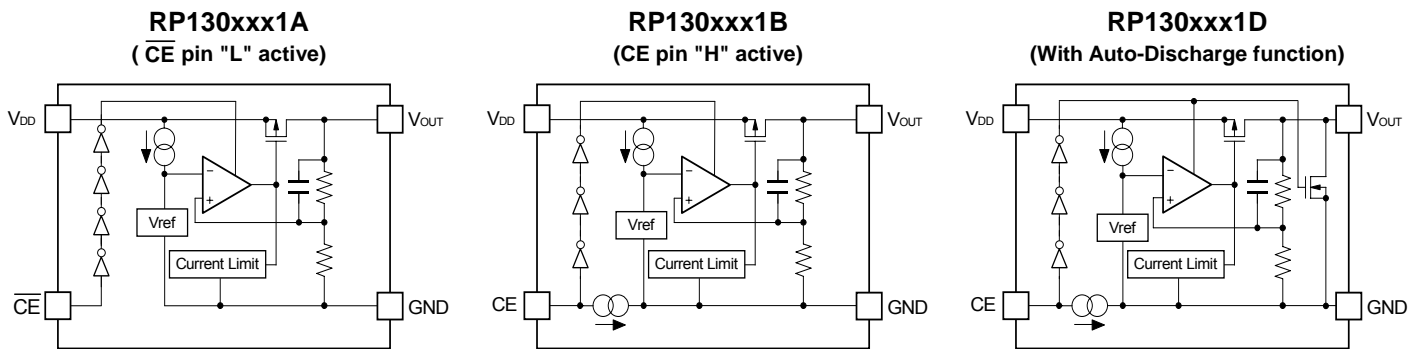


The RP130x Series are CMOS-based LDO regulators featuring 150mA output. The RP130x features an excellent line transient response, a high ripple rejection at 80dB, and low noise. The polarity of the CE pin can be selected. The version with auto-discharge function is also available. Compared to existing high-speed lines, the RP130x provides low supply current at Typ. 38 $\mu$ A. The series covers a wide voltage range, including the input voltage range of 1.7V to 6.5V and the output voltage range of 1.2V to 5.3V. Ceramic capacitors can be used.

### FEATURES

- Supply Current ( $I_{SS}$ ) ..... Typ. 38 $\mu$ A ( $V_{IN} = \text{SET } V_{OUT} + 1.0\text{V}$ )
  - Standby Current ( $I_{standby}$ ) ..... Typ. 0.1 $\mu$ A (Same as above, in standby)
  - Dropout Voltage ( $V_{DIF}$ ) ..... Typ. 0.32V ( $I_{OUT} = 150\text{mA}$ ,  $V_{OUT} = 2.8\text{V}$ )
  - Ripple Rejection (RR) ..... Typ. 80dB ( $f = 1\text{kHz}$ )
  - Input Voltage Range ( $V_{IN}$ ) ..... 1.7V to 6.5V
  - Output Voltage Range ( $V_{OUT}$ ) ..... 1.2V to 5.3V (internally fixed)
  - Output Voltage Accuracy .....  $\pm 1\%$
  - Temp. coeff. of Output Voltage ..... Typ.  $\pm 20\text{ppm}/^\circ\text{C}$
  - Line Regulation ..... Typ. 0.02%/V
  - Fold-back Protection Circuit ..... Current limit Typ. 40mA
  - Auto-Discharge function ..... D Version
  - Packages ..... DFN(PLP)1010-4, SC-82AB, SOT-23-5
  - Ceramic capacitors can be used. .... 0.47 $\mu$ 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



### SELECTION GUIDES

Halogen Free	Package	Q'ty per Reel	Part No.
H/F	DFN(PLP)1010-4	10,000 pcs	RP130Kxx1*-TR
H/F	SC-82AB	3,000 pcs	RP130Qxx1*-TR-FE
H/F	SOT-23-5	3,000 pcs	RP130Nxx1*-TR-FE

xx : Specify the output voltage within the range of 1.2V (12) to 5.3V (53) in 0.1V steps.

\* : Select the polarity of the CE pin from (A) "L" active, (B) "H" active or (D) "H" active with auto-discharge function.

### PACKAGES (Top View)

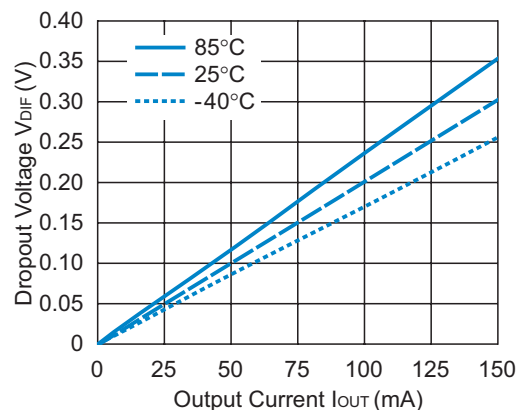
DFN(PLP)1010-4	SC-82AB	SOT-23-5																										
<table><tr><td>1</td><td>V<sub>OUT</sub></td></tr><tr><td>2</td><td>GND</td></tr><tr><td>3</td><td><math>\overline{\text{CE}}</math> or CE</td></tr><tr><td>4</td><td>V<sub>DD</sub></td></tr></table>	1	V <sub>OUT</sub>	2	GND	3	$\overline{\text{CE}}$ or CE	4	V <sub>DD</sub>	<table><tr><td>1</td><td><math>\overline{\text{CE}}</math> or CE</td></tr><tr><td>2</td><td>GND</td></tr><tr><td>3</td><td>V<sub>OUT</sub></td></tr><tr><td>4</td><td>V<sub>DD</sub></td></tr></table>	1	$\overline{\text{CE}}$ or CE	2	GND	3	V <sub>OUT</sub>	4	V <sub>DD</sub>	<table><tr><td>1</td><td>V<sub>DD</sub></td></tr><tr><td>2</td><td>GND</td></tr><tr><td>3</td><td><math>\overline{\text{CE}}</math> or CE</td></tr><tr><td>4</td><td>NC</td></tr><tr><td>5</td><td>V<sub>OUT</sub></td></tr></table>	1	V <sub>DD</sub>	2	GND	3	$\overline{\text{CE}}$ or CE	4	NC	5	V <sub>OUT</sub>
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\*) The tab is substrate level (GND)

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### TYPICAL CHARACTERISTIC

RP130x281x 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-operated devices
- Voltage reference



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