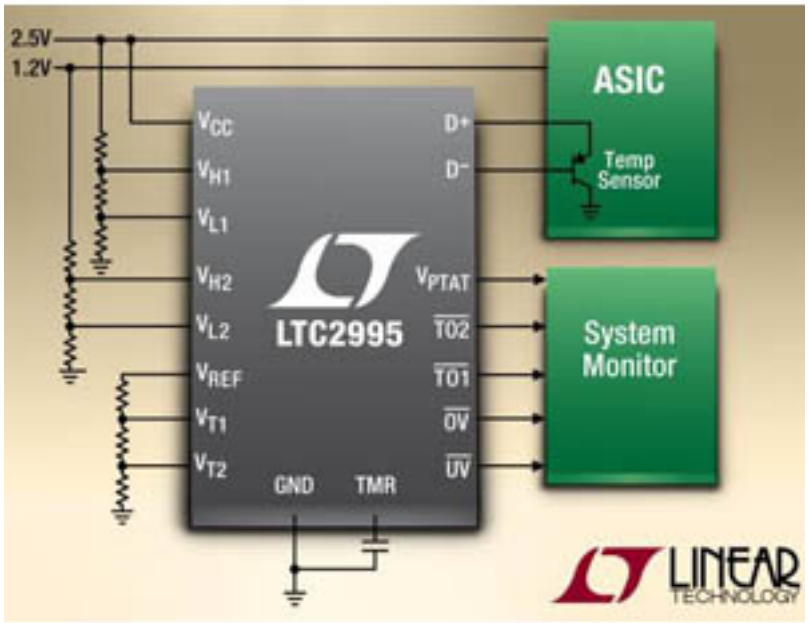
High-accuracy temperature & dual-voltage monitor provides flexible alert outputs



Linear Technology Corporation introduces the LTC2995 [1]high accuracy temperature sensor and dual supply monitor for low voltage systems. The LTC2995 measures a remote diode's temperature with ±1°C accuracy and its own die temperature with ±2°C accuracy, while rejecting errors due to noise and series resistance. Two voltage rails, one of which is required to be between 2.25V and 5.5V to power the device, are monitored with ±1.5% accuracy, minimizing the required system supply margins. The LTC2995 provides a voltage-proportional-to-absolute-temperature (VPTAT) output, as well as individual undertemperature, overtemperature, undervoltage and overvoltage alert outputs defined by user-adjustable thresholds. No code is required to configure the device. The LTC2995 combines the functionality of a temperature monitor and dual voltage monitor in a space-saving, micropower solution.

The LTC2995's accuracy, configurability and code-free operation caters to a wide variety of applications, including system thermal control, energy harvesting, desktop and notebook computers, network servers and environmental monitoring. Users can choose to measure local temperature, remote temperature, or both in alternation, while two temperature output pins can be configured to be any combination of undertemperature and/or overtemperature alerts. Temperature conversions are updated every 3.5ms to provide systems with sufficient time to react to alerts. A 1.8V voltage reference output is also available to share with an external ADC or for generating temperature threshold voltages. When monitoring voltages, an input glitch filter reduces false resets due to noise, while both supplies

share one overvoltage and undervoltage pin. All thresholds are easily adjusted with resistive dividers, and the reset delay time for all alert outputs can be adjusted with just a single capacitor. The LTC2995 draws only 220µA of supply current over the full operating temperature range.

The LTC2995 is offered in commercial, industrial and automotive versions, supporting operating temperature ranges from 0°C to 70°C, -40°C to 85°C and -40°C to 125°C, respectively. The LTC2995 is available today in a RoHS compliant, 20-pin, 3mm x 3mm QFN package. Pricing starts at $2.45 each in 1,000 piece quantities. For more information, visit www.linear.com/product/LTC2995 [1].

Source URL (retrieved on *07/23/2014 - 1:50pm*):
http://www.ecnmag.com/product-releases/2012/05/high-accuracy-temperature-dual-voltage-monitor-provides-flexible-alert-outputs?qt-video_of_the_day=0&qt-recent_content=0

Links:
[1] http://r20.rs6.net/tn.jsp?e=001JR-XxifSQSzU67GhmjhK7M4iNot8rohZUjTrSyYtSuRqn7_NMyeSN9GSJG1A_a04mwBNoXvMvE9tdmykXddM5RY2GeUchd9QWl65IuLkcao20oDn2CK_gcyaKzkshbJ6SZVWMJ3I_l0=