

Manual Mode Shift 300mA 16V Input VR with Reverse Current Protection

The R1191x Series are CMOS-based manual mode switching 16V input voltage regulators with ECO pin featuring 300mA output. By inputting control signals to the ECO pin, the mode of the regulator can be switched to low power mode or fast response mode, thus making both active and sleep modes available for the system. The built-in reverse current protection circuit prevents the current flow from V_{OUT} to V_{DD} when V_{OUT} is higher than V_{DD} . This feature makes the product ideally suited for backup circuit. Standby mode and auto-discharge function are also available (see Selection Guide). Ceramic capacitors can be used.

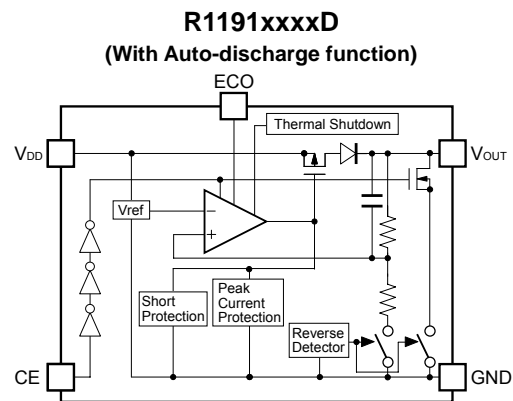
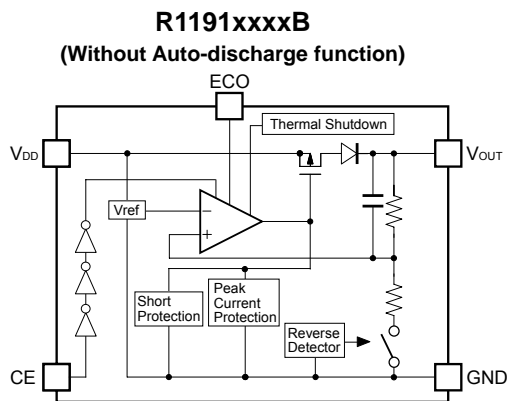
*) R1191x Series are suitable for automotive applications. For details, please refer to our "ELECTRONIC DEVICE PRODUCT CATALOG FOR AUTOMOTIVE" or contact us.

FEATURES

- Supply Current (I_{SS1}) Typ. 50 μ A (Fast mode, $V_{IN}=V_{SET}+3.0V$)
- Supply Current (I_{SS2}) Typ. 6 μ A (Low power mode, same as above)
- Standby Current ($I_{standby}$) Typ. 0.3 μ A (Same as above, CE="L")
- Dropout Voltage (V_{DIF}) Typ. 0.55V (Fast mode, $V_{SET}=5.0V$)
Typ. 0.70V (Low power mode, $V_{SET}=5.0V$)
- Ripple Rejection (RR) Typ. 70dB (f=1kHz, Fast mode)
- Input Voltage Range (V_{IN}) 3.5V to 16.0V ($V_{SET} \geq 3.0V$, Absolute maximum rating : 18.0V)
- Output Voltage Range (V_{OUT}) 2.0V to 15.0V (Internally fixed)
- Output Voltage Accuracy $\pm 1.5\%$ (Fast mode)
 $\pm 2.5\%$ (Low power mode)
- Temp. coeff. of Output Voltage Typ. $\pm 80ppm/^{\circ}C$
- Line Regulation Typ. 0.02%/V
- Fold-back Protection Circuit Current limit Typ. 50mA
- Reverse Current Protection Circuit
- Thermal Shutdown Circuit Stops at 150 $^{\circ}C$
- Auto-discharge Function D Version
- Packages DFN1616-6, SOT-23-5, SOT-89-5
- Ceramic capacitors can be used. $C_{IN}=2.2\mu F$ or more
 $C_{OUT}=4.7\mu F$ or more

(The above shows specification at $T_{opt}=25^{\circ}C$. Design assurance value at $-40^{\circ}C \leq T_{opt} \leq 85^{\circ}C$ 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	DFN1616-6	5,000 pcs	R1191Lxxx*-TR
H/F	SOT-23-5	3,000 pcs	R1191Nxxx*-TR-FE
H/F	SOT-89-5	1,000 pcs	R1191Hxxx*-T1-FE

xxx : Specify the output voltage within the range of 2.0V (020) to 15.0V (150) in 0.1V steps.

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

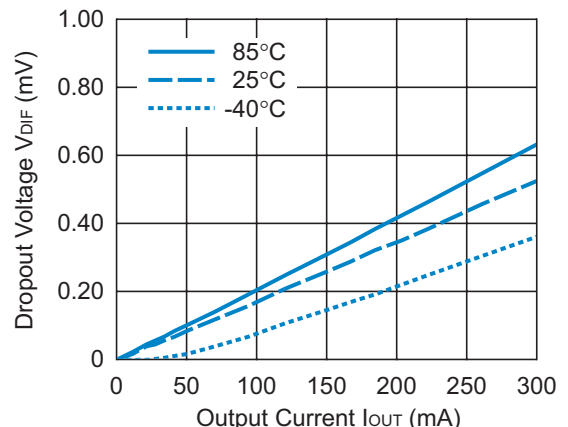
PACKAGES (Top View)

DFN1616-6		SOT-23-5		SOT-89-5	
1	ECO	1	ECO	1	V_{OUT}
2	NC	2	GND	2	GND
3	V_{DD}	3	CE	3	CE
4	V_{OUT}	4	V_{OUT}	4	ECO
5	GND	5	V_{DD}	5	V_{DD}
6	CE				

*) The tab is substrate level (GND).

TYPICAL CHARACTERISTIC

R1191x050x Dropout Voltage vs. Output Current (Fast mode)



APPLICATIONS

- Power source for digital home appliances
- Power source for audio visual equipment



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