

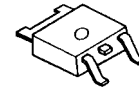
## LOW DROPOUT VOLTAGE REGULATOR

### ■ GENERAL DESCRIPTION

The NJM2885 is low dropout voltage regulator designed for portable application.

Advanced Bipolar technology achieves low noise, high ripple rejection and low quiescent current.

### ■ PACKAGE OUTLINE

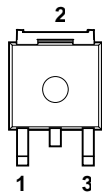


NJM2885DL1

### ■ FEATURES

- High Ripple Rejection    75dB typ. (f=1kHz,Vo=3V Version)
- Output Noise Voltage    Vno=45μVrms typ.
- Output capacitor with 2.2μF ceramic capacitor (Vo≥2.7V)
- Output Current            Io(max.)=500mA
- High Precision Output    Vo±1.0%
- Low Dropout Voltage      0.18V typ. (Io=300mA)
- Internal Short Circuit Current Limit
- Internal Thermal Overload Protection
- Bipolar Technology
- Package Outline            TO-252-3

### ■ PIN CONFIGURATION

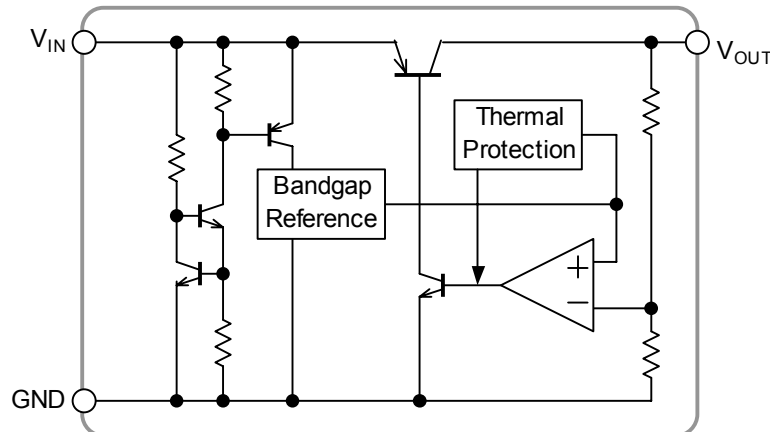


#### PIN FUNCTION

- 1. V<sub>IN</sub>
- 2. GND
- 3. V<sub>OUT</sub>

NJM2885DL1

### ■ EQUIVALENT CIRCUIT



## ■ OUTPUT VOLTAGE RANK LIST

Device Name	V <sub>OUT</sub>	Device Name	V <sub>OUT</sub>
NJM2885DL1-15	1.5V	NJM2885DL1-28	2.8V
NJM2885DL1-18	1.8V	NJM2885DL1-03	3.0V
NJM2885DL1-19	1.9V	NJM2885DL1-33	3.3V
NJM2885DL1-21	2.1V	NJM2885DL1-35	3.5V
NJM2885DL1-25	2.5V	NJM2885DL1-38	3.8V
NJM2885DL1-26	2.6V	NJM2885DL1-05	5.0V

## ■ ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

PARAMETER	SYMBOL	RATINGS	UNIT
Input Voltage	V <sub>IN</sub>	+14	V
Power Dissipation	P <sub>D</sub>	8(Tc=25°C) 0.8(Ta≤25°C)	W
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +125	°C

## ■ Operating Voltage

V<sub>IN</sub>=+2.3V ~ +14.0V (In case of Vo<2.1V)

## ■ ELECTRICAL CHARACTERISTICS

(V<sub>IN</sub>=Vo+1V, C<sub>IN</sub>=0.33μF, Co=2.2μF, (1.7V<Vo≤2.6V: Co=4.7μF, Vo≤1.7V:Co=10μF), Ta=25°C)

