

2MHz Synchronous Buck Converter Featuring Nano Pulse Control®

Breakthrough 9ns minimum ON time control ideal for 48V systems

BD9V100MUF-C / BD9V101MUF-LB



Features

- Supports direct conversion from 48V to 3.3V or 5V (at 2MHz)
- Unprecedented 9ns minimum ON-time control
- Enables 1-stage buck configuration even with large step-down ratios

Applications

- Automotive systems
- Industrial equipment / communications infrastructure
- Other battery-powered sets

Specifications

- Input voltage : 16V to 60V (70V absolute maximum rating)
- Output switching current : 1A (max.)

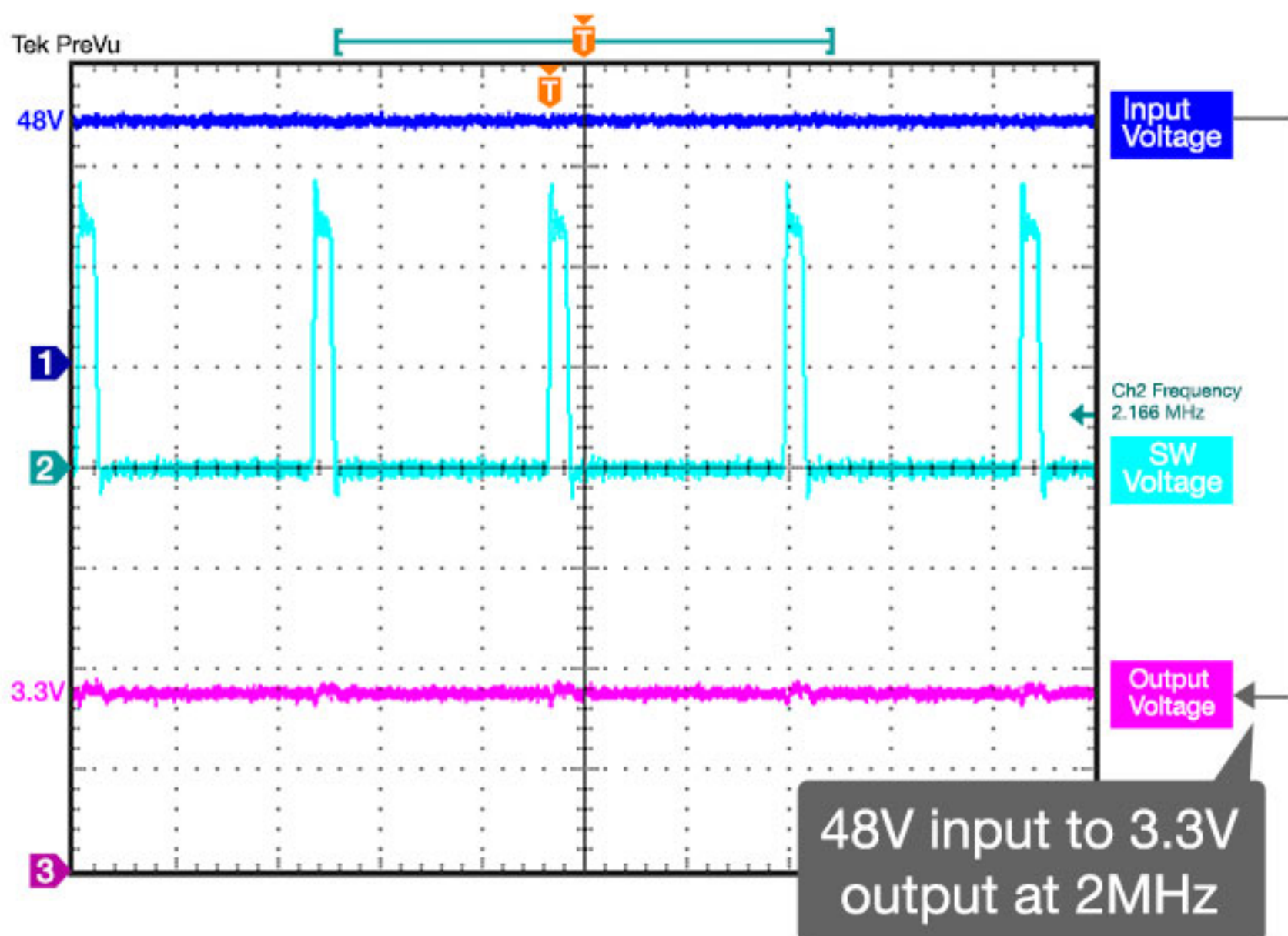
2MHz Synchronous Buck Converter Featuring Nano Pulse Control®

