

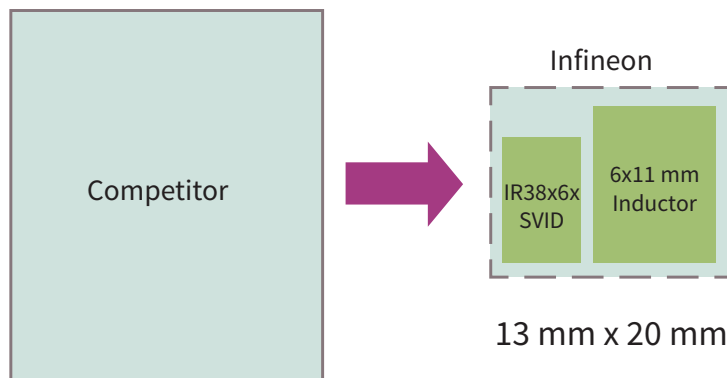
Product brief

Highest density for smart enterprise systems

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

The IR38x6x family is the only single-chip solution available for Intel® system POL rails requiring SVID like V_{CCIO} . This topology offers 50 percent reduction in size compared to traditional dual-chip solutions (controller and power stage). The high level of integration allows for simpler routing, less noise, less capacitors and lower cost.

Layout savings



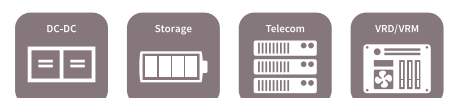
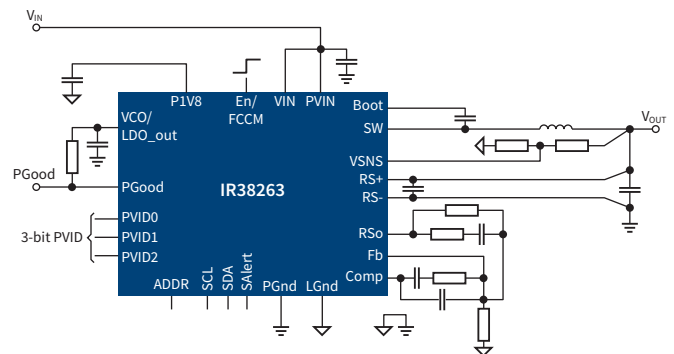
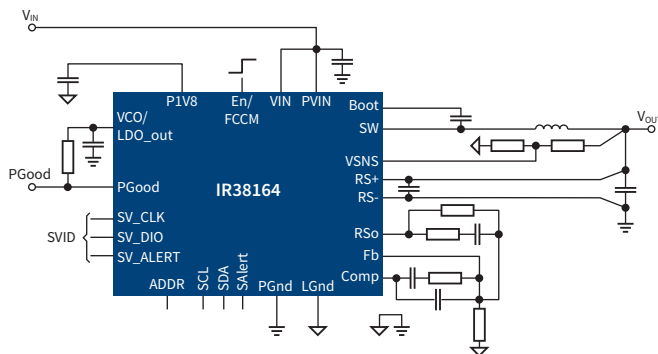
Key features

- > SVID, VR13 and VR12.5 compatible
- > 3-bit PVID for P_{VNN}
- > 5 mm x 7 mm PQFN package up to 30 A
- > 300 kHz-1500 kHz switching frequency
- > 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 dual-chip solutions
- > 1 MHz capable for less capacitors
- > OptiMOST™ 5 for very high efficiency

SVID/PVID options

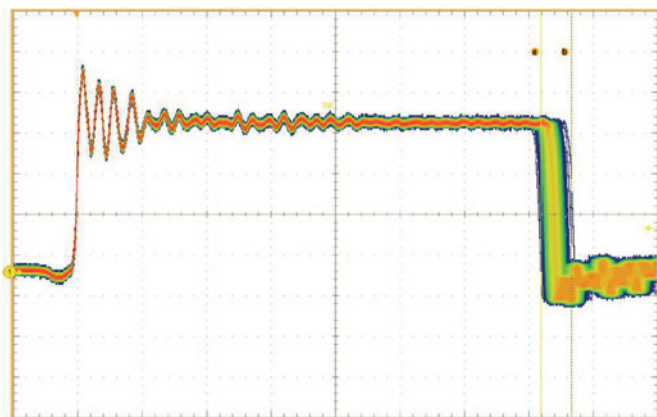


SVID/PVID for Intel® VR13

V_{CCIO} , V_{MPC} and P_{VNN} rails

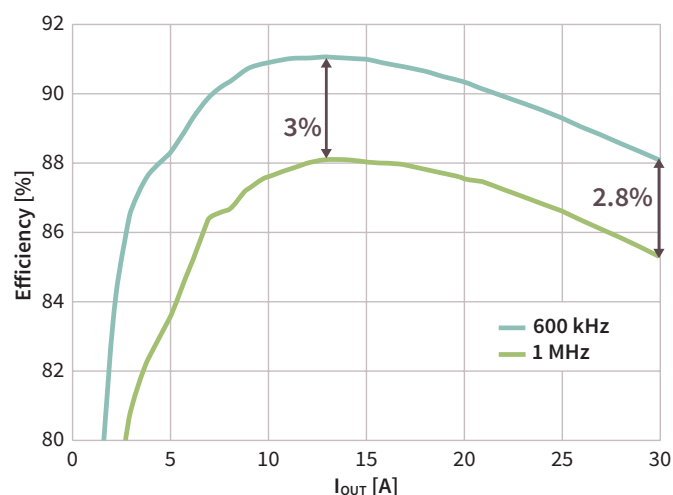
IR38x6x family

V_{CCIO} waveforms



Switching node jitter = 9.4 ns

Performance curve



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

Product portfolio

Part number	Current [A]	Function	OPN
IR38165	30	V_{CCIO} SVID	IR38165MTRPBF
IR38163	30	V_{CCIO} SVID + PMBus™	IR38163MTRPBF
IR38365	15	V_{MPC} SVID	IR38365MTRPBF
IR38363	15	V_{MPC} SVID + PMBus™	IR38363MTRPBF
IR38265	30	PVID	IR38265MTRPBF
IR38263	30	PVID + PMBus™	IR38263MTRPBF
IR38164	30	V_{CCIO} SVID + PMBus™ and enhanced current monitoring accuracy	IR38164MTRPBF

Published by
Infineon Technologies AG
81726 Munich, Germany

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