

The RP171x Series are CMOS-based LDO regulators featuring 150mA output current. Due to the 10V maximum input voltage, RP171x can be used for 2 cell lithium-ion battery powered portable appliances and home appliances. RP171x has a fold-back protection circuit, a thermal shutdown circuit and a constant slope circuit. SC-88A and SOT-23-5 packages are available.

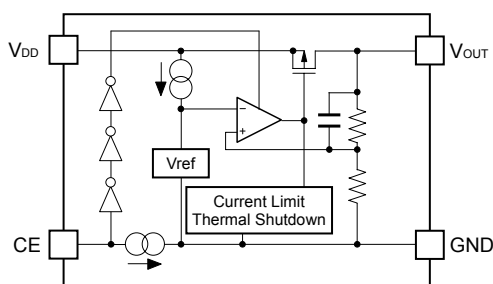
## FEATURES

- Supply Current ( $I_{SS}$ ) ..... Typ. 23 $\mu$ A ( $V_{IN}$ =SET  $V_{OUT}$ +1.0V)
- Standby Current ( $I_{standby}$ ) ..... Typ. 0.1 $\mu$ A ( $V_{IN}$ =10.0V, CE="L")
- Dropout Voltage ( $V_{DIF}$ ) ..... Typ. 0.4V ( $I_{OUT}$ =150mA,  $V_{OUT}$ =2.8V)
- Ripple Rejection (RR)..... Typ. 70dB (f=1kHz)
- Input Voltage Range ( $V_{IN}$ ) ..... 2.6V to 10.0V
- Output Voltage Range ( $V_{OUT}$ )..... 1.2V to 6.0V (internally fixed)
- Output Voltage Accuracy .....  $\pm 1\%$
- Temp. coeff. of Output Voltage ..... Typ.  $\pm 80$ ppm/ $^{\circ}$ C
- Line Regulation..... Typ. 0.02%/V
- Fold-back Protection Circuit..... Current limit Typ. 40mA
- Constant Slope Circuit
- Thermal Shutdown Circuit ..... Stops at 165 $^{\circ}$ C
- Auto-Discharge function ..... D Version
- Packages ..... SC-88A, SOT-23-5
- Ceramic capacitors can be used. ...1 $\mu$ F or more

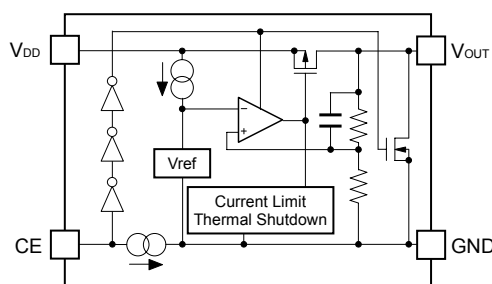
(The above shows specification at  $T_{opt}=25^{\circ}\text{C}$ . Design assurance value at  $-40^{\circ}\text{C} \leq T_{opt} \leq 85^{\circ}\text{C}$  is also available. For details, please refer to the datasheet.)

## BLOCK DIAGRAMS

**RP171xxxB**  
(Without Auto-Discharge function)



**RP171xxxxD**  
(With Auto-Discharge function)



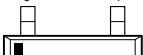
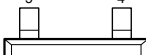
## SELECTION GUIDES

Halogen Free	Package	Q'ty per Reel	Part No.
H/F	SC-88A	3,000 pcs	RP171Qxx2*-TR-FE
H/F	SOT-23-5	3,000 pcs	RP171Nxx1*-TR-FE

**xx**: Specify the output voltage within the range of 1.2V (12) to 6.0V (60) in 0.1V steps.

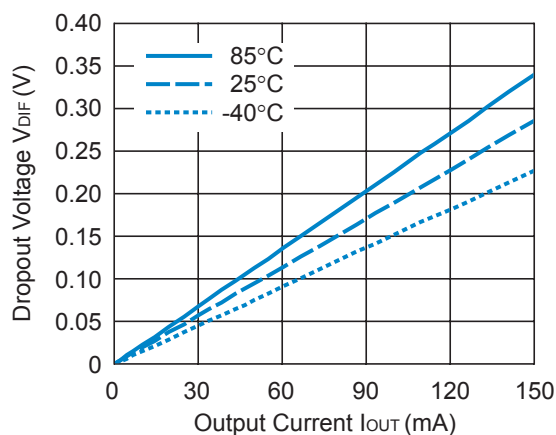
✱: Select from (B) without auto-discharge function or (D) with auto-discharge function.

### PACKAGES (Top View)

SC-88A	SOT-23-5																				
																					
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 30px; text-align: center;">1</td><td>CE</td></tr> <tr><td style="text-align: center;">2</td><td>NC</td></tr> <tr><td style="text-align: center;">3</td><td>GND</td></tr> <tr><td style="text-align: center;">4</td><td>V<sub>OUT</sub></td></tr> <tr><td style="text-align: center;">5</td><td>V<sub>DD</sub></td></tr> </table>	1	CE	2	NC	3	GND	4	V <sub>OUT</sub>	5	V <sub>DD</sub>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr><td style="width: 30px; text-align: center;">1</td><td>V<sub>DD</sub></td></tr> <tr><td style="text-align: center;">2</td><td>GND</td></tr> <tr><td style="text-align: center;">3</td><td>CE</td></tr> <tr><td style="text-align: center;">4</td><td>NC</td></tr> <tr><td style="text-align: center;">5</td><td>V<sub>OUT</sub></td></tr> </table>	1	V <sub>DD</sub>	2	GND	3	CE	4	NC	5	V <sub>OUT</sub>
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## TYPICAL CHARACTERISTIC

### RP171x30xx Dropout Voltage vs. Output Current



## APPLICATIONS

- Power source for hand-held communication equipment and laptop personal computers
- Power source for digital SLRs and VCRs
- Power source for home appliances
- Power source for battery-powered equipment



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## RICOH COMPANY., LTD. Electronic Devices Company



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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.

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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.