

EVAL-L9001 evaluation board

Data brief



Features

- Input voltage: 5.5 V to 18 V.
- Voltage regulator for multiple power supply schemes:
 - First stage asynchronous switch mode regulator (VDD1) 5 V output,
 - Second stage regulator (VDD2) supplied by VDD1 with 1.2 V output (i.e. μ C-core)
 - DC LDO 5 V for ADC μ C supply
- Supervision and diagnosis:
 - VS monitoring
 - Over temperature detection
 - Output supply supervision
 - Output overcurrent protection
- Fail-safe functionality:
 - Output under or over voltage reset generation
 - Configurable Watchdog
 - Over temperature shutdown
 - Low power mode
- Access to all relevant pins by test points
- Input/output signal connector for Watchdog servicing and diagnosis output
- Possibility to enable/disable Watchdog function

- Device Package: PowerSSO-24 (exposed pad down)
- Low cost and ready to use

Description

EVAL-L9001 is a low cost tool designed to evaluate L9001, a smart power device designed by STMicroelectronics in advanced BCD technology.

L9001 SPS (Simple Power Supply) device is a Multiple output power regulator for automotive applications with one buck regulator, one regulator configurable as buck or linear and one more linear regulator. Its output voltages are configurable via discrete pins. On top of the regulators, this device integrates a watchdog functional block, and a diagnosis functional block (under/over voltage, output current and temperature).

Device is capable of low power operation mode with main regulators still active and reduced power consumption from battery.

EVAL-L9001 embeds a typical configuration for SPC5x microcontroller family supplying:

Buck 5 V output for peripheral supply

Buck 1.2 V output for core supply

LDO 5 V output for ADC reference supply

The expansion connector allows to monitor the different diagnostic reset signal, to enable the regulator and, if activated, to service the windows watchdog.

Table 1. Device summary

Order codes	Reference
EVAL-L9901	EVAL-L9901 Evaluation board

Contents

1	System requirements, HW and SW resources	3
2	Revision history	4

1 System requirements, HW and SW resources

- Power Supply: 5.5 V ÷ 18 V; up to 3 A
- Multimeter
- Minimum 3 CH oscilloscope (optional)
- Signal generator or uC for watchdog service (optional)

2 Revision history

Table 2. Document revision history

Date	Revision	Changes
03-June-2019	1	Initial release.

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