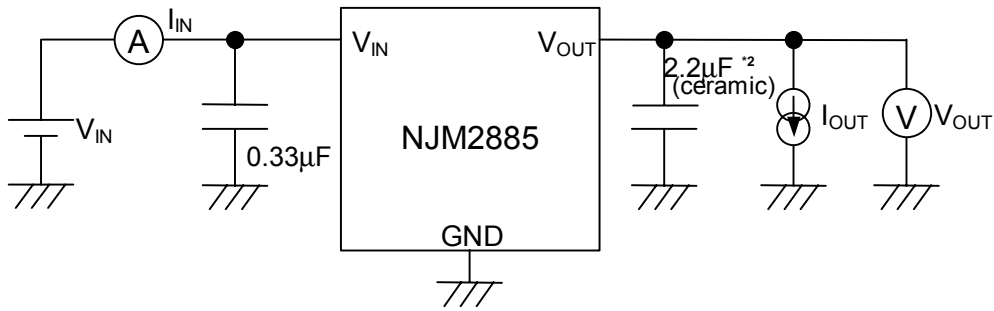
PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Voltage	Vo	Io=30mA	-1.0%	-	+1.0%	V
Quiescent Current	I <sub>Q</sub>	Io=0mA	-	200	300	μA
Output Current	Io	Vo-0.3V	500	650	-	mA
Line Regulation	ΔVo/ΔV <sub>IN</sub>	V <sub>IN</sub> =Vo+1V ~ Vo+6.0V, Io=30mA	-	-	0.10	%/V
Load Regulation	ΔVo/ΔIo	Io=0 ~ 500mA	-	-	0.03	%/mA
Dropout Voltage	ΔV <sub>LO</sub>	Io=300mA	-	0.18	0.28	V
Ripple Rejection	RR	ein=200mVrms, f=1kHz, Io=10mA Vo=3.0V Version	-	75	-	dB
Average Temperature Coefficient of Output Voltage	ΔVo/ΔTa	Ta=0~85°C, Io=10mA	-	±50	-	ppm/°C
Output Noise Voltage	V <sub>NO</sub>	f=10Hz~80kHz, Io=10mA, Vo=3.0V Version	-	45	-	μVrms

(\*1): The output voltage excludes under 2.1V.

The above specification is a common specification for all output voltages.

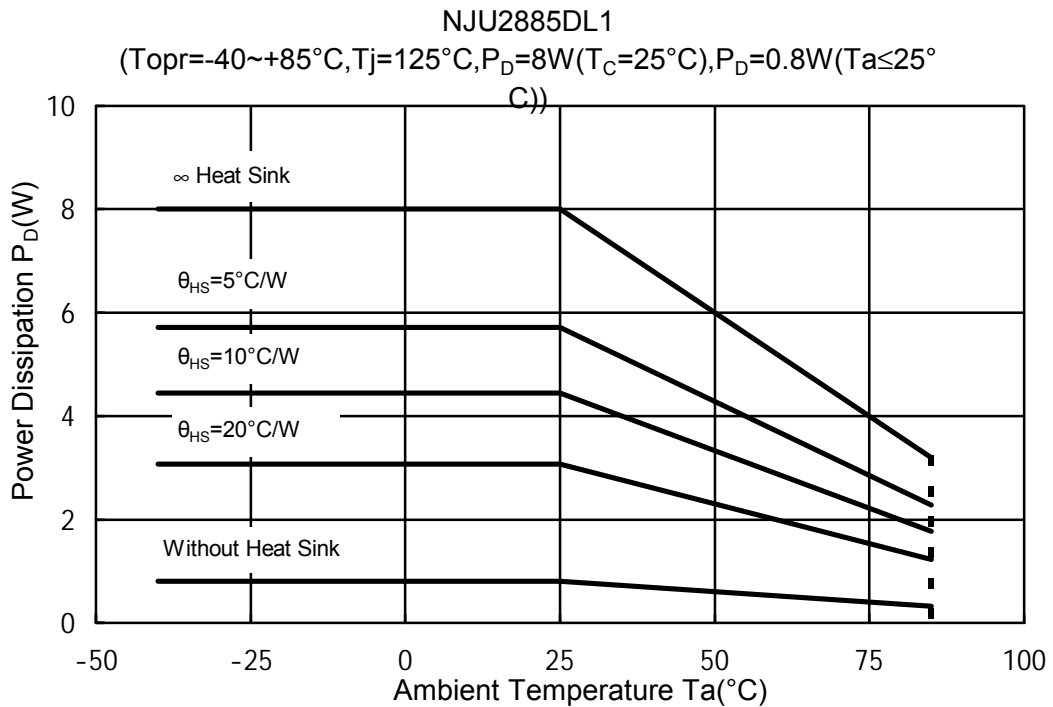
Therefore, it may be different from the individual specification for a specific output voltage.

