

Automotive Secondary Buck DC/DC Converters

Achieves high reliability, high efficiency, and low ON-resistance in a compact form factor

BD9SxxxMUF-C / BD9SxxxNUX-C



Features

- Nch / Nch FET ON resistance :
35mΩ/35mΩ (BD9S2/3/400MUF-C)
Pch / Nch FET ON resistance :
150mΩ/95mΩ (BD9S201NUX-C)
270mΩ/180mΩ (BD9S000/100NUX-C)
(BD9S110/111NUX-C)
(BD9S012NUX-C)
- Switching frequency : 2.2MHz ±10%
- Superior load response through current mode control
- AEC-Q100 (Grade 1) qualified
- Compact package reduces mounting area
- Built-in Power Good function

Applications

- Automotive systems
- Electronic devices

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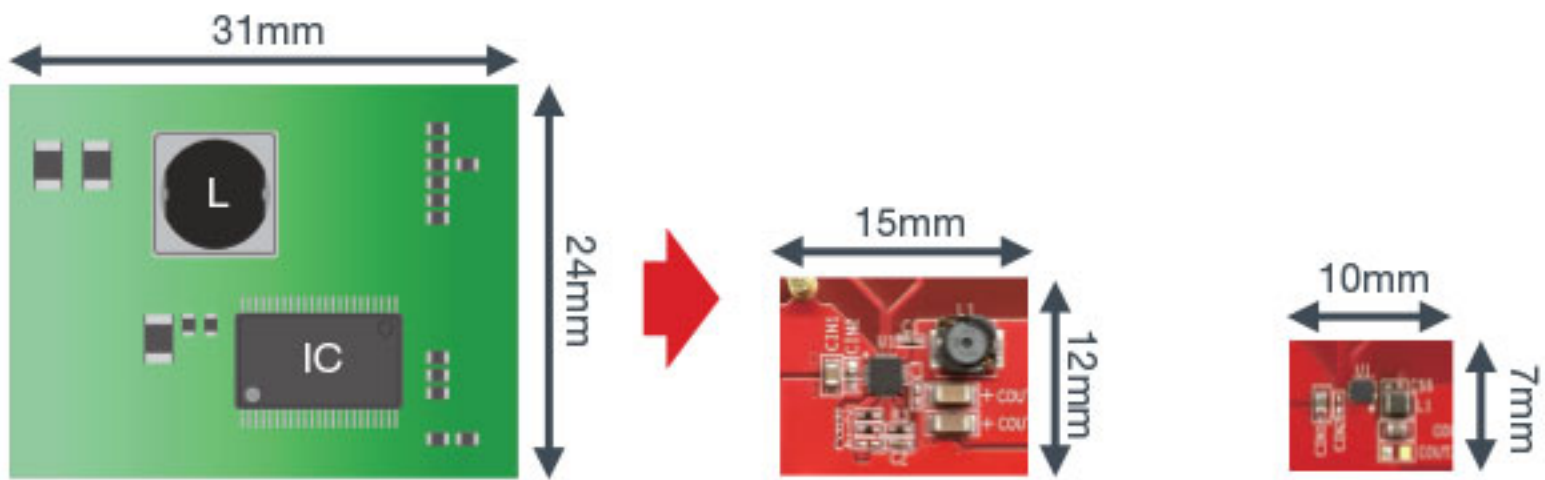
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APEC

Backside heat radiation design contributes to greater space savings

2.2MHz operation supports smaller peripheral components and eliminates AM band interference



