

Automatic Mode Shift 150mA LDO

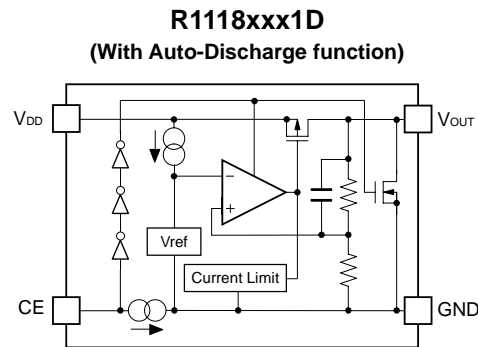
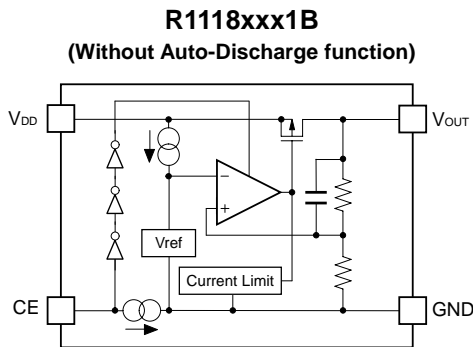
The R1118x Series are CMOS-based auto mode switching LDO regulators featuring 150mA output. In auto switching mode, the operation can switch automatically to fast response mode or low power mode of the ECO function according to output current. (Automatic switching to fast response mode under $I_{OUT} > 7\text{mA}$ conditions or to low power mode under $I_{OUT} < 2\text{mA}$ conditions.) In lower power mode, supply current is as low as $5.5\mu\text{A}$. In fast response mode, ripple rejection is 70dB and noise is low. R1118x requires neither ECO pin for switching mode nor microcontroller pin. R1118x supports low voltage, featuring input voltage from 1.4V and output voltage from 0.8V. Standby mode and auto-discharge function are also available (see Selection Guide). Ceramic capacitors can be used.

FEATURES

- Supply Current (I_{SS1}) Typ. $5.5\mu\text{A}$ (Low power mode, $V_{IN}=\text{SET } V_{OUT}+1\text{V}$)
- Supply Current (I_{SS2}) Typ. $50\mu\text{A}$ (Fast mode, same as above)
- Standby Current ($I_{standby}$) Typ. $0.1\mu\text{A}$ ($V_{IN}=6.0\text{V}$, $\text{CE} = \text{"L"}$)
- Dropout Voltage (V_{DIF}) Typ. 0.27V ($I_{OUT}=150\text{mA}$, $V_{OUT}=2.8\text{V}$)
- Ripple Rejection (RR) Typ. 70dB ($f=1\text{kHz}$), TYP. 60dB ($f=10\text{kHz}$)
- Input Voltage Range (V_{IN}) 1.4V to 6.0V
- Output Voltage Range (V_{OUT}) 0.8V to 4.2V (internally fixed)
- Output Voltage Accuracy $\pm 1\%$
- Temp. coeff. of Output Voltage Typ. $\pm 100\text{ppm}/^\circ\text{C}$
- Line Regulation Typ. $0.02\%/V$
- Fold-back Protection Circuit Current limit Typ. 40mA
- Auto-Discharge function D Version
- Packages DFN(PLP)1612-4B, SOT-23-5
- Ceramic capacitors can be used. $1\mu\text{F}$ or more

(The above shows specification at $T_{opt}=25^\circ\text{C}$. Design assurance value at $-40^\circ\text{C} \leq T_{opt} \leq 85^\circ\text{C}$ is also available. For details, please refer to the datasheet.)

BLOCK DIAGRAMS



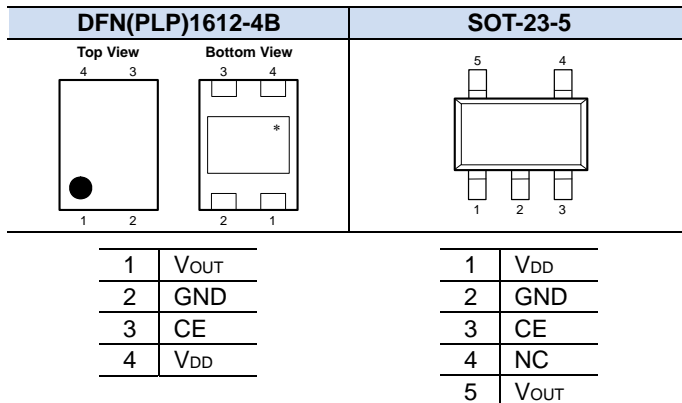
SELECTION GUIDES

Package	Quantity per Reel	Part No.
DFN(PLP)1612-4B	5,000 pcs	R1118Kxx1*-TR
SOT-23-5	3,000 pcs	R1118Nxx1*-TR-F

xx : Specify the output voltage within the range 0.8V(08) to 4.2V(42) in 0.1V steps.

* : Select from (B) without auto-discharge function or (D) with auto-discharge function.

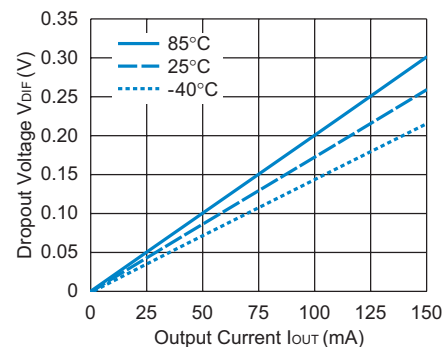
PACKAGES



*) The tab is substrate level (GND).

TYPICAL CHARACTERISTIC

R1118x281x 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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