■ TEST CIRCUIT

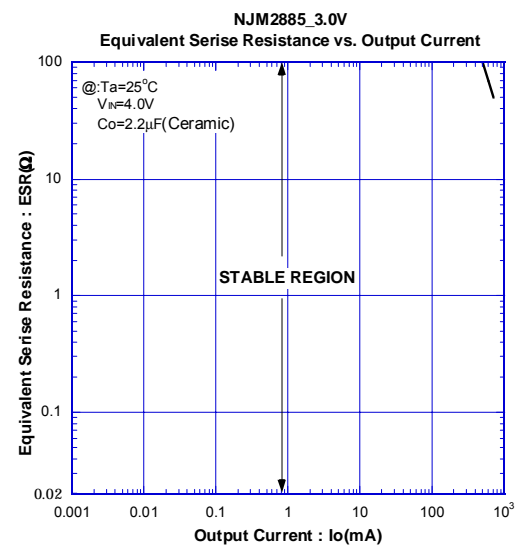
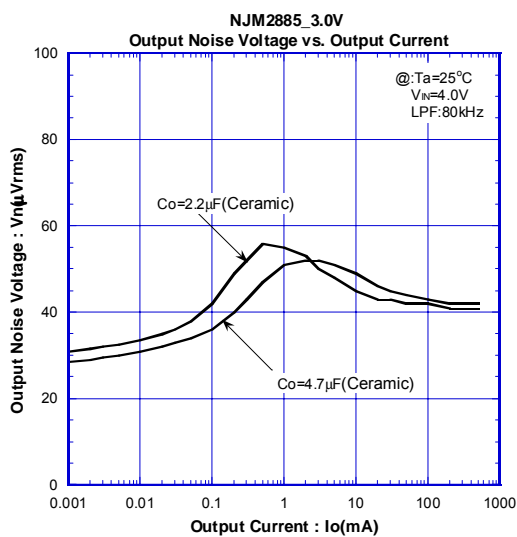
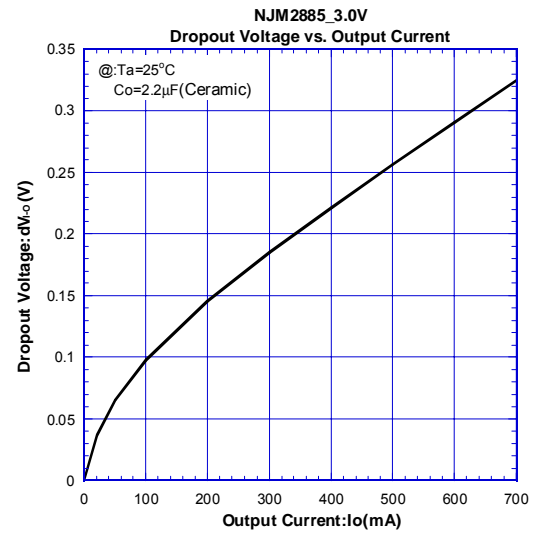
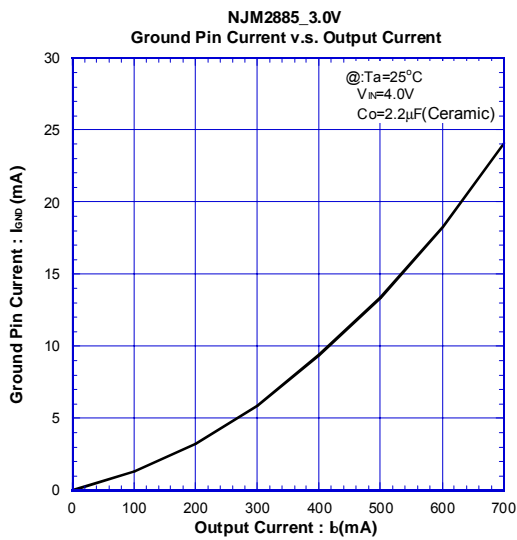
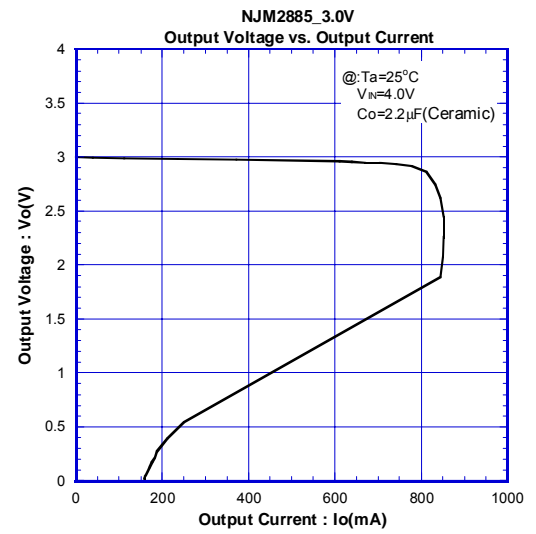
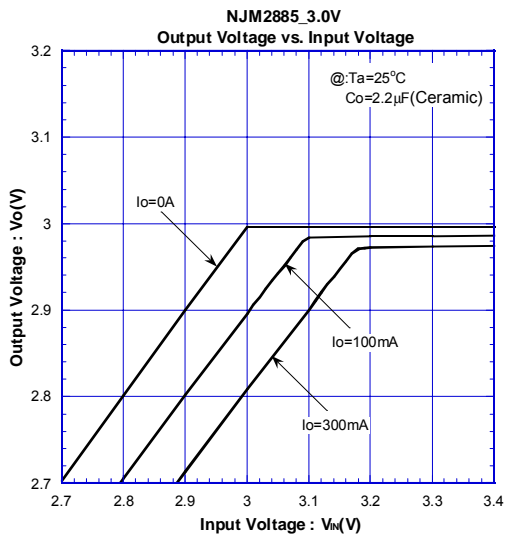