Breakthrough 9ns minimum ON time control ideal for 48V systems

BD9V100MUF-C / BD9V101MUF-LB

APEC

Directly converts from 48V to 3.3V required by MCUs



Ch1 20.0V B_W

Ch2 20.0V B_W

Ch3 2.00V B_W

M 200ns

A Ch2 \int 10.8V

T 46.60%

NEW

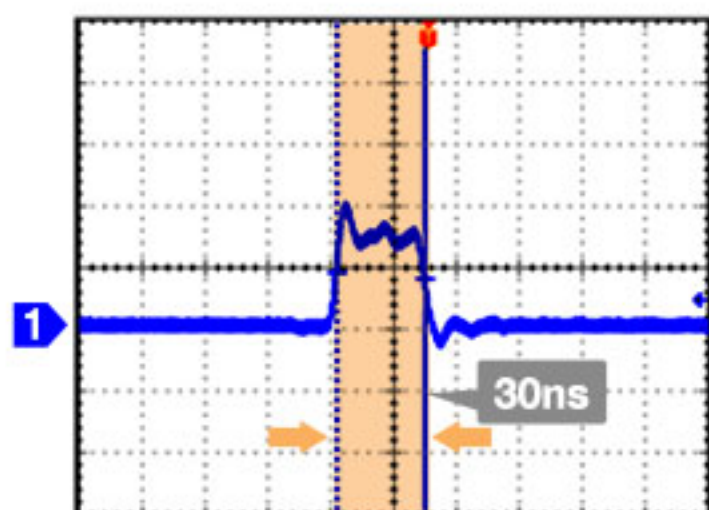
2MHz Synchronous Buck Converter Featuring Nano Pulse Control®

Breakthrough 9ns minimum ON time control ideal for 48V systems

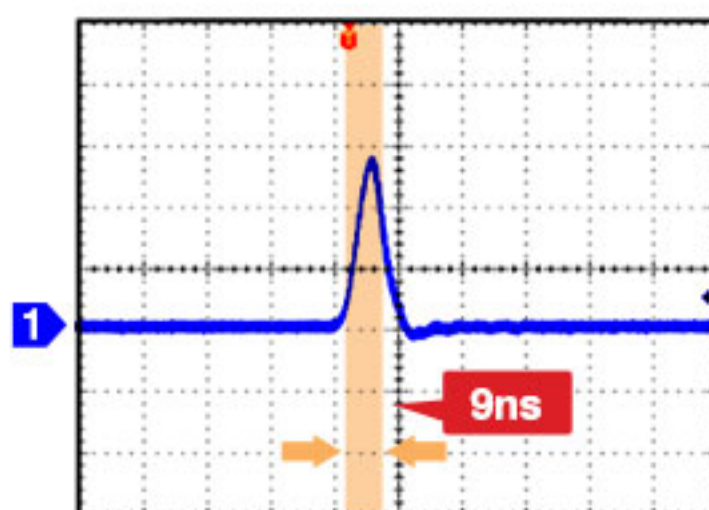
BD9V100MUF-C / BD9V101MUF-LB

APEC

Breakthrough 9ns Minimum ON-time Control



Company C



ROHM (BD9V100MUF)

