RICOH

R1180x Series

Low Supply Current 150mA LDO

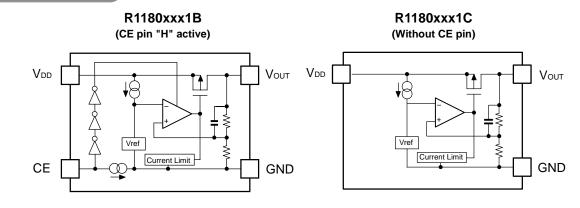
The R1180x Series are CMOS-based LDO regulators featuring 150mA output. R1180x's typical low supply current of 1µA makes it ideal for use in power supplies systems with the sleep mode on. The version that reduced supply current to the lowest possible level by eliminating the CE pin is also available. Ceramic capacitors can be used.

FEATURES

- Supply Current (Iss)Typ. 1µA (VIN=SET VOUT+1.0V)
- Standby Current (Istandby)Typ. 0.1µA (Same as above, CE="L")
- Dropout Voltage (VDIF) ······Typ. 0.25V (IOUT=150mA, VOUT=2.8V)
- Input Voltage Range (VIN) ------ 1.7V to 6.0V
- Output Voltage Range (Vout) 1.2V to 3.6V (internally fixed)
- Output Voltage Accuracy± 2%

BLOCK DIAGRAMS

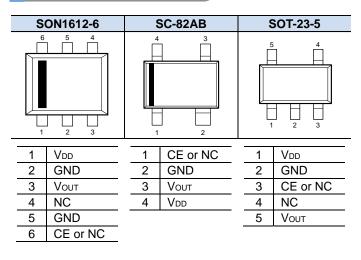
- Temp. coeff. of Output VoltageTyp. ± 100ppm/°C
- Line Regulation Typ. 0.05%/V
- Fold-back Protection Circuit -----Current limit Typ. 40mA
- Packages-----SON1612-6, SC-82AB,
 - SOT-23-5
- \bullet Ceramic capacitors can be used. $\cdots 0.1 \mu F$ or more



SELECTION GUIDES

Halogen Free	Package	Q'ty per Reel	Part No.
H/F	SON1612-6	4,000 pcs	R1180Dxx1*-TR-FE
H/F	SC-82AB	3,000 pcs	R1180Qxx1*-TR-FE
H/F	SOT-23-5	3,000 pcs	R1180Nxx1*-TR-FE

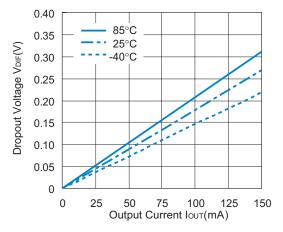
PACKAGES (Top View)



- xx : Specify the output voltage within the range of 1.2V (12) to 3.6V (36) in 0.1V steps.
- Select the polarity of the CE pin from (B) "H" active or (C) without CE pin.

TYPICAL CHARACTERISTIC

R1180x281x 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
- Power source for automotive application

1. The products and the product specifications described in this document are subject to change or discontinuation of production without notice for reasons such as improvement. Therefore, before deciding to use the products, please refer to Ricoh sales representatives for the latest information thereon.
2. The materials in this document may not be copied or otherwise reproduced in whole or in part without prior written consent of Ricoh.
3. Please be sure to take any necessary formalities under relevant laws or regulations before
exporting or otherwise taking out of your country the products or the technical information described herein.
4. The technical information described in this document shows typical characteristics of and
example application circuits for the products. The release of such information is not to be
construed as a warranty of or a grant of license under Ricoh's or any third party's intellectual property rights or any other rights.
5. The products listed in this document are intended and designed for use as general electronic
components in standard applications (office equipment, telecommunication equipment,
measuring instruments, consumer electronic products, amusement equipment etc.). Those
customers intending to use a product in an application requiring extreme quality and reliability,
for example, in a highly specific application where the failure or misoperation of the product
could result in human injury or death (aircraft, spacevehicle, nuclear reactor control system,
traffic control system, automotive and transportation equipment, combustion equipment, safety
devices, life support system etc.) should first contact us.
6. We are making our continuous effort to improve the quality and reliability of our products, but
semiconductor products are likely to fail with certain probability. In order to prevent any injury to
persons or damages to property resulting from such failure, customers should be careful enough
to incorporate safety measures in their design, such as redundancy feature, firecontainment

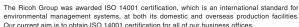
- feature and fail-safe feature. We do not assume any liability or responsibility for any loss or damage arising from misuse or inappropriate use of the products.
- 7. Anti-radiation design is not implemented in the products described in this document.
- 8. Please contact Ricoh sales representatives should you have any questions or comments concerning the products or the technical information.

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.





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.

http://www.ricoh.com/LSI/

RICOH COMPANY, LTD.

Electronic Devices Company Shin-Yokohama office (International Sales) 3-2-3, Shin-Yokohama, Kohoku-ku, Yokohama City, Kanagawa 222-8530, Japan Phone: +81-45-477-1697 Fax: +81-45-477-1698

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, 6904Bi 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

• 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