

C-MOS 2-OUTPUT POSITIVE VOLTAGE REGULATOR PRELIMINARY

■ GENERAL DESCRIPTION

The NJU7204 series is a 2-output 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



NJU7204M

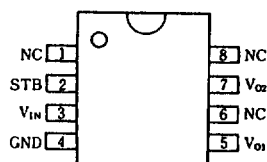


NJU7204V

■ FEATURES

- Positive Voltage Two-Output (Programmable)
- Low Stand-By Current ($5 \mu\text{A MAX}$)
- Wide Operating Voltage $3.0\text{V} \sim 12.0\text{V}$
- Low Dropout Voltage ($\Delta V_{IO} < 0.6\text{V}$, $I_O = 40\text{mA}$)
- Small Temperature Coefficient of Output Voltage
- Build-In Strobe Circuit
- Strobe Function Programmable
- Package Outline DMP/SSOP 8
- C-MOS Technology

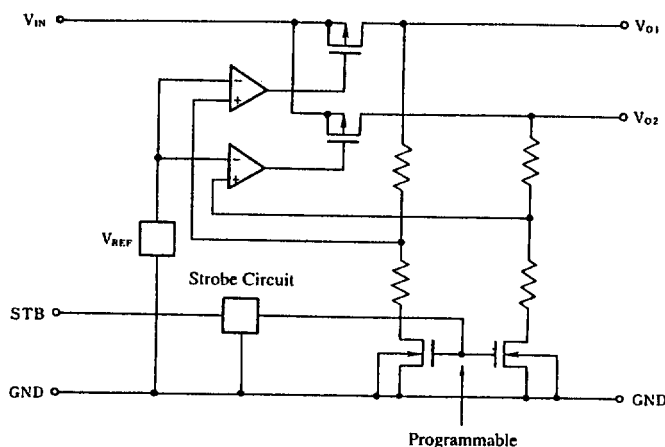
■ PIN CONFIGURATION



■ SERIES REFERENCE

VERSION	V ₀₁ [V]	V ₀₂ [V]	STB "H" or Open
NJU7204A	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 8.5V 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 (SSOP) 300 (DMP)	mW
Operating Temperature Range	T _{opr}	-25 ~ +75	°C
Storage Temperature Range	T _{sig}	-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)

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNIT
Output Voltage	V _{O1}	I _{O1} =10mA	2.85		3.15	V
	V _{O2}	I _{O2} =30mA	4.75		5.25	V
Input Voltage	V _{IN}				12.0	V
Dropout Voltage	ΔV _{O1}	I _{O1} =20mA		0.2	0.6	V
	ΔV _{O2}	I _{O2} =40mA		0.3	0.6	V
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
Operating Current	I _{DD}			30	60	μA



■ MEASUREMENT CIRCUIT

