



# NJM2885

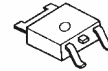
## LOW DROPOUT VOLTAGE REGULATOR

### ■ 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

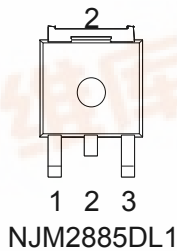


NJM2885DL1

### ■ FEATURES

- High Ripple Rejection 75dB typ. (f=1kHz)
- Output Noise Voltage  $V_{no}=45\mu V_{rms}$
- Output capacitor with 2.2 $\mu F$  ceramic capacitor ( $V_o \geq 2.7V$ )
- Output Current  $I_o(max.)=500mA$
- High Precision Output  $V_o \pm 1.0\%$
- Low Dropout Voltage 0.18V typ. ( $I_o=300mA$ )
- Internal Short Circuit Current Limit
- Internal Thermal Overload Protection
- Bipolar Technology
- Package Outline TO-252-3

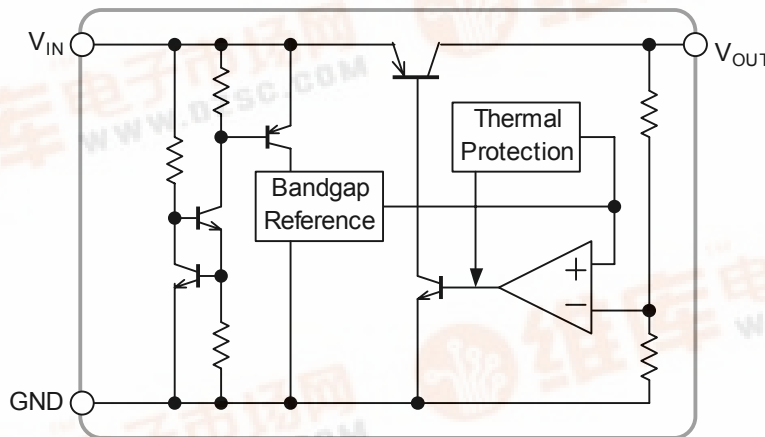
### ■ PIN CONFIGURATION



#### PIN FUNCTION

- 1.  $V_{IN}$
- 2. GND
- 3.  $V_{OUT}$

### ■ EQUIVALENT CIRCUIT



### ■ OUTPUT VOLTAGE RANK LIST

Device Name	$V_{OUT}$	Device Name	$V_{OUT}$
NJM2885DL1-18	1.8V	NJM2885DL1-30	3.0V
NJM2885DL1-21	2.1V	NJM2885DL1-33	3.3V
NJM2885DL1-25	2.5V	NJM2885DL1-35	3.5V
NJM2885DL1-26	2.6V	NJM2885DL1-38	3.8V
NJM2885DL1-28	2.8V	NJM2885DL1-05	5.0V



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

PARAMETER	SYMBOL	RATINGS	UNIT
Input Voltage	$V_{IN}$	+14	V
Power Dissipation	$P_D$	8(Tc=25°C) 0.8(Ta≤25°C)	mW
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +125	°C

**■ ELECTRICAL CHARACTERISTICS**

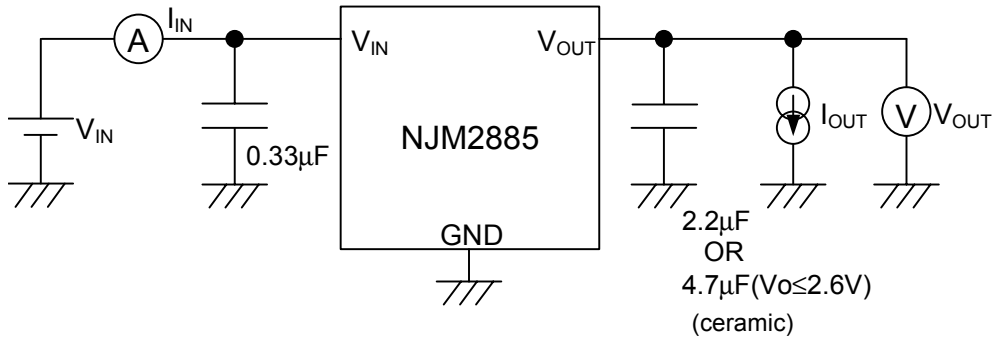
(VIN=Vo+1V, CIN=0.33μF, Co=2.2μF: Vo≥2.7V (Co=4.7μF: Vo≤2.6V), Ta=25°C)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Output Voltage	Vo	Io=30mA	-1.0%	–	+1.0%	V
Quiescent Current	Iq	Io=0mA	–	200	300	μA
Output Current	Io	Vo-0.3V	500	650	–	mA
Line Regulation	$\Delta V_o/\Delta V_{IN}$	VIN=Vo+1V ~ Vo+6.0V, Io=30mA	–	–	0.10	%/V
Load Regulation	$\Delta V_o/\Delta I_o$	Io=0 ~ 500mA	–	–	0.03	%/mA
Dropout Voltage	$\Delta V_{I-O}$	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	$\Delta V_o/\Delta T_a$	Ta=0~85°C, Io=10mA	–	±50	–	ppm/°C
Output Noise Voltage	VNO	f=10Hz~80kHz, Io=10mA, Vo=3.0V Version	–	45	–	μVrms