DISCOVER THE POWER

ROHM
SEMICONDUCTOR

NEW

2MHz Synchronous Buck Converter Featuring Nano Pulse Control®

Breakthrough 9ns minimum ON time control ideal for 48V systems

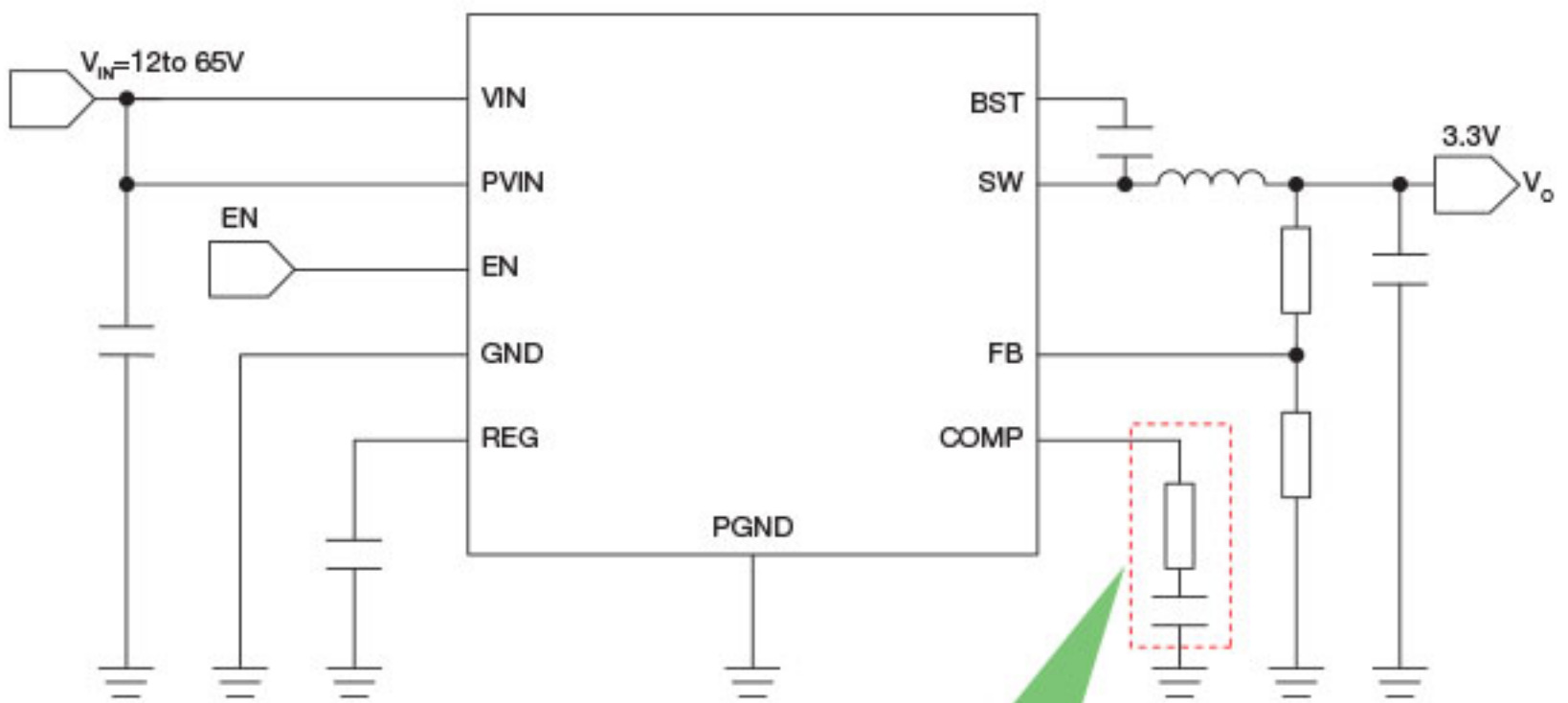
BD9V100MUF-C / BD9V101MUF-LB

APEC

Current Mode Control Provides Easy Phase Compensation



Backside heat sink achieves greater minaturization



Current mode control ensures easy phase compensation with fewer external components

