

High Efficiency 48V–12V Front-End DC-DC Converter

Product Description

The **PE25204** is an ultra-high efficiency front-end DC-DC converter solution that divides down an input voltage by either a factor of 3 or 4 and delivers up to 72W output at up to 96.8% peak efficiency. The PE25204 can also be used in parallel to increase output power. The PE25204 supports an input voltage range of 18V to 60V in divide-by-4 operation and between 18V and 45V in divide-by-3 operation. It is available in a WLCSP package.

Features

- Input voltage range of 18V to 60V in divide-by-4 configuration supports 48V bus systems and 24V industrial supplies
- Input voltage range of 18V to 45V in divide-by-3 configuration
- 72W output power can be connected in parallel for higher output power
- Uses capacitors in a very thin 1 mm-high solution
- Fixed divide-by-4 or divide-by-3 conversion ratio from input voltage to output voltage

Applications

- Ultrabooks/notebook computers
- Data centers/servers
- Networking equipment
- Base stations
- Optical equipment
- Industrial applications

Efficiency

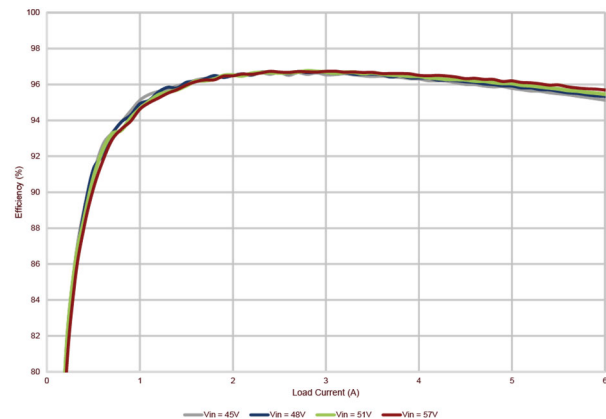


Figure 1. PE25204 Typical Efficiency 48V to 12V

Simplified Applications Circuit

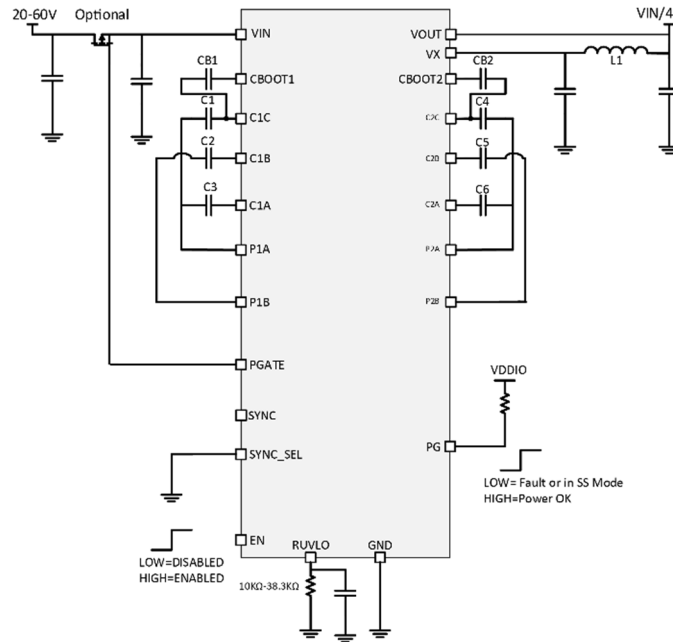


Figure 2. PE25204 Typical Applications Circuit

Evaluation Kit

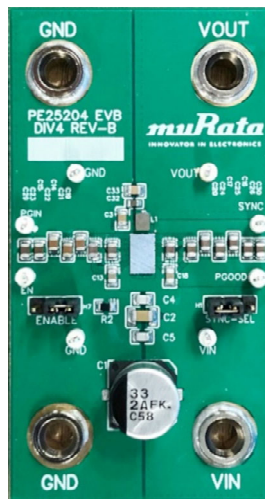


Figure 3. PE25204 Evaluation Kit

Order Codes

ORDER CODES	DESCRIPTION	PACKAGING	SHIPPING METHOD
PE25204-A-X	PE25204 DC-DC converter	WLCSP	500 unit/T&R
EK25204-01	PE25204 DC-DC converter evaluation board	PCB Board	1 unit

Table 1. Order Codes

Notices

CAUTION

Limitation of Applications

Please contact us before using our products for the applications listed below which require especially high reliability for the prevention of defects which might lead to damage to life, body or property.

- Aircraft equipment
- Aerospace equipment
- Undersea equipment
- Power plant control equipment
- Surgical implants
- Transportation equipment (vehicles, trains, ships, etc.)
- Traffic signal equipment
- Disaster prevention / crime prevention equipment
- Application of similar complexity and/or reliability requirements to the applications listed in the above

Note

1. Please make sure that your product has been evaluated and confirmed to your specifications when our product is used in your product.
2. All the items and parameters in this approval sheet for product specification are based on the premise that our product is used for the purpose, under the condition and in the environment agreed upon between you and us. You are requested not to use our product in a manner deviating from such agreement.
3. If you have any concerns about materials other than those listed in the RoHS directive, please contact us.
4. Be sure to provide an appropriate fail-safe functionality in your product to prevent secondary damage that could be caused by the abnormal function or failure of our product.
5. Do not allow our product to be exposed to excess moisture under any circumstances.

Document Categories

Advance Information

The product is in a formative or design stage. The datasheet contains design target specifications for product development. Specifications and features may change in any manner without notice.

Preliminary Specification

The datasheet contains preliminary data. Additional data may be added at a later date. Murata reserves the right to change specifications at any time without notice in order to supply the best possible product.

Product Specification

The datasheet contains final data. In the event Murata decides to change the specifications, Murata will notify customers of the intended changes by issuing a CNF (Customer Notification Form).

Product Brief

The datasheet contains summary product information.

Sales Contact

For additional information, contact Sales at <https://www.murata.com/contactform>.

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