

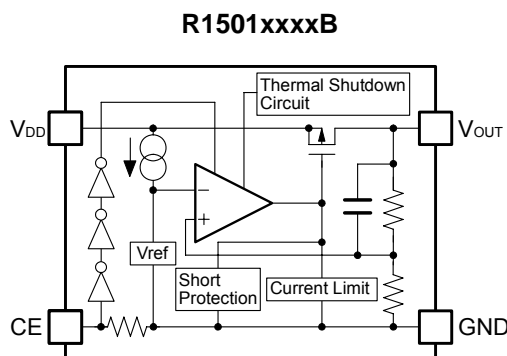
The R1501x Series are CMOS-based voltage regulators featuring 1A output current and 24V input voltage. The R1501x series provides high input voltage operation and low on-resistance (at $V_{OUT} = 10V$, below 0.6Ω) because of using CMOS transistor. In addition to a fold-back protection circuit built into conventional regulators, R1501x contains a thermal shutdown circuit. Besides the low supply current by CMOS, the operating temperature is $-40^{\circ}C$ to $105^{\circ}C$ and the maximum input voltage is 24V, the R1501x series are very suitable for power source of car accessories.

FEATURES

- Supply Current (I_{SS})Typ. $70\mu A$ ($V_{IN}=24.0V$)
- Standby Current ($I_{standby}$)Typ. $0.1\mu A$ ($V_{IN}=24.0V$, $CE="L"$)
- Dropout Voltage (V_{DIF})Typ. $0.575V$ ($I_{OUT}=1A$, $V_{OUT}=5.0V$)
- Input Voltage Range (V_{IN}) $3.0V$ to $24.0V$ (Absolute maximum rating: $36.0V$)
- Ripple Rejection(RR)Typ. $60dB$ ($f=1kHz$, $V_{OUT} \leq 6.0V$)
Typ. $50dB$ ($f=1kHz$, $V_{OUT}>6.0V$)
- Output Voltage Range (V_{OUT}) $3.0V$ to $18.0V$ (internally fixed)
- Output Voltage Accuracy $\pm 2\%$
- Temp. coeff of Output VoltageTyp. $\pm 100ppm/^{\circ}C$
- Line RegulationTyp. $0.05\%/V$
- Fold-back Protection Circuit.....Current limit Typ. $65mA$
- Thermal Shutdown Circuit.....Stops at Typ. $160^{\circ}C$.
- PackagesHSOP-6J, TO-252-5-P2
- Ceramic capacitors can be used..... $10\mu F$ or more

(The above shows specification at $T_{opt}=25^{\circ}C$. Design assurance value at $-40^{\circ}C \leq T_{opt} \leq 105^{\circ}C$ is also available. For details, please refer to the datasheet.)

BLOCK DIAGRAM



SELECTION GUIDES

Halogen Free	Package	Q'ty per Reel	Part No.
H/F	HSOP-6J	1,000 pcs	R1501SxxxB-E2-FE
H/F	TO-252-5-P2	3,000 pcs	R1501JxxxB-T1-FE

xxx : Specify the output voltage within the range of $3.0V$ (030) to $12.0V$ (120) in $0.1V$ steps and $12.5V$ (125) to $18.0V$ (180) in $0.5V$ steps.

PACKAGES (Top View)

HSOP-6J		TO-252-5-P2	
1	V_{DD}	1	V_{DD}
2	GND*	2	GND*
3	GND*	3	GND*
4	CE	4	CE
5	GND*	5	V_{OUT}
6	V_{OUT}		

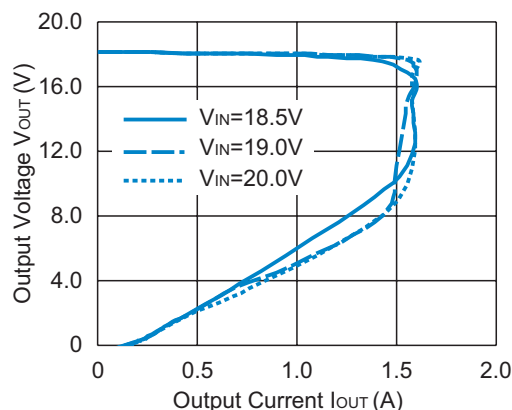
*) The GND pin must be wired together when it is mounted on board.

APPLICATIONS

- Power source for home appliances such as refrigerators, rice cookers, electric water warmers, etc
- Power source for car audio equipment, car navigation systems, ETC systems, etc
- Power source for laptop personal computers, digital TVs, cordless phones, and private LAN systems for home, etc
- Power source for office equipment machines such as copiers, printers, facsimiles, scanners, etc

TYPICAL CHARACTERISTIC

R1501x180B Output Voltage vs. Output Current





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■ 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.