

## **A8285/8287**

LNB regulator IC family for satellite set-top boxes

Allegro MicroSystems Europe has introduced two new additions to its family of low-noise block voltage regulator ICs (LNBRs) for satellite set-top box systems.

The new A8285/8287 devices complement the earlier A8282/8281 to form a complete family of highly efficient monolithic linear and switching voltage regulators.

The new devices are specifically designed to provide both power and interface signals to the LNB down-converter via the coaxial cable. They are designed to be both future-proof and compatible with legacy systems, and offer the flexibility of two-way DiSEqC(TM) communications.

Specific features and benefits of the new devices include a wide operating voltage range, 16 adjustable LNB boost output voltages from 12.7 to 20.4 V, and high efficiency, with the integrated switching regulator tracking to just above the linear regulator output to provide low power dissipation and allow operation from a single voltage supply.

The devices use a 2-wire bidirectional serial interface compatible with the I2C standard and operating at up to 400 kHz. A built-in tone oscillator, factory trimmed to 22 kHz, facilitates DiSEqC(TM) decoding, while the A8287 also features a 22 kHz tone detector for decoding. A switched 13-18 V output is also provided for non-DiSEqC(TM) communication in legacy systems.

Comprehensive protection facilities include internal over-temperature, externally adjustable short circuit, and reverse current protection. Further diagnostics include undervoltage indications on both the input and output voltages.

Both devices are supplied in plastic power SOIC with copper batwing tabs, 16-lead for the A8285 and 24-lead for the A8287.

The LNBR family is manufactured using Allegro's ABCD3 (Allegro Bipolar CMOS DMOS 3rd generation) process.

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