DISCOVER THE POWER

ROHM
SEMICONDUCTOR

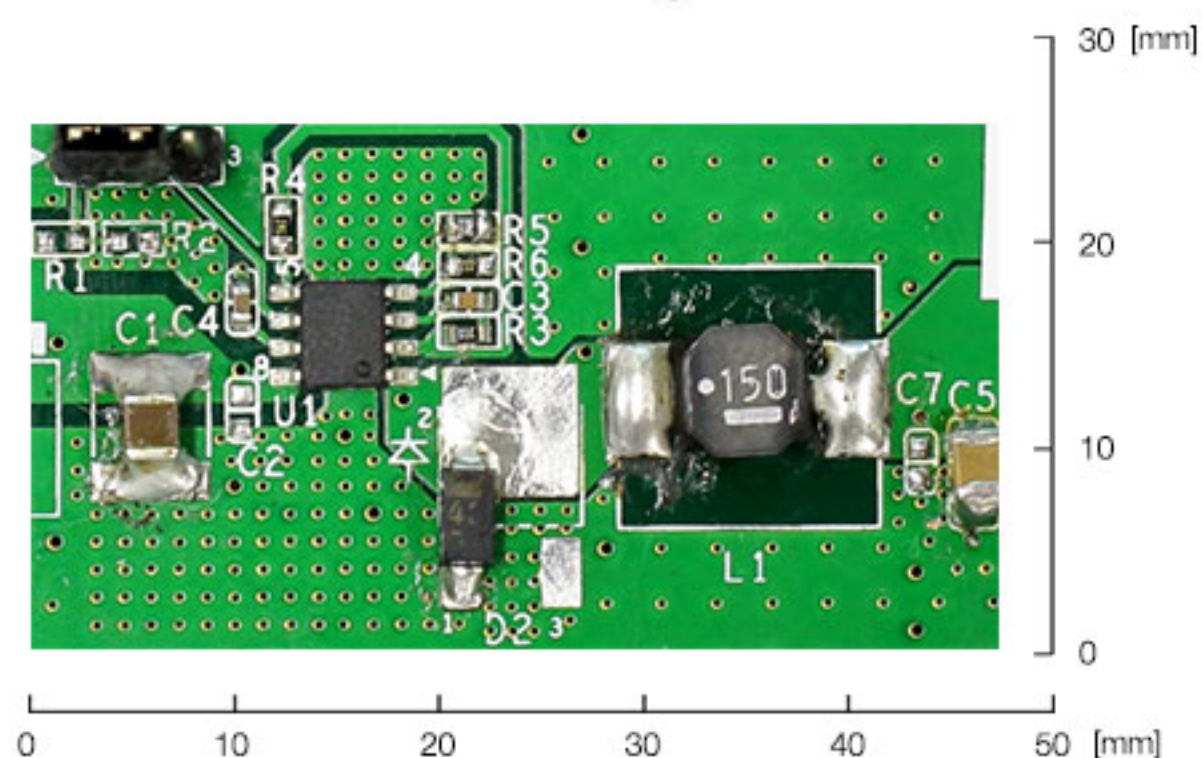
2MHz Synchronous Buck Converter Featuring Nano Pulse Control®

Breakthrough 9ns minimum ON time control ideal for 48V systems

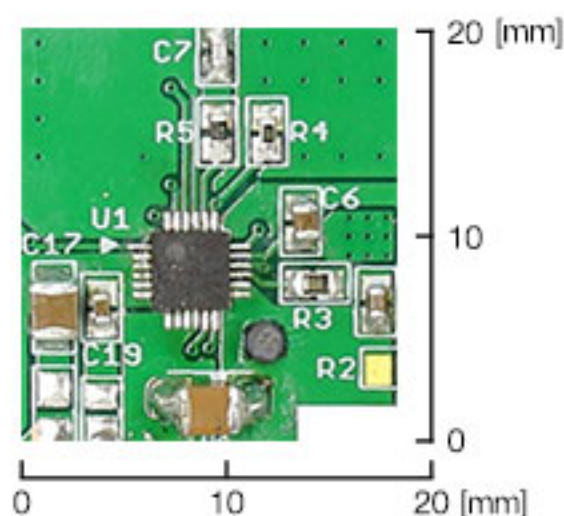
BD9V100MUF-C / BD9V101MUF-LB

APEC

2MH operation reduces mounting area



70% smaller



1175mm² (47mm x 25mm) → 360mm² (18mm x 20mm)

Inductor size (Reference) 6mm² » 2.4mm²