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TLS105B0MB BOARD



Overview

The TLS105B0MB demoboard allows the full electrical performance evaluation of Infineon's low drop out voltage tracker TLS105B0MB in the small and robust PG-SCT595-5 package.

[TLS105B0MB \(/cms/en/product/power/linear-voltage-regulator/linear-voltage-regulators-for-automotive-applications/tls105b0mb/\)](/cms/en/product/power/linear-voltage-regulator/linear-voltage-regulators-for-automotive-applications/tls105b0mb/)

is designed to supply off-board systems, specifically sensors in powertrain management systems that are located outside of the Electronic Control Unit (ECU). Due to the connection via a cable between the sensor and the ECU, the ECU needs to be protected against short to ground and short to battery. These protection mechanisms, together with reverse battery protection, are all implemented in the TLS105B0MB voltage tracker and are demonstrated by the demoboard functionality. The outstanding voltage tracking accuracy (0,1%) of the device can also be assessed accurately with this demoboard.

The TLS105B0MB BOARD can also be populated with the **[TLS102B0MB \(/cms/en/product/power/linear-voltage-regulator/linear-voltage-regulators-for-automotive-applications/tls102b0mb/\)](/cms/en/product/power/linear-voltage-regulator/linear-voltage-regulators-for-automotive-applications/tls102b0mb/)** allowing full electrical evaluation of the TLS102B0MB.

Summary of Features

- Plug and Play evaluation capability
- Easy verification and configuration
- Evaluation of 50 mA current capability
- Very tight output tracking tolerance to reference of maximum of 5mV
- Output voltage adjustable down to 2.0 V
- Very low dropout voltage of typ. 250 mV at 50 mA
- Very low current consumption of typ. 3 μ A in off mode



- Wide input voltage range $-16\text{ V} \leq V_{IN} \leq 45\text{ V}$
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- > [TLS105B0MB BOARD](#)
- Demonstration of short circuit, reverse polarity input and overtemperature protection

Benefits


- Demonstrate the capabilities of TLS105B0MB
- Save design time
- Allow easy application adaption for evaluation

Potential Applications

- Protected sensor supply for off-board sensors in HVAC, EMS, TCU and EPS Systems
- High-precision voltage tracking
- Power switch for off-board load



Parametrics

Parametrics	TLS105B0MB BOARD
Dimensions	47mm/45mm
	 TOP

Family	Linear Voltage Regulator (LDO)
Parametrics	TLS105B0MB BOARD
> Home (/cms/en/) > Products (/cms/en/product/) > Evaluation Boards (/cms/en/product/evaluation-boards/)	
Frequency	N/A
Input Type	DC
Interfaces	N/A
Mounting	SMD
Output Current max	0.05 A
Output Voltage min max	2.0 V 20.0 V
P _{out} max	1.0 W
Product Description	Evaluation board for Sensor Supply IC TLS105B0MB
Qualification	Automotive
Supply Voltage max	40.0 V
Target Application	Automotive
Topology	Linear
Type	Demo Board

Documents

+ User Manual



TLS10xB0MB Demoboard User Guide (/dgdl/Infineon-Z8F61701244_TLS10xB0MB_Demoboards-UserManual-v01_00-EN.pdf?fileId=5546d46262b31d2e016317dad3046601)

> EN (/dgdl/Infineon-Z8F61701244_TLS10xB0MB_Demoboards-UserManual-v01_00-EN.pdf?fileId=5546d46262b31d2e016317dad3046601)
01_00 | 2019-09-03 | pdf | 272 KB

Order

<https://www.infineon.com/cms/en/product/evaluation-boards/tls105b0mb-board/>



TOP


Sales Product Name	TLS105B0MB BOARD Home (/cms/en/) Products (/cms/en/product/) Evaluation Boards (/cms/en/product/evaluation-boards/)
OPN	TLS105B0MBBOARDTOBO1
Product Status	active and preferred
Package name	--
Order online	
Completely lead free	
Halogen free	
RoHS compliant	no
Packing Size	1
Packing Type	CONTAINER
Moisture Level	
Moisture Packing	NON DRY

Simulation

+ Expand all

+ Simulation Models



TLS105B0MB PSpice model  (/dgd/Infineon-TLS105B0MB-PSpice-TB-SimulationModels-v01_20-EN.zip?fileId=5546d462647e95a601648d796d5b0374)

> EN (/dgd/Infineon-TLS105B0MB-PSpice-TB-SimulationModels-v01_20-EN.zip?fileId=5546d462647e95a601648d796d5b0374)

01_20 | 2019-05-27 | zip | 3.5 MB

+ Simulation Tool



> Home (/cms/en/) > Products (/cms/en/product/) > Evaluation Boards (/cms/en/product/evaluation-boards/)
> TLS105B0MB BOARD



Simulate ONLINE - Automotive Linear LDO High Precision Voltage Tracking Regulator
TLS105B0MB: typical application circuit (/dgd/Infineon-atv_LDO_TLS105B0MB_high_precision_tracker_application_circuit-SimulationTool-v01_00-EN.htm?fileId=5546d4626cb27db2016d4359c6727d80)
> EN (/dgd/Infineon-atv_LDO_TLS105B0MB_high_precision_tracker_application_circuit-SimulationTool-v01_00-EN.htm?fileId=5546d4626cb27db2016d4359c6727d80)
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The package information is available on our homepage at <https://www.infineon.com/packages> (<https://www.infineon.com/packages>). Please note, that they are divided into the subcategories “Leaded and through-hole”, “Surface Mounted Devices” and “Special Packages”. You will find all relevant package information at the option that applies.

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Notes on processing

Information regarding reflow profile, soldering temperature, soldering profile and further processing notes for most of the discrete products are mentioned in the Application Note.

Please visit <https://www.infineon.com/packages> (<https://www.infineon.com/packages>) and refer to the document "General Recommendations for Assembly of Infineon Packages" under Downloads. For TO-packages please refer to <https://www.infineon.com/assembly...>

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