

200 mA LDO Regulator with Alternative Dual-Voltage Level Output

The RP155Z is a 200-mA LDO regulator with a selectable dual-voltage level output. It provides the VSEL pin that is used to select one of two preset output voltage levels.

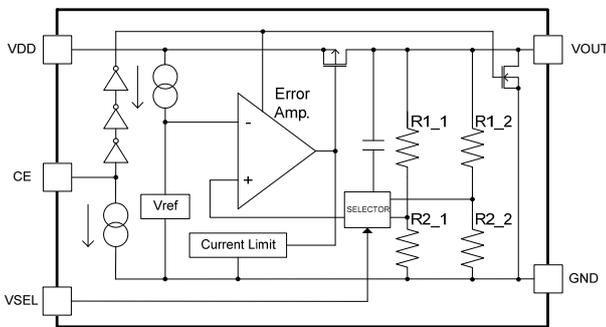
Excellent ripple rejection, input transient response, and load transient response make the RP155Z ideal for the application for mobile communication equipment.

For protection, the RP155Z provides a short-current limiting circuit, a thermal shutdown circuit and an inrush current limiting circuit. The RP155Z is offered in a 5-pin WLCSP-5-P1 package which achieves the smallest possible footprint solution on boards where area is limited.

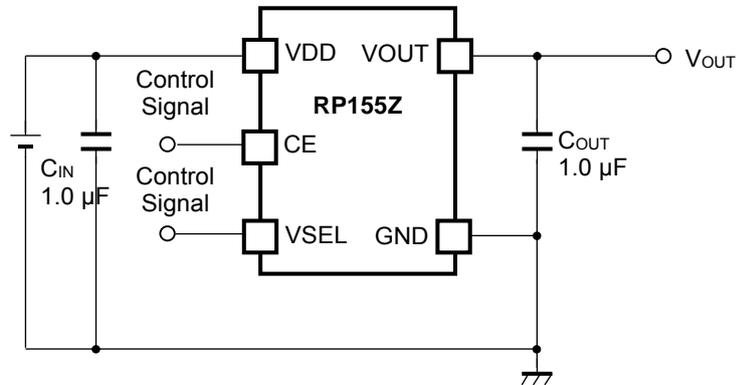
FEATURES

- Supply Current (I_{SS}) Typ. 80 μ A ($V_{IN}=V_{SET}+1.0V$, $I_{OUT}=0mA$)
 - Standby Current ($I_{standby}$) Typ. 0.1 μ A (Same as above, $I_{OUT}=1mA$, $V_{CE}=0V$)
 - Dropout Voltage (V_{DIF}) Typ. 0.085V ($I_{OUT}=200mA$, $V_{SET}=2.5V$)
 - Ripple Rejection (RR) Typ. 75dB ($f=1kHz$), Typ. 70dB ($f=10kHz$)
 - Input Voltage Range (V_{IN}) 1.9V to 5.25V (Absolute maximum rating: 6.0V)
 - Output Voltage Range (V_{OUT}) 1.6V to 3.6V
 - Output Voltage Accuracy $\pm 1.0\%$
 - Output Voltage Temperature Coefficient Typ. ± 30 ppm/ $^{\circ}C$
 - Line Regulation Typ. 0.02%/V
 - Short-current Protection Circuit Current Limit Typ. 50 mA
 - Overcurrent Protection Fold-back Type
 - Inrush Current Limiting Typ. 160 mA during 180 μ s after start-up
 - Thermal Shutdown Circuit Stops at 160 $^{\circ}C$
 - Auto-discharge Function
 - Package WLCSP-5-P1
 - Ceramic capacitors can be used. $C_{IN}=1.0\mu F$ or more
- ※The above shows specifications at $T_a=25^{\circ}C$. The design guaranteed values at $-40^{\circ}C \leq T_a \leq 85^{\circ}C$ are also available. For details, please refer to the datasheet.

BLOCK DIAGRAM



TYPICAL APPLICATION



SELECTION GUIDE

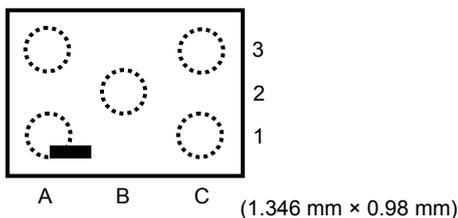
Halogen Free	Package	Q'ty per Reel	Part No.
H/F	WLCSP-5-P1	5,000 pcs	RP155Zxxx*-E2-F

xxx : Specify a combination of two set output voltages (V_{SET1}/V_{SET2}).
 V_{SET1}/V_{SET2} can be selected within the range of 1.6 V to 3.6 V.

* : Specify the auto-discharge option.
 (B) Auto-discharge function included

PACKAGE (Top View)

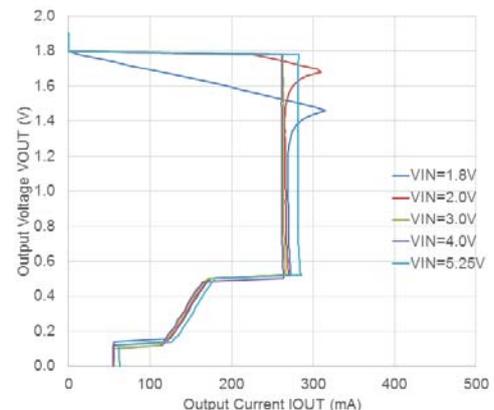
WLCSP-5-P1



A1	CE	Chip Enable Pin, Active-high
A3	VSEL	Output Voltage Selector Pin, SET1-low, VSET2-high
B2	GND	Ground Pin
C1	VOUT	Output Pin
C3	VDD	Input Pin

TYPICAL CHARACTERISTIC

1.8 V (V_{SET1}/V_{SET2}) Output Voltage vs. Output Current



APPLICATIONS

- Printers and PCs with SD Card Slots
- Battery-powered Equipment: Portable Music Players, IC Recorders, Cameras and Camcorders
- Portable Communication Equipment: Smartphones, Feature Phones
- Electronic Equipment System that Requires Two Levels of Output Voltage Regulation in Normal Mode/ Power-Saving Mode



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