

A8286-92: Single and Dual LNB Supply Voltage Regulators

Allegro® introduces two new single LNB supply control voltage regulators (A8290 and A8291) and two dual LNB supply voltage regulators (A8286 and A8292) all designed for high efficiency, utilizing our advanced BCD process. The low-noise block converter regulators (LNBRs) are monolithic linear/switching voltage regulators, specifically designed to provide the power and interface signals to an LNB downconverter via a coaxial cable. The integrated boost switch has been optimized to minimize both switching and static losses. To further enhance efficiency, the voltage drop across the tracking regulator has been minimized.

The A8290 (single) and A8286 (dual) devices provide the higher output current required by the latest satellite STB applications, while the A8291 (single) and A8292 (dual) versions have lower current limits for more traditional requirements.

All four devices offer “push/pull” output stages with the ability to sink and source current, and a static current limit with overcurrent timer mode. They also offer a “Cable Disconnect” function in addition to a wide variety of other diagnostics.

The devices also require few external components, with the boost switch, compensation circuitry, and sense resistor integrated into the solution. The A8290 and A8291 also integrate an output filter bypass FET. A high switching frequency is chosen to minimize the size of the passive filtering components to further assist in reducing cost.

Allegro’s A8290 and A8291 are available in the 5x5 mm QFN/MLP-28 package. Allegro’s A8286 and A8292 are also available in the 5x5 mm QFN/MLP-28 package.