

Low Voltage 3A LDO with Ext. VOUT Adjustable and Reverse Current Protection

The RP108J Series are CMOS-based LDO regulators featuring 3A output with low on-resistance. The CMOS process provides both large output current and low supply current. The dropout voltage is significantly lower than bipolar regulators. The RP108J handles low voltage with an input voltage from 1.6V and an output voltage from 0.8V. Accordingly, the device supports highly integrated, low voltage-driven LSI as a rear stage of the DC/DC converter. RP108J081x can set adjustable output voltage with external resistors. The CE pin can switch the regulator into standby mode. In addition to a fold-back protection circuit built into conventional LDO regulators, RP108J has a thermal shutdown circuit, a reverse current protection circuit and a constant slope circuit. The constant slope circuit is a soft start function to prevent inrush current and malfunction of devices. Ceramic capacitors can be used.

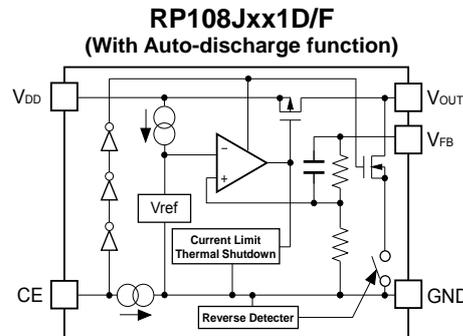
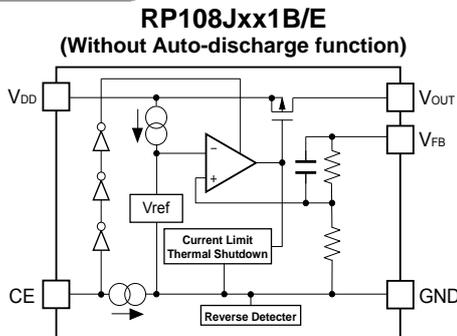
*) RP108J Series are suitable for automotive applications and Y class applications. For details, please refer to our product catalog and datasheet. Or, please contact us.

FEATURES

- Supply Current (I_{SS}) Typ. 350μA (V_{IN}=V_{SET}+1.0V)
- Standby Current (I_{standby}) Typ. 2μA (CE="L")
- Dropout Voltage (V_{DIF}) Typ. 0.51V (I_{OUT}=3A, V_{SET}=2.8V)
- Ripple Rejection (RR) Typ. 65dB (f=1kHz)
- Input Voltage Range (V_{IN}) 1.6V to 5.25V (Absolute maximum rating : 6.0V)
- Output Voltage Range (V_{OUT}) 0.8V to 4.2V (Internally fixed)
Adjustable by external resistors (081x: 0.8V to 4.2V)
- Output Voltage Accuracy ± 1%
- Temp.coeff.of Output Voltage Typ. ± 100ppm/°C
- Line Regulation Typ. 0.1%/V
- Load Regulation Typ. 3mV (I_{OUT}=3A)
- Fold-back Protection Circuit Current limit Typ. 220mA
- Reverse Current Protection Circuit
- Constant Slope Circuit (Soft Start Function)
- Thermal Shutdown Circuit Stops at 165°C
- Auto-discharge Function D/F Version
- Package TO-252-5-P2
- Ceramic capacitors can be used. ... 10μF or more

(The above shows specification at Ta=25°C. Design assurance value at -40°C ≤ Ta ≤ 85°C is also available. For details, please refer to the datasheet.)

BLOCK DIAGRAMS

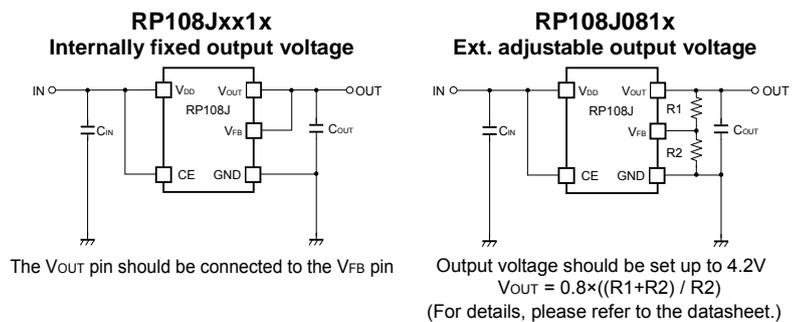


SELECTION GUIDE

Halogen Free	Package	Q'ty per Reel	Part No.
H/F	TO-252-5-P2	5,000 pcs	RP108Jxx1* T -1-FE

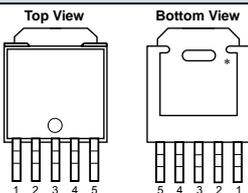
- xx : Specify the output voltage within the range of 0.8V (08) to 4.2V (42) in 0.1V steps.
- * : Designation of auto-discharge function at off state and the soft-start time
 - (B) No auto-discharge function, soft start time typ. 180 μs
 - (D) Auto-discharge function, soft start time typ. 180 μs
 - (E) No auto-discharge function, soft start time typ. 570 μs
 - (F) Auto-discharge function, soft start time typ. 570 μs

TYPICAL APPLICATIONS



PACKAGE

TO-252-5-P2

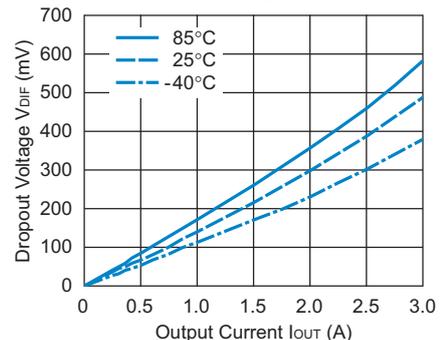


1	CE	4	V _{OUT}
2	V _{DD}	5	V _{FB}
3	GND		

*) The tab is substrate level. (GND)
 The V_{OUT} pin should be connected to the V_{FB} pin when the output voltage is fixed inside the IC.

TYPICAL CHARACTERISTIC

RP108J251x Dropout Voltage vs. Output Current



APPLICATIONS

- Power source for hand-held communication equipment, cameras, and VCRs
- Power source for home appliances
- Power source for battery-powered equipment



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