ROHM Conventional Board
31mm x 24mm=744mm²

BD9Sx00MUF-C
15mm x 12mm=120mm²

BD9Sx00NUX-C
10mm x 7mm=70mm²

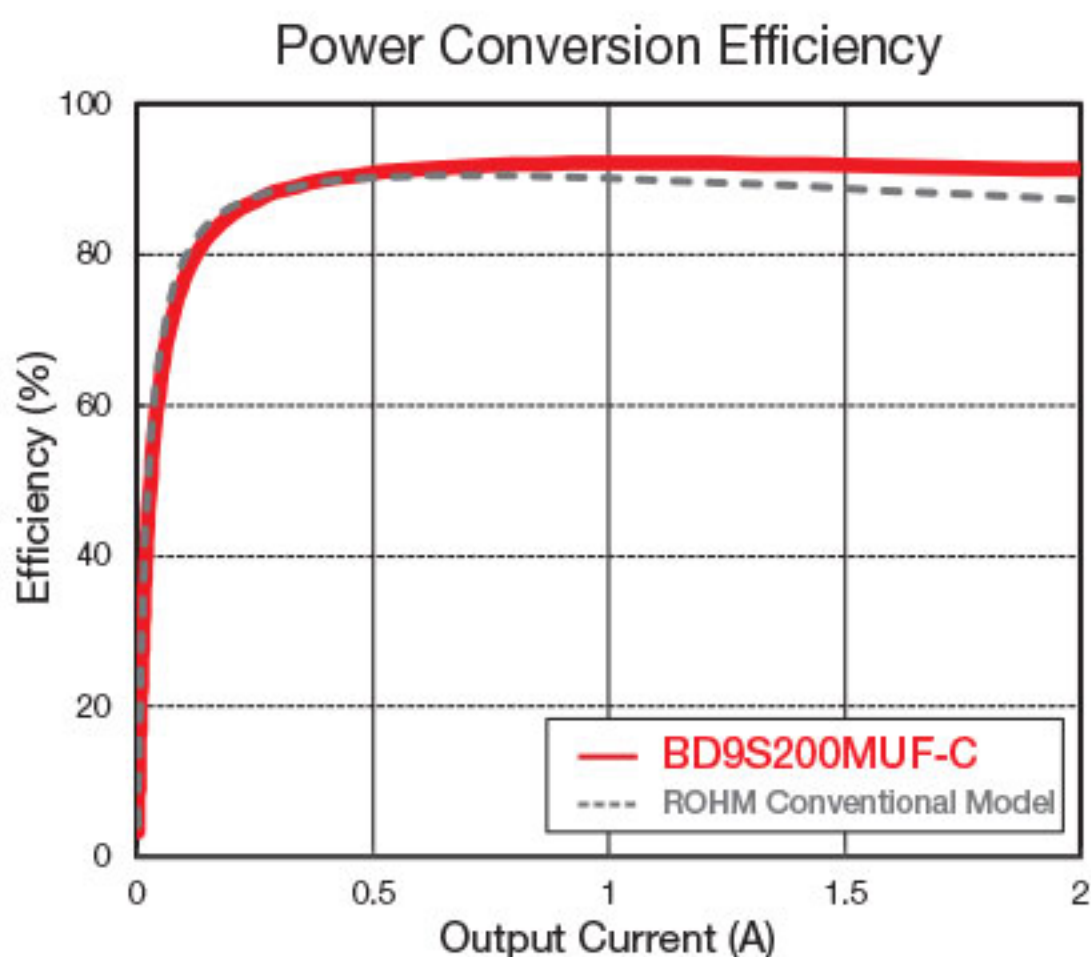
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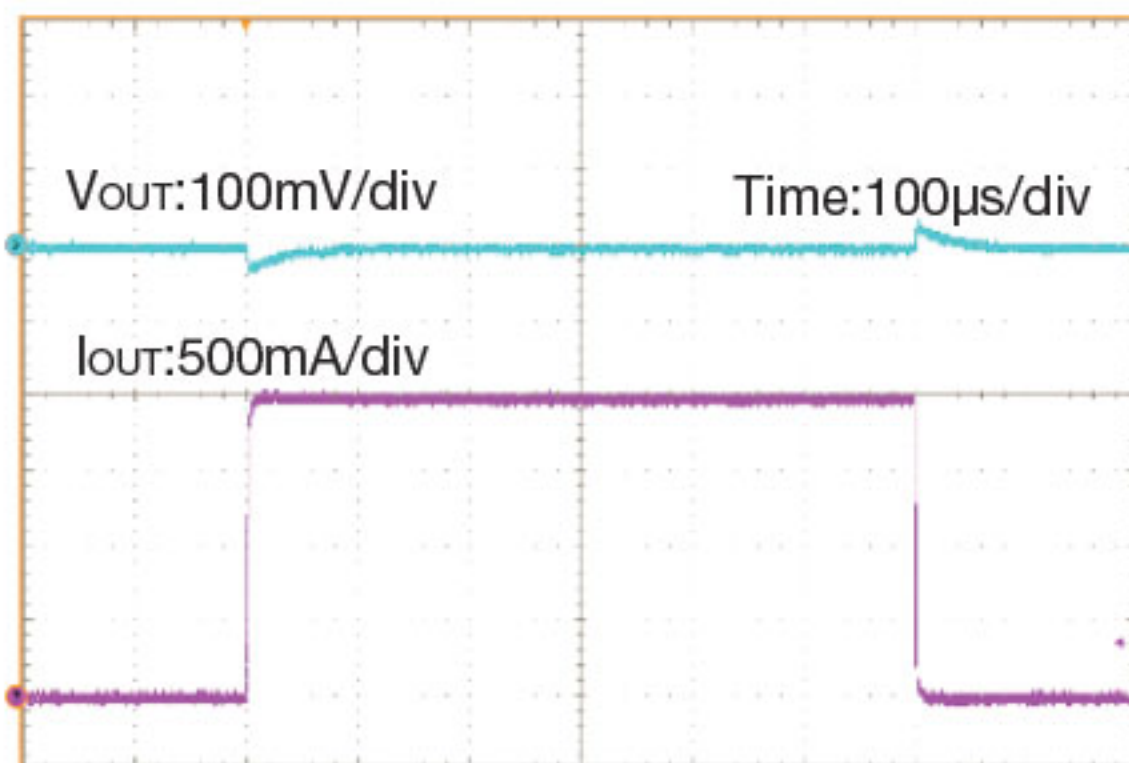
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APEC

