



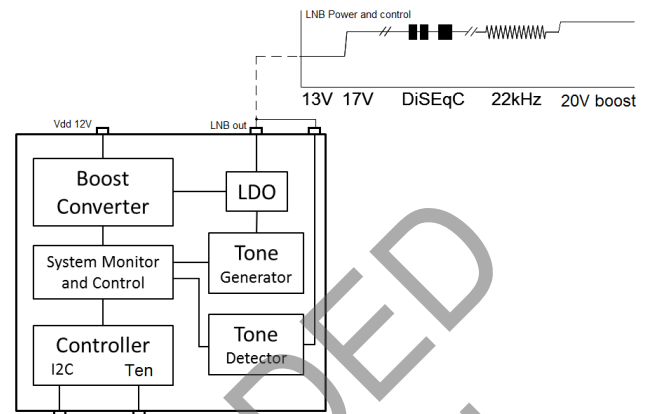
**THE DATASHEET OF  
ZLPM8014JB20TC**



## Description

The ZLPM8014 is a power management and control solution for satellite set-top boxes (STBs). Based on an efficient boost converter the ZLPM8014 provides a power supply within the range of 11V to 21V as well as all the control signals required by a single port satellite Low Noise Block (LNB). The ZLPM8014 includes an accurate 22kHz tone generator to provide DiSEqC™ control words or continuous tone for band switching control. To provide a reliable DiSEqC 2.0 solution, the IC includes a DiSEqC detector with unwanted signal rejection. Controlled by an I<sup>2</sup>C compatible interface and with the minimal external components, the ZLPM8014 provides a high performance, cost efficient solution.

## System Diagram



## Features

- High System Efficiency with Energy Saving Standby Mode
- Efficient Boost Converter and LDO Provide an Accurate Adjustable Power Supply for LNBs
- High Accuracy Output Overload and Temperature
  - Provides a Protected Output of up to 750mA (continuous)
  - Programmable Current Limit for System Flexibility
- Optional Current Boost Mode. 150% of I<sub>max</sub> for 65ms
- Designed for Stability with Low Power LNBs
- Provides Standard Voltage / Tone and DiSEqC Control Signals and has a V<sub>pol</sub> Voltage Boost for SMW Applications
  - Internal Tone Generator for DiSEqC Control and Traditional Band Switching
  - Tone Maintains Shape Across all Load Conditions
- Internal Reliable Tone Detector for DiSEqC 2.0 Systems
- Controlled by I<sup>2</sup>C interface and Additional Logic Control for Tone
- Built in Multiple Diagnostics and Protection for IC and LNB Protection
- Minimal External Components for a Simple, Reliable and Cost Effective Solution
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

## Applications

- Single Tuner Satellite Set-Top Boxes
  - High Current LNBs
  - Stability with Minimal Current LNBs
- Satellite PC Cards
- TVs with Integrated Satellite Tuners
- Hybrid Set-Top Boxes
- Suitable for Digital and Analog Satellite Systems

- Notes:
1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant.
  2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
  3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

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