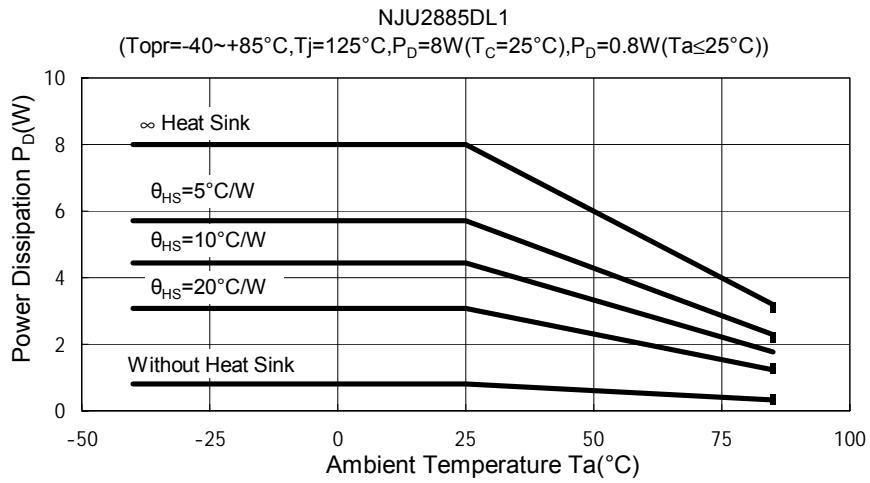
(\*note 1): The above specification is a common specification for all output voltages.

