RICOH

R1118K Series

Automatic Mode Shift Low Voltage 150mA LDO

The R1118K 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} > 7mA conditions or to low power mode under I_{OUT} < 2mA conditions.) In lower power mode, supply current is as low as 5.5µA. In fast response mode, ripple rejection is 70dB and noise is low. R1118K requires neither ECO pin for switching mode nor microcontroller pin. R1118K 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.

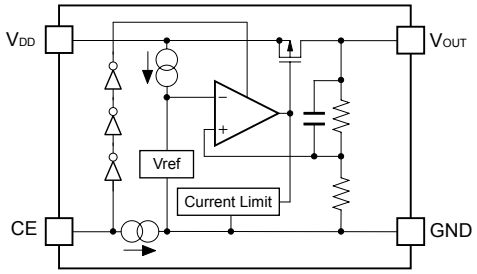
FEATURES

- Supply Current (I_{SS1}) ····· Typ. 5.5µA (Low power mode, V_{IN}=SET V_{OUT}+1.0V)
- Supply Current (I_{SS2}) ····· Typ. 50µA (Fast mode, same as above)
- Standby Current ($I_{standby}$) ····· Typ. 0.1µA (V_{IN}=6.0V, CE = "L")
- Dropout Voltage (V_{DIF}) ····· Typ. 0.27V (I_{OUT}=150mA, V_{OUT}=2.8V)
- Ripple Rejection (RR) ····· Typ. 70dB (f=1kHz), TYP. 60dB (f=10kHz)
- 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 ····· ± 1%
- Temp. coeff. of Output Voltage ····· Typ. ± 100ppm/°C
- Line Regulation ····· Typ. 0.02%/V
- Fold-back Protection Circuit ····· Current limit Typ. 40mA
- Auto-Discharge function ····· D Version
- Package ····· DFN(PLP)1612-4B
- Ceramic capacitors can be used. ··· 1µF or more

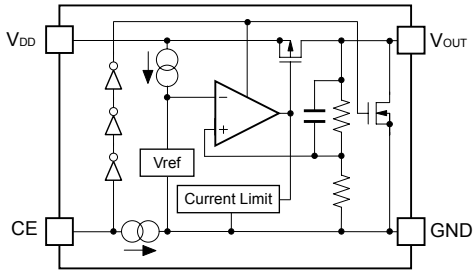
(The above shows specification at Topt=25°C. Design assurance value at -40°C ≤ Topt ≤ 85°C is also available. For details, please refer to the datasheet.)

BLOCK DIAGRAMS

R1118Kxx1B
(Without Auto-Discharge function)



R1118Kxx1D
(With Auto-Discharge function)



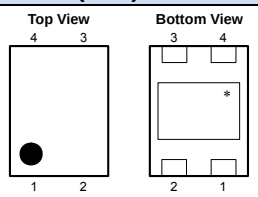
SELECTION GUIDES

Halogen Free	Package	Q'ty per Reel	Part No.
H/F	DFN(PLP)1612-4B	5,000 pcs	R1118Kxx1*-TR

xx : Specify the output voltage within the range of 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

DFN(PLP)1612-4B

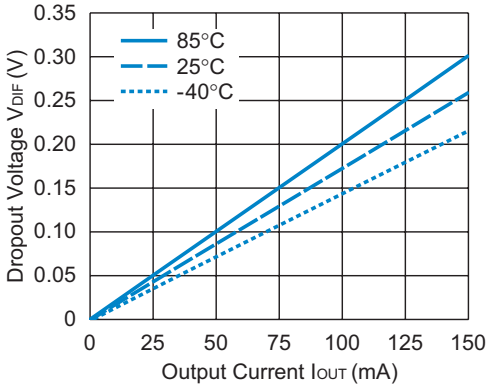


1	VOUT
2	GND
3	CE
4	VDD

*) The tab is substrate level (GND).

TYPICAL CHARACTERISTIC

R1118K281x Dropout Voltage vs. Output Current



APPLICATIONS

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

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RICOH COMPANY, LTD. Electronic Devices Company

■Ricoh presented with the Japan Management Quality Award for 1999.
Ricoh continually strives to promote customer satisfaction, and shares the achievements of its management quality improvement program with people and society.

■Ricoh awarded ISO 14001 certification.
The Ricoh Group was awarded ISO 14001 certification, which is an international standard for environmental management systems, at both its domestic and overseas production facilities. Our current aim is to obtain ISO 14001 certification for all of our business offices.

RoHS Compliant
Ricoh completed the organization of the Lead-free production for all of our products. After Apr. 1, 2006, we will ship out the lead free products only. Thus, all products that will be shipped from now on comply with RoHS Directive.

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RICOH COMPANY, LTD.
Electronic Devices Company
● Higashi-Shinagawa Office (International Sales)
3-32-3, Higashi-Shinagawa, Shinagawa-ku, Tokyo 140-8655, Japan
Phone: +81-3-5479-2857 Fax: +81-3-5479-0502

RICOH EUROPE (NETHERLANDS) B.V.
● Semiconductor Support Centre
Prof. W.H.Keesomlaan 1, 1183 DL Amstelveen, The Netherlands
P.O.Box 114, 1180 AC Amstelveen
Phone: +31-20-5474-309 Fax: +31-20-5474-791

RICOH ELECTRONIC DEVICES KOREA Co., Ltd.
11 floor, Haesung 1 building, 942, Daechidong, Gangnamgu, Seoul, Korea
Phone: +82-2-2135-5700 Fax: +82-2-2135-5705

RICOH ELECTRONIC DEVICES SHANGHAI Co., Ltd.
Room403, No.2 Building, 690#Bi Bo Road, Pu Dong New district, Shanghai 201203, People's Republic of China
Phone: +86-21-5027-3200 Fax: +86-21-5027-3299

RICOH COMPANY, LTD.
Electronic Devices Company
● Taipei office
Room109, 10F-1, No.51, Hengyang Rd., Taipei City, Taiwan (R.O.C.)
Phone: +886-2-2313-1621/1622 Fax: +886-2-2313-1623