ₀₁ , V ₀₂ Output "OFF"

EQUIVALENT CIRCUIT



■ TERMINAL DESCRIPTION

NO.	SYMBOL	FUNCTION
1	NC	Non Connection
2	V _{IN}	Power Supply Terminal
3	STB	Output ON/OFF Control Terminal
4	GND	Ground
5	V _{O1}	Output Terminal 1
6	NC	Non Connection
7	V _{O2}	Output Terminal 2
8	NC	Non Connection

(Note) During the STB terminal is "L", regulation voltage is output and during the STB is "H" or "OPEN", the output is disablement. The V_{O1} and V_{O2} regulation voltage can be assigned by pre-fix voltage selected from 1.2V to 7.8V and its ON/OFF can also be set by using the programmable strobe function.

■ ABSOLUTE MAXIMUM RATINGS

(Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Input Voltage	V _{IN}	14	V
Strobe Input Voltage	V _{ST}	V _{IN} ≥ V _{ST}	V
Output Voltage	V _{O1} V _{O2}	GND - 0.3 ~ V _{IN} +0.3	V
Output Current	I _{O1} I _{O2}	100	mA
Power Dissipation	P _D	250(SSOP8) 300(DMP8)	mW
Operating Temperature Range	T _{opr}	-25 ~ +75	°C
Storage Temperature Range	T _{stg}	-40 ~ +125	°C

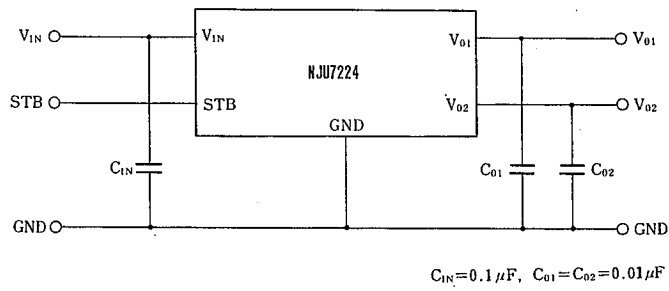
■ ELECTRICAL CHARACTERISTICS

(C_{IN}=0.1 μF, C_{O1}=C_{O2}=0.01 μF, Ta=25°C, V_{IN}=7V, V_{O1}=3V, V_{O2}=5V)

A Version

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Output Voltage	V _{O1}	I _{O1} =10mA	2.94		3.06	V
	V _{O2}	I _{O2} =30mA	4.90		5.10	V
Input Voltage	V _{IN}				12.0	V
Dropout Voltage	ΔV _{IO1}	I _{O1} =20mA		0.2	0.6	V
	ΔV _{IO2}	I _{O2} =40mA		0.3	0.6	V
Operating Current	I _{DD}			30	60	μA
Stand - By Current	I _O	V _{ST} =7V		3.0	5.0	μA
Load Regulation	ΔV _{O1} / ΔI _{O1}	I _{O1} =1 ~ 20mA		80	120	mV
	ΔV _{O2} / ΔI _{O2}	I _{O2} =1 ~ 40mA		120	180	mV
Line Regulation	ΔV _{O1} / (ΔV _{IN} · V _{O1})	V _{IN} =6V ~ 12V		0.1		%/V
	ΔV _{O2} / (ΔV _{IN} · V _{O2})			0.1		%/V
Strobe "H" Input Volt	V _{STH}		5.0			V
Strobe "L" Input Volt	V _{STL}				2.0	V
Strobe Input Current	I _{ST}	V _{ST} =0V	5.0	10	20	μA

■ MEASUREMENT CIRCUIT



NJU7224 Series

MEMO

[CAUTION]

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