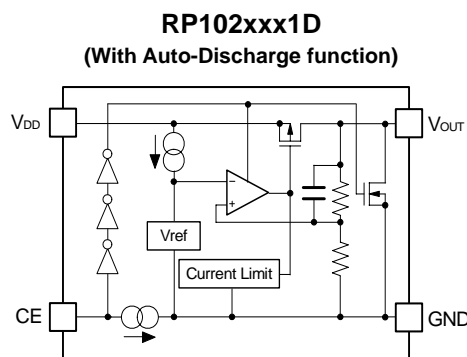
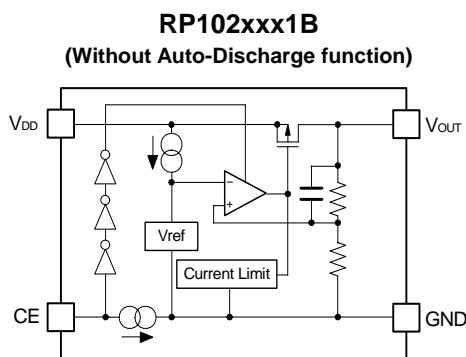


The RP102x Series are CMOS-based LDO regulators featuring 300mA output. The RP102x features supply current as low as 50μA, which is far lower than existing lines. Due to a built-in 0.4Ω (at $V_{OUT}=2.8V$) on-resistor, RP102x can provide a low dropout voltage. RP102x also features excellent line transient response, ripple rejection at 80dB, and low noise. The output voltage accuracy is as high as $\pm 0.8\%$ and the temperature drift coefficient of output voltage is low at $\pm 20\text{ppm}/^\circ\text{C}$.

FEATURES

- Supply Current (I_{SS}) Typ. 50μA ($V_{IN}=\text{SET } V_{OUT}+1.0V$)
- Standby Current ($I_{standby}$) Typ. 0.1μA (Same as above, CE="L")
- Dropout Voltage (V_{DIF}) Typ. 0.12V ($I_{OUT}=300\text{mA}$, $V_{OUT}=2.8V$)
- Ripple Rejection (RR) Typ. 80dB ($f=1\text{kHz}$)
- Input Voltage Range (V_{IN}) 1.7V to 5.25V
- Output Voltage Range (V_{OUT}) 1.2V to 3.3V (internally fixed)
- Output Voltage Accuracy $\pm 0.8\%$
- 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. 50mA
- Auto-Discharge function D Version
- Packages WLCSP-4-P2,
DFN(PLP)1820-6,
SOT-23-5
- Ceramic capacitors can be used. ... 1μF or more

BLOCK DIAGRAMS



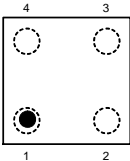
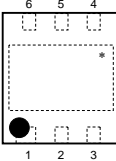
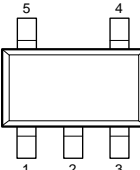
SELECTION GUIDES

Halogen Free	Package	Q'ty per Reel	Part No.
H/F	WLCSP-4-P2	5,000 pcs	RP102Zxx1*-TR-F
H/F	DFN(PLP)1820-6	5,000 pcs	RP102Kxx1*-TR
H/F	SOT-23-5	3,000 pcs	RP102Nxx1*-TR-FE

xx : Specify the output voltage within the range of 1.2V (12) to 3.3V (33) in 0.1V steps.

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

PACKAGES (Top View)

WLCSP-4-P2	DFN(PLP)1820-6	SOT-23-5
		

1	V_{DD}
2	CE
3	GND
4	V_{OUT}

1	V_{OUT}^{*1}
2	V_{OUT}^{*1}
3	GND
4	CE
5	V_{DD}^{*1}
6	V_{DD}^{*1}

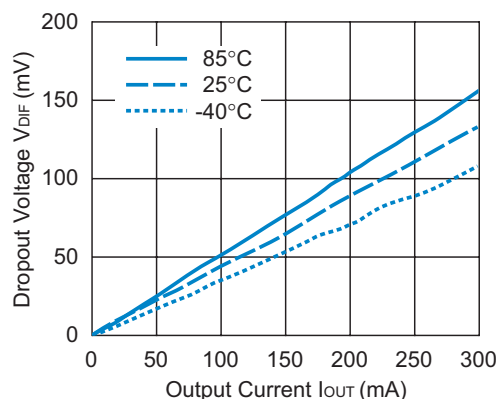
1	V_{DD}
2	GND
3	CE
4	NC
5	V_{OUT}

*) The tab is substrate level (GND).

*1) The V_{OUT} pin V_{DD} pin must be wired each other when it is mounted on board.

TYPICAL CHARACTERISTIC

RP102x251x 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 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.