

# Featured Products



Power Supply Solutions for Automotive ADAS/Infotainment

## Primary/Secondary DC/DC Converter IC series and Reference Design

BD9P series (Primary DC/DC) / BD9S series (Secondary DCDC) / REFRPT001 (Reference Design)

Optimize systems by combining high performance + high performance

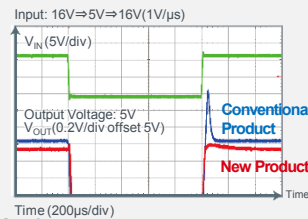
### Primary DC/DC Converter ICs

BD9P series (with Nano Pulse Control™ Technology)

High performance with less than 1/10th the overshoot

- Achieves 80-90% efficiency over the entire range from light loads (0.2mA) to max. output at 42V withstand voltage
- Spread spectrum function ensures low EMI (low noise)
- 2.2MHz (Typ) switching frequency prevents AM band interference
- Supports functional safety-compatible categories

■ Primary DC/DC Converter ICs (BD9P series)



Part No.	Input Voltage (V)	Output Voltage (V)	Maximum Output Current (A)	Package	AEC-Q100	Functional Safety	Reference Designs
<b>New</b> BD9P105MUF-C	3.5 to 40.0 (42V absolute max.)	0.8 to 8.5	1.0	VQFN20FV4040	YES	Supported	—
<b>New</b> BD9P135MUF-C		3.3 (Typ)					—
<b>New</b> BD9P155MUF-C		5.0 (Typ)					—
<b>New</b> BD9P205MUF-C		0.8 to 8.5	2.0				—
<b>New</b> BD9P235MUF-C		3.3 (Typ)					—
<b>New</b> BD9P255MUF-C		5.0 (Typ)					—
<b>New</b> BD9P105EFV-C	3.5 to 40.0 (42V absolute max.)	0.8 to 8.5	1.0	HTSSOP-B20	YES	Supported	✓
<b>New</b> BD9P135EFV-C		3.3 (Typ)					—
<b>New</b> BD9P155EFV-C		5.0 (Typ)					—
<b>New</b> BD9P205EFV-C		0.8 to 8.5	2.0				✓
<b>New</b> BD9P235EFV-C		3.3 (Typ)					—
<b>New</b> BD9P255EFV-C		5.0 (Typ)					—



### Secondary DC/DC Converter ICs

BD9S series

Class-leading\* high efficiency operation (90% at 3.6V input, 1.8V output)

- Built-in output voltage monitoring function contributes to higher system reliability; customizable soft start time
- 2.2MHz (Typ) switching frequency prevents AM band interference
- Supports functional safety-compatible categories

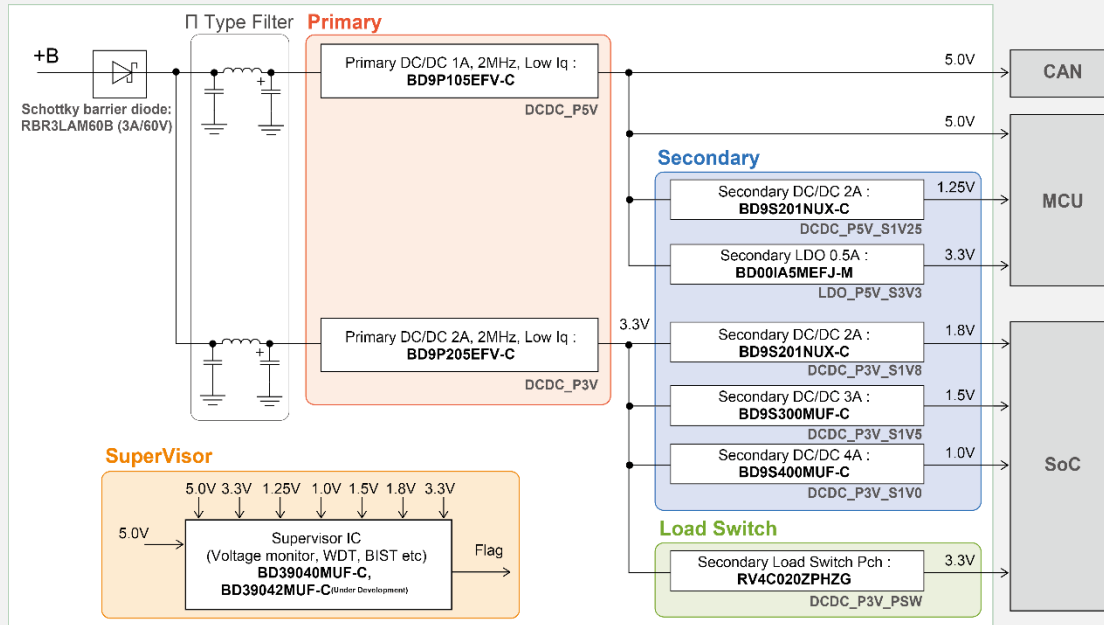
■ Secondary DC/DC Converter ICs (BD9S series)

Part No.	Input Voltage (V)	Output Voltage (V)	Max. Output Current (A)	Package	AEC-Q100	Functional Safety	Reference Design
<b>BD9S000NUX-C</b>	2.7 to 5.5	0.8 to $V_{IN}$	0.6	VSON008X2020	YES	Supported	—
<b>BD9S100NUX-C</b>			1.0				—
<b>BD9S110NUX-C</b>			1.2				1.0
<b>BD9S111NUX-C</b>		1.8	1.0				—
<b>New</b> <b>BD9S201NUX-C</b>		0.8 to $V_{IN}$	2.0				✓
<b>BD9S200MUF-C</b>		0.8 to $V_{IN} \times 0.8$	2.0				—
<b>BD9S300MUF-C</b>	3.0		✓				
<b>BD9S400MUF-C</b>	4.0		✓				

