R1173x Series

1A LDO with/without Adjust pin

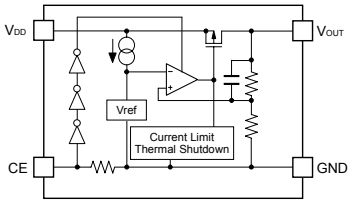
The R1173x Series are CMOS-based LDO regulators featuring 1A output. R1173x offers almost the same basic performances as the R1172x Series. But R1173x offers an excellent load regulation. While the output voltage is internally set in the R1172x Series, the R1173x Series is available in two versions: standard version in which the output voltage is internally set and the adjusted version in which it is set with an external resistor. For this reason, when the output voltage is not determined yet, the adjusted version can be used for advanced production. After the final determination of the voltage is made, it can be replaced with the standard version.

FEATURES

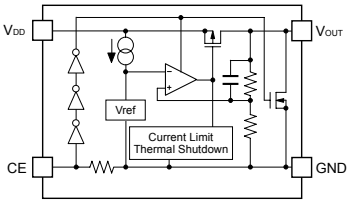
- Supply Current (I_{SS}) ····· Typ. 60μA (V_{IN}=SET V_{OUT}+1.0V)
- Standby Current ($I_{standby}$) ····· Typ. 0.1μA (V_{IN}=6.0V, CE="L")
- Dropout Voltage (V_{DIF}) ····· Typ. 0.05V (I_{OUT}=300mA, V_{OUT}=2.8V)
  Typ. 0.18V (I_{OUT}=1A, V_{OUT}=2.8V)
- Ripple Rejection (RR) ····· Typ. 70dB (f=1kHz, V_{OUT} ≤ 4.0V)
  Typ. 60dB (f=1kHz, V_{OUT} > 4.0V)
- Input Voltage Range (V_{IN}) ····· 1.4V to 6.0V
- Output Voltage Range (V_{OUT}) ··· 0.8V to 5.0V (internally fixed),
  Externally specified by the ADJUST pin (001B/D)
- Output Voltage Accuracy ····· ± 2%
- Temp. coeff. of Output Voltage ····· Typ. ± 100ppm/°C
- Line Regulation ····· Typ. 0.05%/V
- Load Regulation ····· Typ. -2mV (I_{OUT}=300mA)
  Typ. -3mV (I_{OUT}=1A)
- Fold-back Protection Circuit ····· Current limit Typ. 250mA
- Inrush Current Limit Circuit ····· Typ. 500mA
- Thermal Shutdown Circuit ····· Stops at 150°C
- Packages ····· SOT-89-5, HSON-6, HSOP-6J
- Ceramic capacitors can be used. ··· 4.7μF or more (V_{OUT} ≥ 1.0V)

BLOCK DIAGRAMS

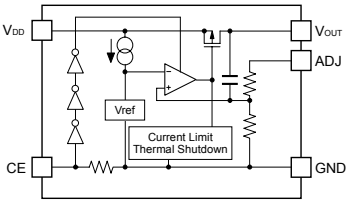
R1173xxx1B
(Without Auto-Discharge function)



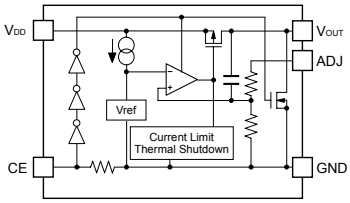
R1173xxx1D
(With Auto-Discharge function)



R1173x001B
(With ADJ, Without Auto- Discharge function)



R1173x001D
(With ADJ, With Auto-Discharge function)



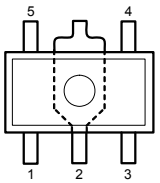
SELECTION GUIDES

Halogen Free	Package	Q'ty per Reel	Part No.
H/F	SOT-89-5	1,000 pcs	R1173Hxx1∗-T1-FE
H/F	HSON-6	3,000 pcs	R1173Dxx1∗-TR-FE
H/F	HSOP-6J	1,000 pcs	R1173Sxx1∗-E2-FE

xx : Specify the output voltage within the range of 0.8V (08) to 5.0V (50) in 0.1V steps.
(For the version with ADJUST, xx is fixed at 00)
∗ : Select from (B) without auto-discharge function or (D) with auto-discharge function.

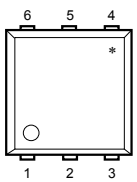
PACKAGES (Top View)

SOT-89-5



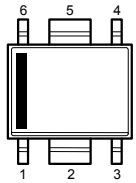
1	ADJ or NC
2	GND
3	CE
4	V_{DD}
5	V_{OUT}

HSON-6



1	V_{OUT}*1
2	V_{OUT}*1
3	ADJ or NC
4	GND
5	CE
6	V_{DD}

HSOP-6J

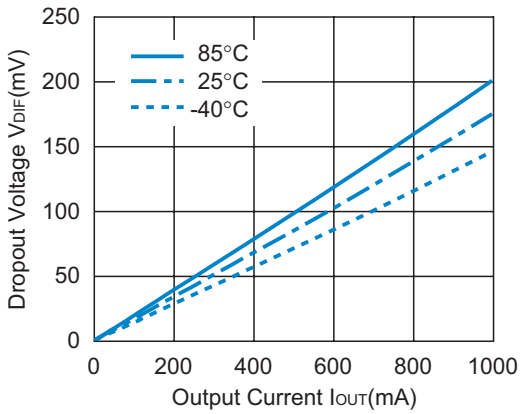


1	V_{OUT}
2	GND*1
3	ADJ or NC
4	CE
5	GND*1
6	V_{DD}

∗) The tab and tab suspension leads on back side are substrate level (GND).
∗1) The V_{OUT} pin and GND pin must be wired each other when it is mounted on board.

TYPICAL CHARACTERISTIC

R1173x301x Dropout Voltage vs. Output Current



APPLICATIONS

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

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