RP116Z Series

400mA 1V Input LDO

The RP116x Series are CMOS-based LDO regulators featuring 400mA output. The input voltage as low as Min. 1.0V and the output voltage can be set from 0.7V. The output voltage accuracy has been improved to ± 0.8% and due to a built-in transistor with low on-resistance of 0.55Ω (at V_{OUT}=1.5V), RP106x provides a low dropout voltage. The CE pin can switch the regulator to standby mode. In addition to (a 0.69mm square, t=0.36mm, 0.4mm pitch) WLCSP-4-P7 package is available. The package is thinner than WLCSP-4-P5 package of RP106Z (t=0.48mm).

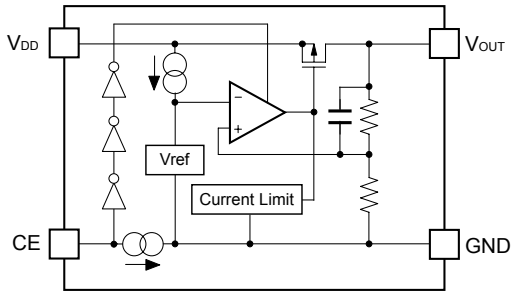
FEATURES

- Supply Current (I_{SS}) ····· Typ. 48μA (V_{IN}=SET V_{OUT}+1.0V)
- Standby Current ($I_{standby}$) ····· Typ. 0.1μA (Same as above, CE="L")
- Dropout Voltage (V_{DIF}) ····· Typ. 0.22V (I_{OUT}=400mA, V_{OUT}=1.5V)
- Ripple Rejection (RR) ····· Typ. 60dB (f=10kHz)
- Input Voltage Range (V_{IN}) ····· 1.0V to 3.6V
- Output Voltage Range (V_{OUT}) ····· 0.7V to 1.8V (internally fixed)
- Output Voltage Accuracy ····· ± 0.8%
- Temp. coeff. of Output Voltage ····· Typ. ± 60ppm/°C
- Line Regulation ····· Typ. 0.10%/V
- Fold-back Protection Circuit ····· Current limit Typ. 110mA
- Constant Slope Circuit
- Auto-Discharge function ····· D Version
- Package ····· WLCSP-4-P7
- Ceramic capacitors can be used ···· 1μF or more

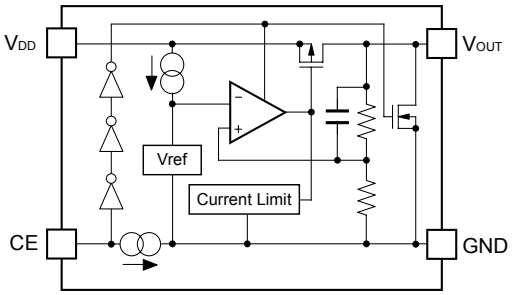
(The above shows specification at Topt=25°C. Design assurance value at -40°C ≤ Topt ≤ 85°C is also available. For details, please refer to the datasheet.)

BLOCK DIAGRAMS

RP116xxx1B
(Without Auto-Discharge function)



RP116Zxx1D
(With Auto-Discharge function)



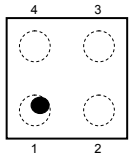
SELECTION GUIDES

Halogen Free	Package	Q'ty per Reel	Part No.
H/F	WLCSP-4-P7	5,000 pcs	RP116Zxx1*-TR-F

xx : Specify the output voltage within the range of 0.7V (07) to 1.8V (18) in 0.1V steps.
* : Select from (B) without auto-discharge function or (D) with auto-discharge function.

PACKAGES (Top View)

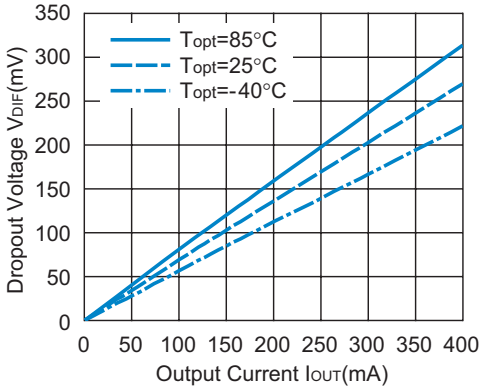
WLCSP-4-P7



1	V_{DD}
2	CE
3	GND
4	V_{OUT}

TYPICAL CHARACTERISTIC

RP116Z121x Dropout Voltage vs. Output Current



APPLICATIONS

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

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