



For Automotive and Industrial Electronics

## **Bosch presents fully integrated programmable dual channel current regulator of the third generation**

CG208 regulates with an accuracy of  $\pm 1$  percent

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- ▶ Voltage range: 6.3 to 42 V; regulation range: 0.6 mA to 1.2 A
- ▶ SPI interface for programming and diagnostics

Third generation Bosch current regulators have twice as much control accuracy as their predecessors. The first arrival of this generation is the CG208, a fully integrated dual channel current regulator, which maintains output current reference value at precisely  $\pm 1$  percent, even under full load. The ASIC module (Application Specific Integrated Circuit) is provided in the TQFP housing, which is just as robust as it is compact. It can be used for operating voltages between 6.3 and 42 volts and delivers constant current in the regulation range between 0.6 milliamperes and 1.2 amperes.

With a switching characteristic specially optimized for inductive loads, the CG208 is particularly well-suited for the high-precision control of magnetic valves in hydraulic circuits. Applications for the regulator are consequently enabled in both automobile manufacturing – e.g., hydraulic control of automatic transmissions – and industrial electronics. Samples of the new current regulator are immediately available; series production is expected to start at the beginning of 2007.

This new module is equipped with internal digital control electronics that maintain the selected output current constant under changing environmental conditions. External computing power is therefore not required – a factor that quickly becomes very advantageous with heavily loaded processors used in control electronics.

The CG208's housing includes two identical current regulators, which can, however, be set absolutely independent of one another. Both feature a power switch in the low-side branch of the control circuit (standard in

Europe), so that the external connection only requires the minimum amount of components. A shared SPI interface (Serial Peripheral Interface) is provided for programming the operating characteristics with a processor; in the opposite direction, this interface signals the status of chip-internal autodiagnosics back to the processor. Internal overload protection automatically prevents damage caused by short-circuits and excessive temperatures.

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