Ready-to-evaluate reference design (reverse side)

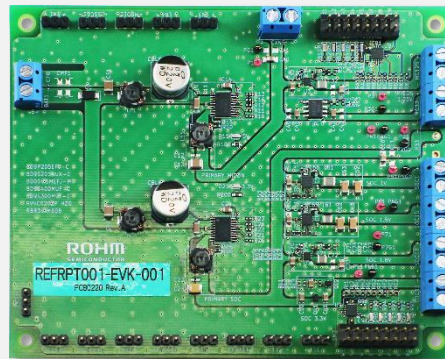
## Reference Design

### Reference Board Block Diagram



### Features

- 8-system power tree configuration  
Provides a power rail solution from battery voltage to CAN, MCUs, and SoC
- Clears CISPR25 Class 5 requirements demanded by automotive ADAS and infotainment systems  
Tested to meet CISPR 25 Class 5 performance without a common mode filter
- Low heat generation  
High efficiency DC/DC distributed layout reduces heat generation
- Helps improve the functional safety level  
Power supply monitoring IC with built-in self-diagnostic function monitors the output status of all 8 systems to improve the functional safety level
- Design data provided  
Circuit schematic/PCB/evaluation data and product models available  
Compatible with ROHM Solution Simulator

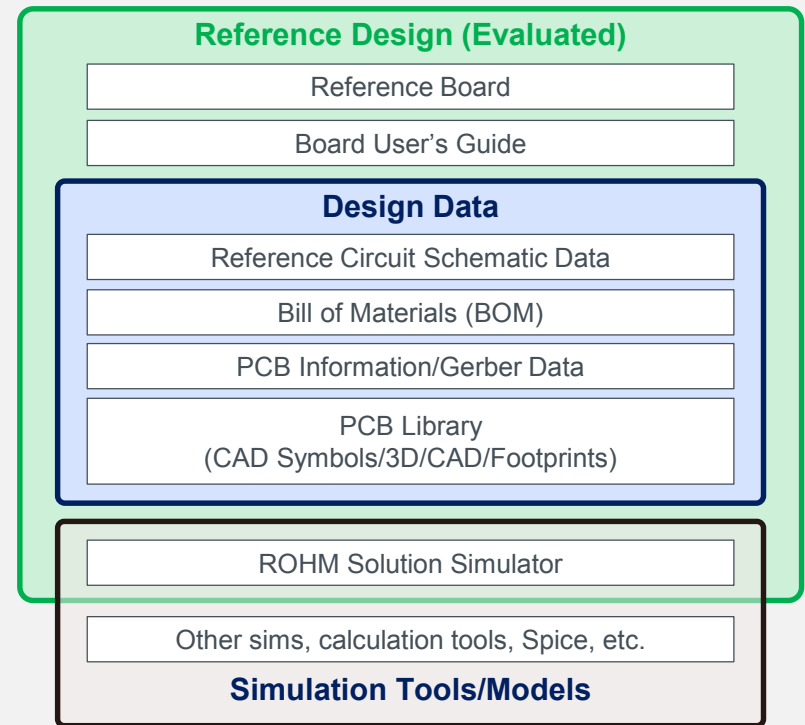


Reference Board (REFRPT001-EVK-001)

Webpage Reference Designs

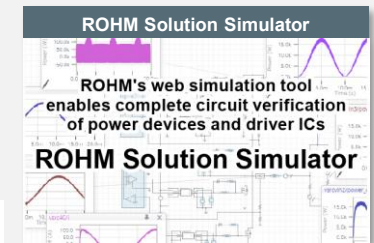
<https://www.rohm.com/reference-designs/refrpt001>

## Support Contents for Development Review



### ROHM Solution Simulator (Available)

ROHM Solution Simulator is an online simulation tool that enables complete circuit verification of power devices, (power semiconductors), driver ICs, and power supply ICs on a solution circuit. This makes it possible to simulate and verify desired characteristics when combining the new BD9P and BD9S series.



Webpage ROHM Solution Simulator  
<https://www.rohm.com/solution-simulator>



**ROHM Co., Ltd.**

21 Saini Mizosaki-cho, Ukyo-ku,  
Kyoto 615-8585 Japan

[www.rohm.com](http://www.rohm.com)

The content specified herein is for the purpose of introducing ROHM's products (hereinafter "Products"). If you wish to use any such Product, please be sure to refer to the specifications, which can be obtained from ROHM upon request. Great care was taken in ensuring the accuracy of the information specified in this document. However, should you incur any damage arising from any inaccuracy or misprint of such information, ROHM shall bear no responsibility for such damage. The technical information specified herein is intended only to show the typical functions of and examples of application circuits for the Products. ROHM does not grant you, explicitly or implicitly, any license to use or exercise intellectual property or other rights held by ROHM and other parties. ROHM shall bear no responsibility whatsoever for any dispute arising from the use of such technical information. If you intend to export or ship overseas any Product or technology specified herein that may be controlled under the Foreign Exchange and the Foreign Trade Law, you will be required to obtain a license or permit under the Law.

The content specified in this document is correct as of 1st November, 2020.