

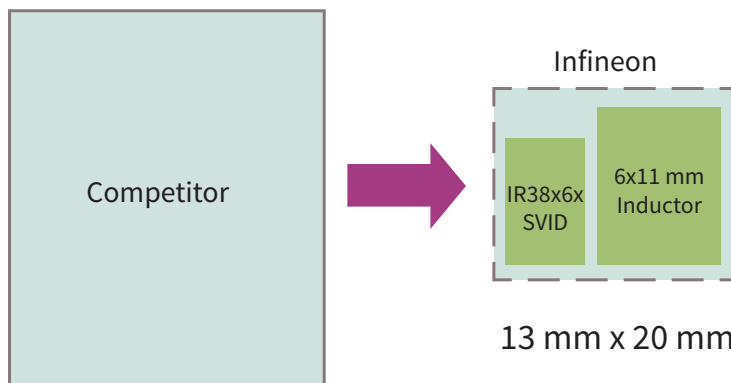
Product brief

Highest density and highest efficiency PMBus™ IPOL

IR38263/5 30 A OptiMOS™ IPOL with PMBus™ and 3-bit PVID

The IR38263/5 is the only single chip solution offering 3-bit PVID and very extensive PMBus™ support. This single chip solution offers 50 percent reduction in size, compared to traditional 2-chip solutions (controller + power stage). The high level of integration allows for simpler routing, less noise, less capacitors and lower cost.

Layout savings



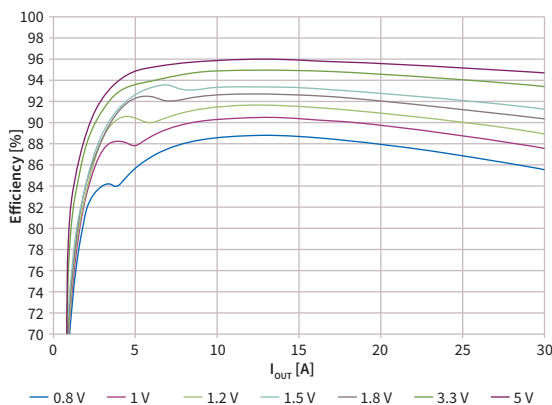
Key features

- > Broad PMBus™ support
- > 3-bit PVID
- > 5 x 7 mm up to 30 A
- > 300 – 1500 kHz switching frequency
- > Gen3 voltage mode engine for ultra-low jitter
- > Pin compatible options with/without PMBus™

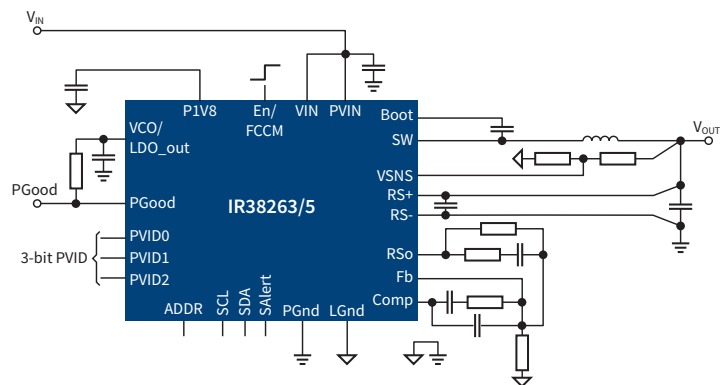
Key benefits

- > 50 percent space saving compared to 2-chip solutions
- > 1 MHz capable for less caps
- > SFET6 for very high efficiency
- > Voltage scaling through PMBus™ or PVID
- > PMBus™ telemetry, diagnostic and configuration

