Step-down DC/DC converter operates to 105°C

Torex Semiconductor has developed the XC9250/XC9251 series of 30V, 2A step-down DC/DC converters.

The XC9250/XC9251 series is high breakdown voltage DC/DC converter with 30V operation, 2A output, and an internal driver Tr. With an input voltage of up to 30V, input rating of 36V, peak voltage of 46V for 400ms and an operating ambient temperature range of -40℃ to +105℃, this series is ideal for a wide range of in-vehicle applications and industrial equipment applications. A 0.8V reference voltage source is incorporated and the output voltage can be set within a range of 1.2V to 12.0V using external resistors (RFB1, RFB2). 300kHz or 500kHz can be selected for the switching frequency. By synchronizing to an external clock, the generation of unwanted noise can be suppressed (accuracy ±25%).

Control methods are PWM control (XC9250 series) and PFM/PWM auto switching control (XC9251 series). The soft start time can be set as desired by adding an external capacitor to the SS pin. For the current limiting function, either latch type or auto recovery type can be selected. In addition to the current limiting function, a thermal shutdown circuit is incorporated to enable safer circuit design. A SOP-8FD package is used and greater integration of the power components is achieved. In addition, a high-side driver is incorporated so that fewer peripheral components are needed, making it possible to reduce the mounting area.

This series is an environment-friendly product that complies with the EU RoHS Directive and is Pb-free. For more details on the XC9250/XC9251 Series, please click: http://www.torex.co.jp/english/products/detail.php?id=507 [1]

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