\*2 1.7V<Vo≤2.6V version: Co=4.7µF(ceramic)  
Vo≤1.7V version: 10µF(ceramic)

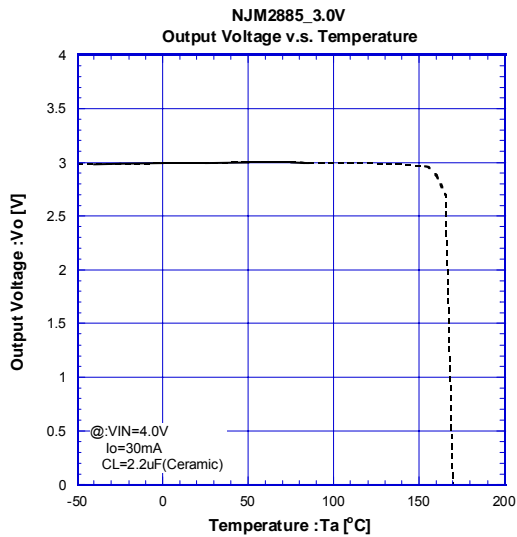
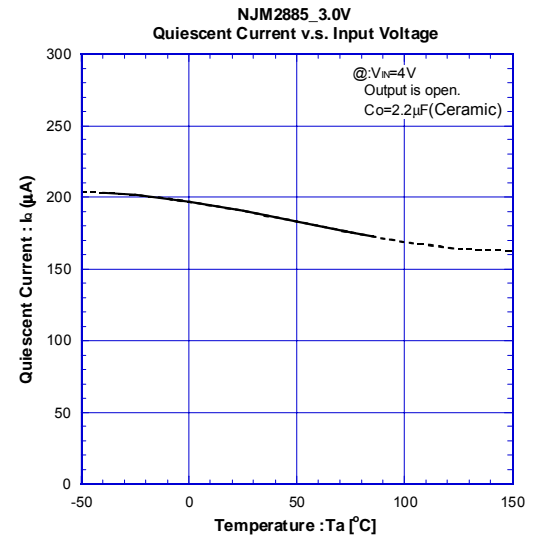
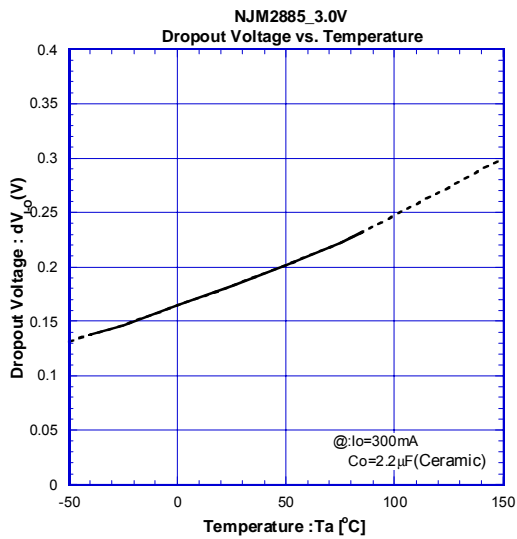
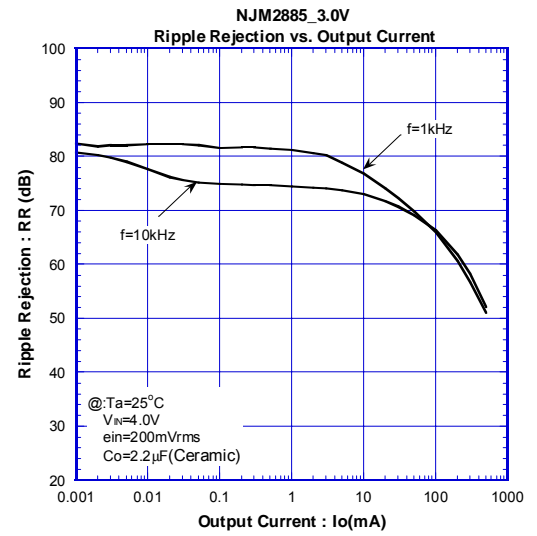