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

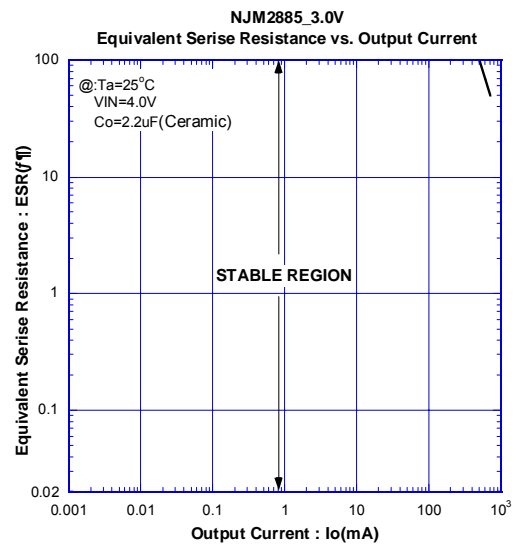
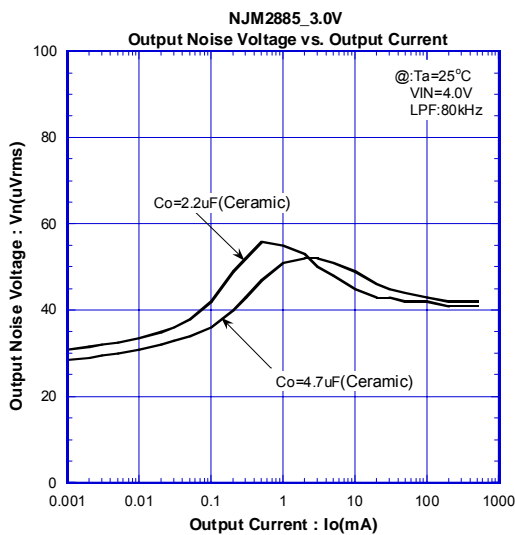
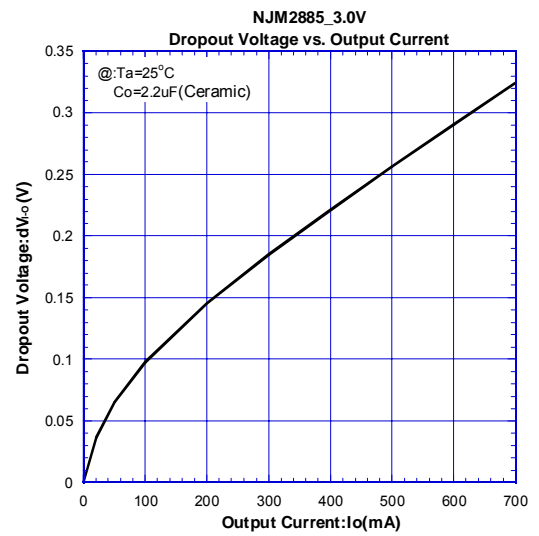
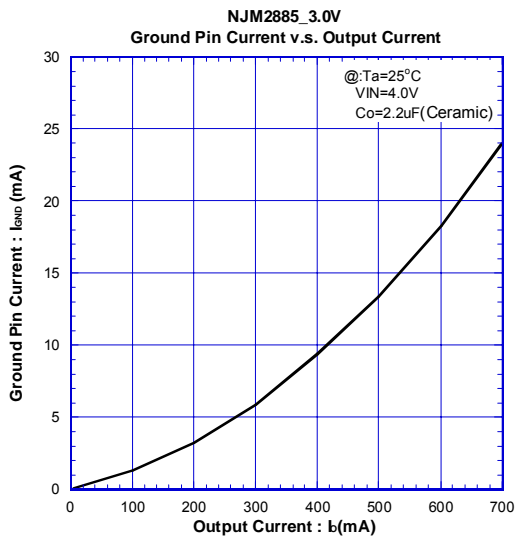
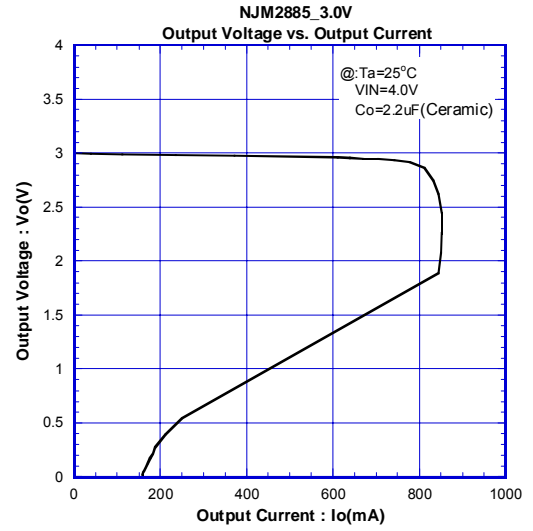
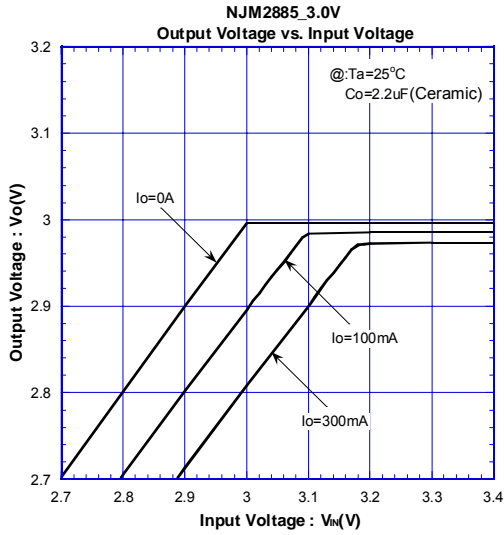
■ TEST CIRCUIT



