

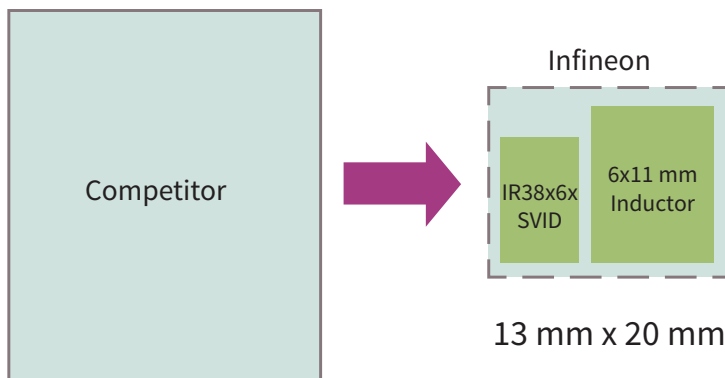
Product brief

Highest density for smart enterprise systems

IR38x6x full integrated solution with Intel SVID, PVID and PMBus™

The IR38x6x family is the only single chip solution available for Intel system POL rail requiring SVID like VCCIO. 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



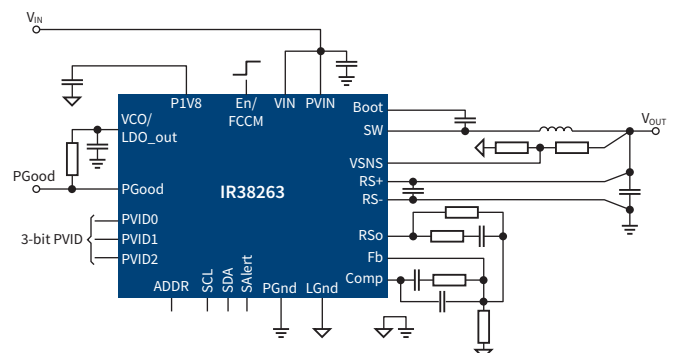
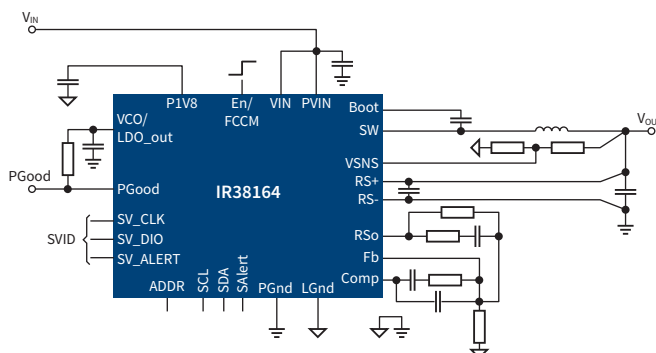
Key features

- > SVID, VR13 and VR12.5 compatible
- > 3-bit PVID for PVNN
- > 5x7 mm up to 30 A
- > 300 kHz-1500 kHz switching frequency
- > Gen3 Voltage Mode Engine for ultra-low jitter and fewer capacitors
- > Pin compatible options with/ without PMBUS™
- > Pre-programmed for Intel VR13 rails

Key benefits

- > 50 percent space saving compared to 2-chip solutions
- > 1 MHz Capable for less caps
- > SFET6 for very high efficiency

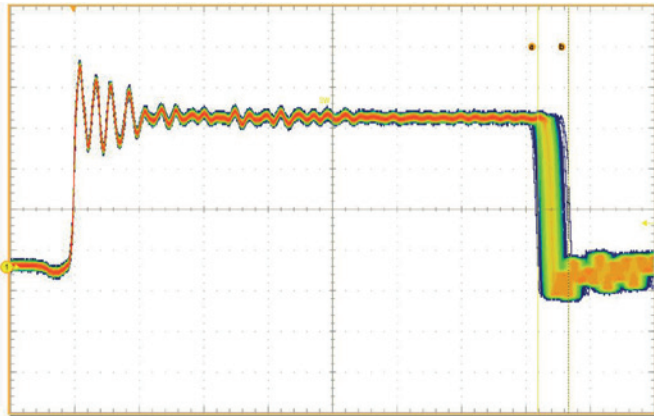
SVID/PVID options



SVID/PVID for Intel VR13 VCCIO, VMCP, PVNN rails

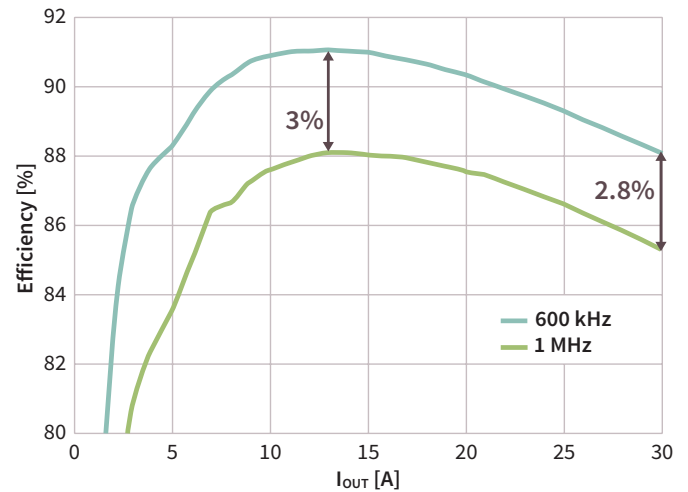
IR38x6x family

VCCIO waveforms



SW node jitter = 9.4 ns

Performance curve



Performance VCCIO 12 V to 1 V, 5 V external bias:
1 MHz vs. 600 kHz solution

Product portfolio

Part number	Current [A]	Function	OPN
IR38165	30	VCCIO SVID	IR38165MTRPBF
IR38163	30	VCCIO SVID + PMBus	IR38163MTRPBF
IR38365	15	VMCP SVID	IR38365MTRPBF
IR38363	15	VMCP SVID + PMBus	IR38363MTRPBF
IR38265	30	PVID	IR38265MTRPBF
IR38263	30	PVID + PMBUS	IR38263MTRPBF
IR38164	30	VCCIO SVID + PMBus and enhanced current monitoring accuracy	IR38164MTRPBF

Published by
Infineon Technologies AG
81726 Munich, Germany

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