Class-leading efficiency in a compact size



Current Mode Control Enables Superior Load Response



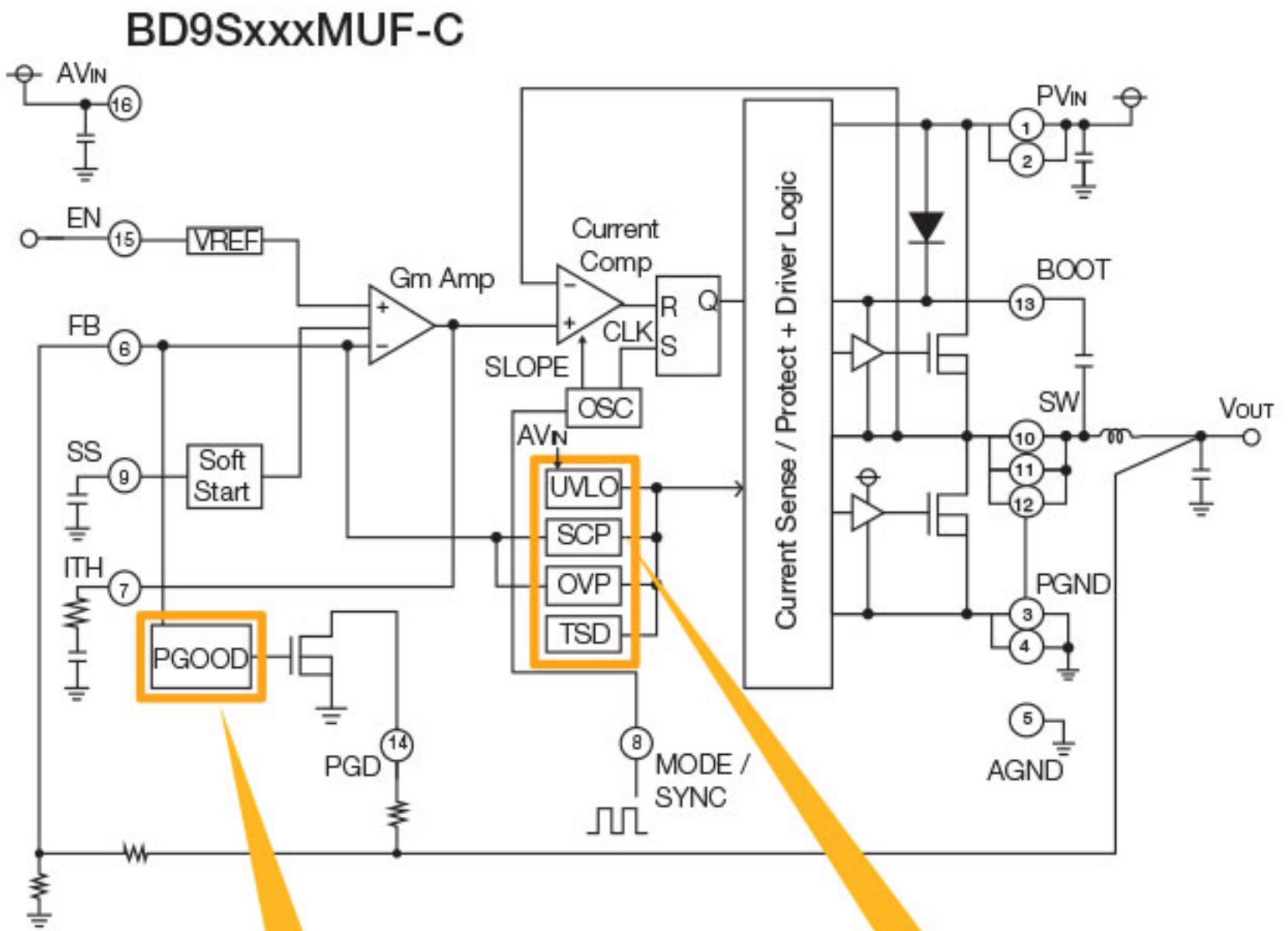
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Application circuit diagram



Power Good
Function

Multiple Protection
Circuits: UVLO, SCP,
OVP, TSD

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Lineup

Part No.	Supply Voltage (V)	Output Voltage (V)	Output Current (A)	Output Voltage Accuracy (%)	Switching Frequency (MHz)	Operation Temperature (°C)	Package	
BD9S400MUF-C	2.7 to 5.5	0.8 to $V_{IN} \times 0.8$	4.0	±1.5	2.2 ±10%	-40 to +125	VQFN16FV3030	
BD9S300MUF-C			3.0					
BD9S200MUF-C			2.0					
☆ BD9S201NUX-C		0.8 to V_{IN}	2.0				VSON008X2020	
BD9S100NUX-C			1.0					
BD9S000NUX-C			0.6					
BD9S012NUX-C			1.1					0.6
BD9S110NUX-C			1.2					1.0
BD9S111NUX-C			1.8					1.0

☆: Under Development