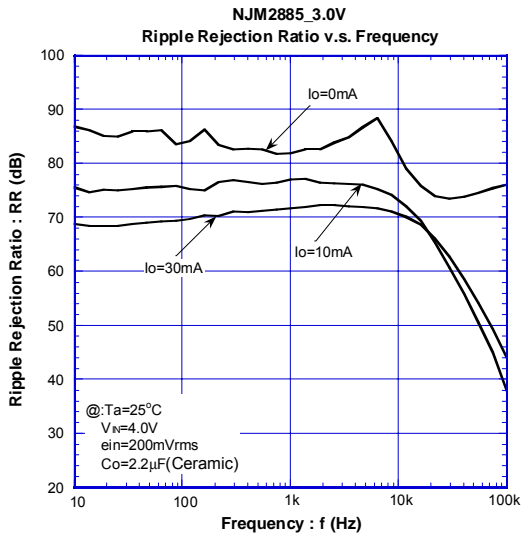
■ POWER DISSIPATION VS. AMBIENT TEMPERATURE



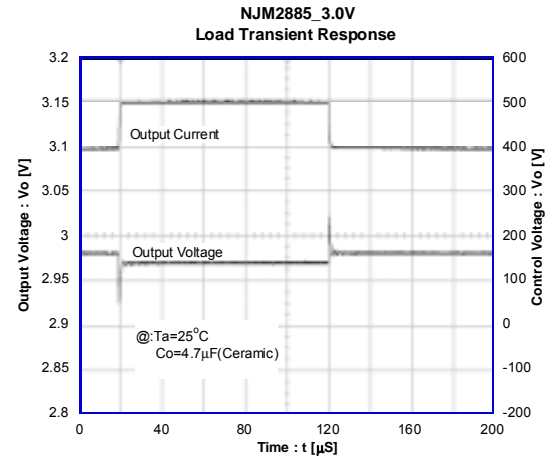
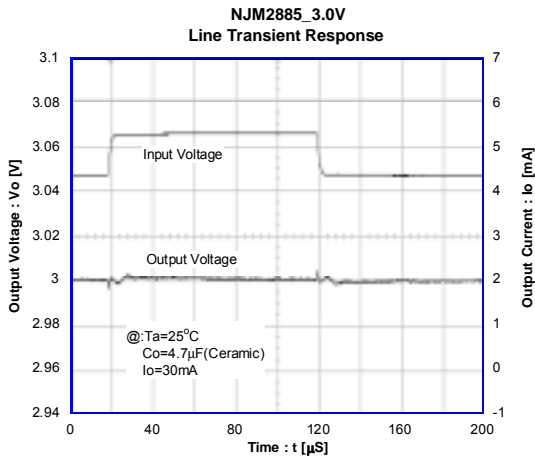
## ■ ELECTRICAL CHARACTERISTICS



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