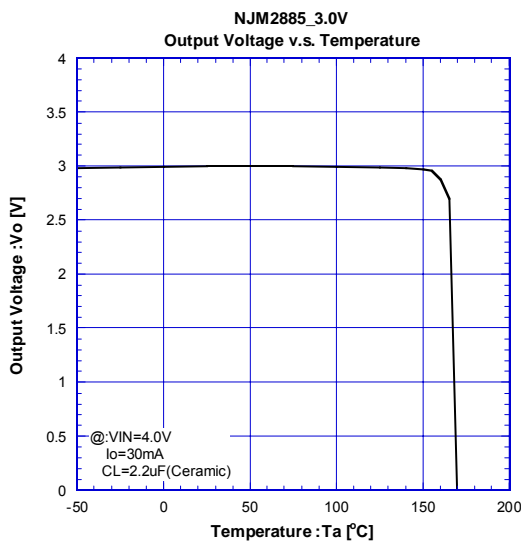
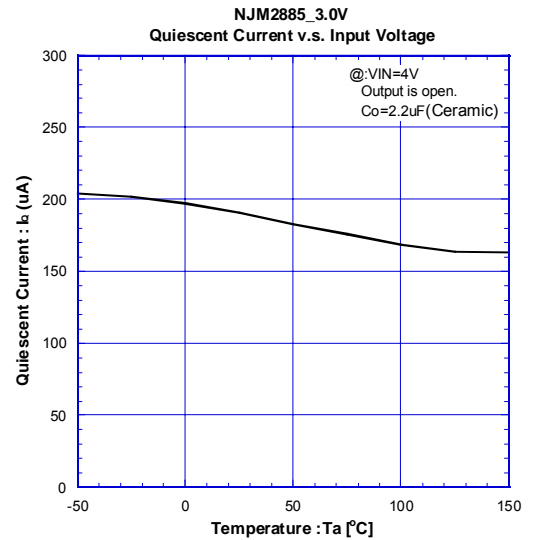
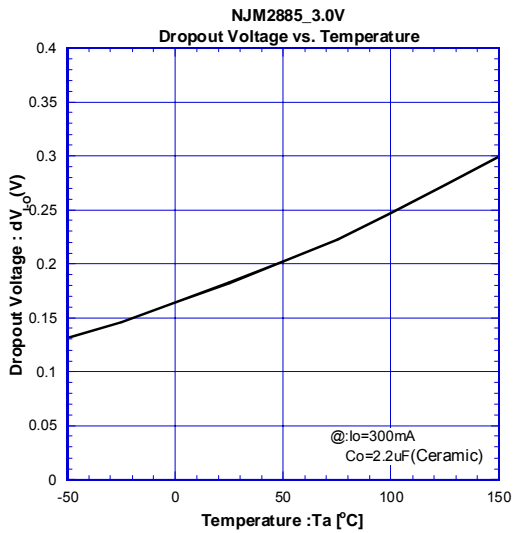
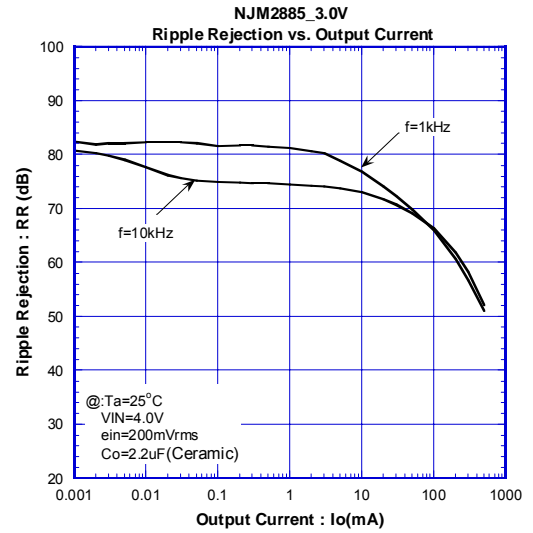
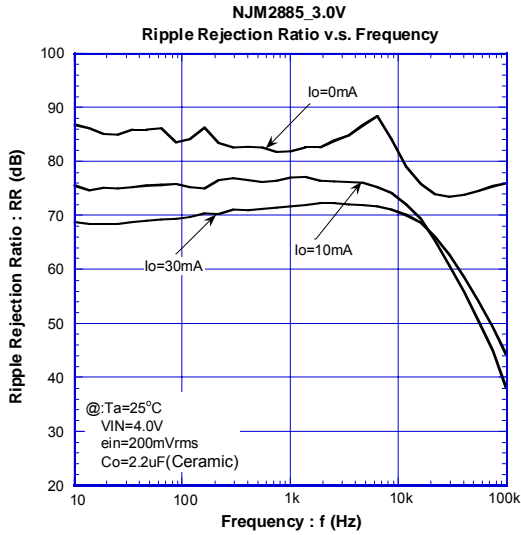
■ POWER DISSIPATION VS. AMBIENT TEMPERATURE



## ■ ELECTRICAL CHARACTERISTICS



## ■ ELECTRICAL CHARACTERISTICS





[CAUTION]

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