Efficiency



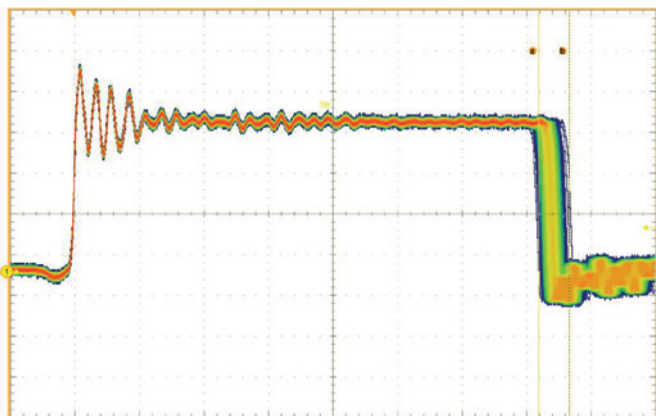
Application diagram



Highest density and highest efficiency PMBus™ IPOL

IR38263/5 30A OptiMOS™ IPOL with PMBus™ and 3-bit PVID

Switching node waveform



SW node jitter = 9.4 ns

V_{CCIO} Rail, 12 Vin to 1 Vout 21 A

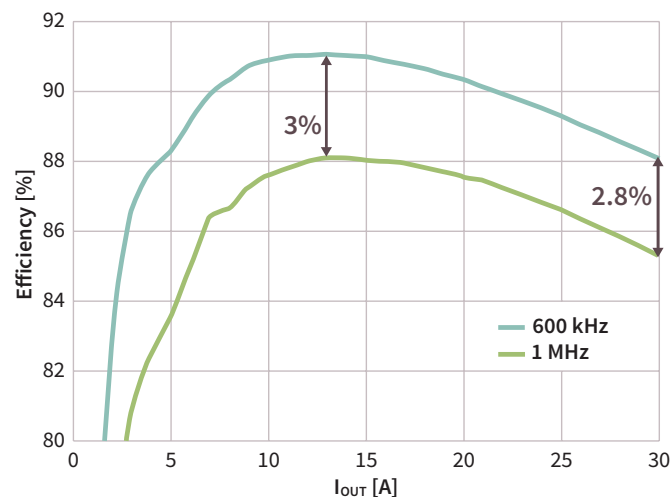
$t_1 = 144.2$ ns

$t_2 = 153.6$ ns

$\Delta t = 9.4$ ns

$1/\Delta t = 106.383$ MHz

Performance



Performance V_{CCIO} 12 V to 1 V, 5 V external bias:
1 MHz vs. 600 kHz solution

Product portfolio

Product name	Current [A]	Function	OPN
IR38265	30	PVID	IR38265MTRPBF
IR38263	30	PVID + PMBUS™	IR38263MTRPBF

PMBus™ is a registered trademark of SMIF.

Published by
Infineon Technologies AG
81726 Munich, Germany

© 2017 Infineon Technologies AG.
All Rights Reserved.

Please note!

THIS DOCUMENT IS FOR INFORMATION PURPOSES ONLY AND ANY INFORMATION GIVEN HEREIN SHALL IN NO EVENT BE REGARDED AS A WARRANTY, GUARANTEE OR DESCRIPTION OF ANY FUNCTIONALITY, CONDITIONS AND/OR QUALITY OF OUR PRODUCTS OR ANY SUITABILITY FOR A PARTICULAR PURPOSE. WITH REGARD TO THE TECHNICAL SPECIFICATIONS OF OUR PRODUCTS, WE KINDLY ASK YOU TO REFER TO THE RELEVANT PRODUCT DATA SHEETS PROVIDED BY US. OUR CUSTOMERS AND THEIR TECHNICAL DEPARTMENTS ARE REQUIRED TO EVALUATE THE SUITABILITY OF OUR PRODUCTS FOR THE INTENDED APPLICATION.

WE RESERVE THE RIGHT TO CHANGE THIS DOCUMENT AND/OR THE INFORMATION GIVEN HEREIN AT ANY TIME.

Additional information

For further information on technologies, our products, the application of our products, delivery terms and conditions and/or prices, please contact your nearest Infineon Technologies office (www.infineon.com).

Warnings

Due to technical requirements, our products may contain dangerous substances. For information on the types in question, please contact your nearest Infineon Technologies office.

Except as otherwise explicitly approved by us in a written document signed by authorized representatives of Infineon Technologies, our products may not be used in any life-endangering applications, including but not limited to medical, nuclear, military, life-critical or any other applications where a failure of the product or any consequences of the use thereof can result in personal injury.