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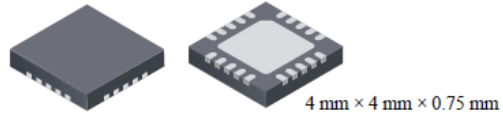
A8298 Single LNB Supply and Control Voltage Regulator

Contact [Allegro Marketing](#) for datasheet.

Features

- Integrated boost MOSFET, current sensing, and compensation
- Stable with low-profile ceramic boost capacitors
- Higher voltage ratings support increased surge
- Supplies up to 550 mA continuously
- Supplies up to 700 mA for reconfiguration
- Adjustable LNB output current limit from 300 to 800 mA
- Boost peak current limit scales with LNB current limit setting
- 8 programmable LNB output voltage (DAC) levels
- LNB overcurrent limiter with shutdown timer
- Tracking boost converter minimizes power dissipation
- LNB transition times configurable by external capacitor
- Push-pull LNB output stage maintains 13→18 V and 18→13 V transition times, even with highly capacitive loads
- Built-in 22 kHz tone oscillator facilitates DiSeq™ tone encoding, even at no-load
- Tone generation does not require additional external components
- Diagnostic features: PNG, TDET
- Dynamic tone detect amplitude and frequency thresholds
- Extensive protection features: UVLO, OCP, TSD, CPOK
- 2-wire I2C-compatible interface

Package: 20-contact MLP/QFN (suffix ES)



Description

Intended for analog and digital satellite receivers, this single low noise block converter regulator (LNBR) is a monolithic linear and switching voltage regulator, specifically designed to provide the power and the interface signals to an LNB down converter via coaxial cable. The A8298 requires few external components, with the boost switch and compensation circuitry integrated inside of the device. A high switching frequency is chosen to minimize the size of the passive filtering components, further assisting in cost reduction. The high levels of component integration ensure extremely low noise and ripple figures.

The A8298 has been designed for high efficiency, utilizing the Allegro® advanced BCD process. 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.

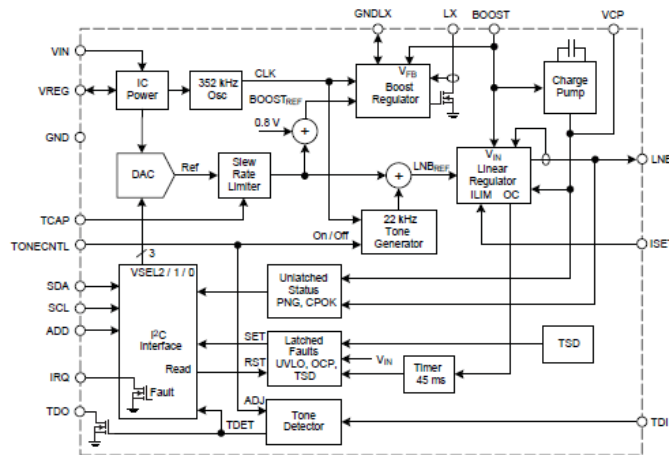
For DiSeq™ communications, a tone control pin is provided to gate the internally-generated 22 kHz tone on-and-off.

A comprehensive set of fault registers are provided, which comply with all the common standards, including: overcurrent, thermal shutdown, undervoltage, and power not good.

The device uses a 2-wire bidirectional serial interface, compatible with the I2C™ standard, that operates up to 400 kHz.

The A8298 is supplied in a lead (Pb) free package.

Functional Block Diagram



Complete Part Numbers

Part Number	Package Type	RoHS Compliant	Part Composition/ RoHS Data	Temperature	Comments	Samples/Demo	Distributor Stock
A8298SESTR-T	20-lead QFN	Yes	view data	-20 °C to 85 °C	<i>new</i>	Contact Local Sales Representative or check distributor stock	All <input type="button" value="Check Stock"/>
APEK8298SES-01-T	DEMO BOARD	No	--	-20 °C to 85 °C	<i>new</i>	Contact Local Sales Representative	

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