

Product Summary Sheet

Applications:

- ▶ DC/DC SMPS startup circuits
- ▶ Industrial Controls
- ▶ Motor Controls
- ▶ Battery Powered Systems
- ▶ Power Supplies
- ▶ Telecom Applications
- ▶ Automotive Applications
- ▶ LED Driver



3-Lead TO-252 (K4)



8-Lead SOIC (LG)

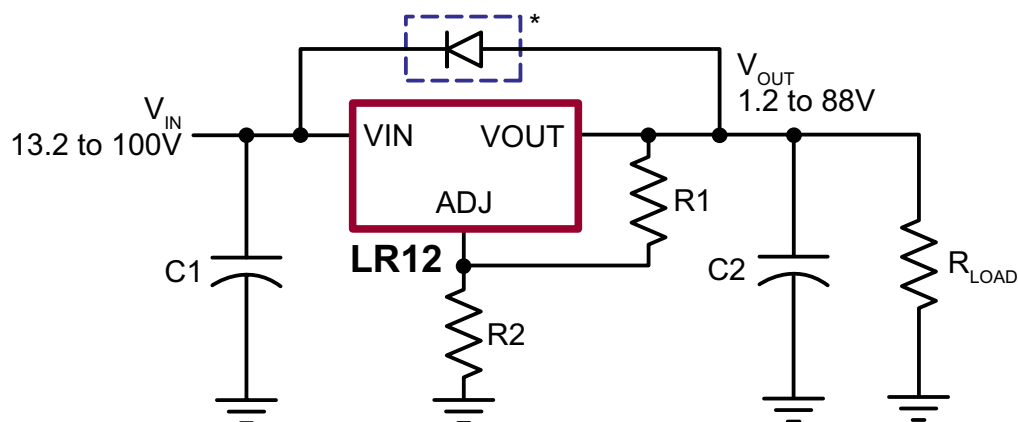


3-Lead TO-92 (N3)



033111

High Voltage, Adjustable 3-Terminal Linear Regulator



* Required for conditions where V_{IN} is less than V_{OUT}

Typical Application Circuit

Product Overview:

The LR12 is a high voltage, low output current, adjustable, linear regulator. It has a wide operating input voltage range of 13.2 to 100V. The output voltage can be adjusted from 13.2 to 88V provided that the input voltage is at least 12V greater than the output voltage. The output voltage can be adjusted by means of two external resistors. The LR12 regulates the voltage difference between V_{OUT} and ADJ pins to a nominal value of 1.20V. The 1.20V is amplified by the external resistor ratio, $R1/R2$. An internal constant bias current $10\mu A$ is connected to the ADJ pin. This increases V_{OUT} by a constant voltage of $10\mu A$ times $R2$.

The LR12 has current limiting and temperature limiting. The output current limit is 50 - 100mA and the minimum temperature limit is $125^{\circ}C$. An output short circuit current will therefore be limited to 100mA maximum. When the junction temperature reaches its temperature limit, the output current and/or output voltage will decrease to keep the junction temperature from exceeding its temperature limit.

Features:	Benefits:
13.2 - 100V input voltage range	Provides higher reliability with greater immunity to input voltage transients
Stable with 100nF output capacitor	Reduces cost, smaller footprint, saves space
Adjustable 13.2 - 88V output regulation	Offers simple, flexible design
5% output voltage tolerance	Meets the majority of power supply system requirements
Output current limiting, 50mA (min)	Fail-safe protection of system design
$10\mu A$ typical ADJ current	Saves power, increases efficiency
Over temperature protection	Provides increased reliability
Available in 3 different packages	Offers different power ranges for different applications, gives design flexibility.
Back-biasing output shuts down LR12	Saves power in SMPS bootstrap applications

Supertex inc.

High Voltage, Adjustable 3-Terminal Linear Regulator

Ordering Information / Availability

<u>Part Number</u>	<u>Package Option</u>	<u>Samples</u>	<u>Product Availability</u>
LR12K4-G	3-Lead TO-252 (Green)	Now	4-6 Weeks ARO
LR12LG	8-Lead SOIC	Now	4-6 Weeks ARO
LR12LG-G	8-Lead SOIC (Green)	Now	4-6 Weeks ARO
LR12N3	3-Lead TO-92	Now	4-6 Weeks ARO
LR12N3-G	3-Lead TO-92 (Green)	Now	4-6 Weeks ARO

-G indicates the part is RoHS compliant (Green).



Product Contact

For any questions regarding the LR12 please contact your local area Supertex sales office, or contact the main office in the US at:

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