

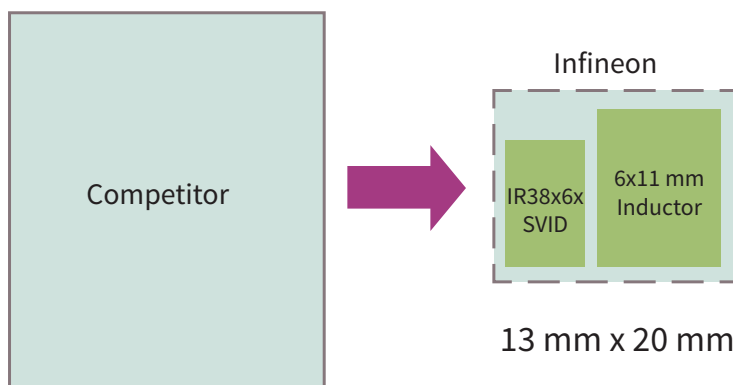
Product brief

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



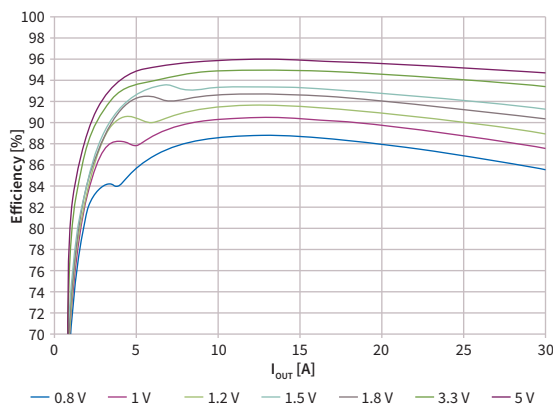
Key features

- > 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™

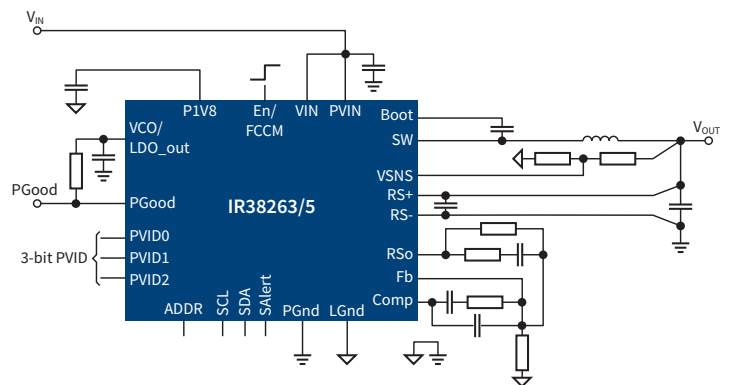
Key benefits

- > 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



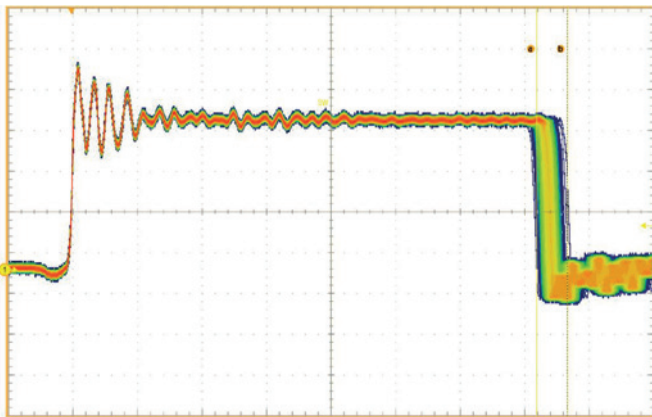
Application diagram



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Switching node waveform



SW node jitter = 9.4 ns

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

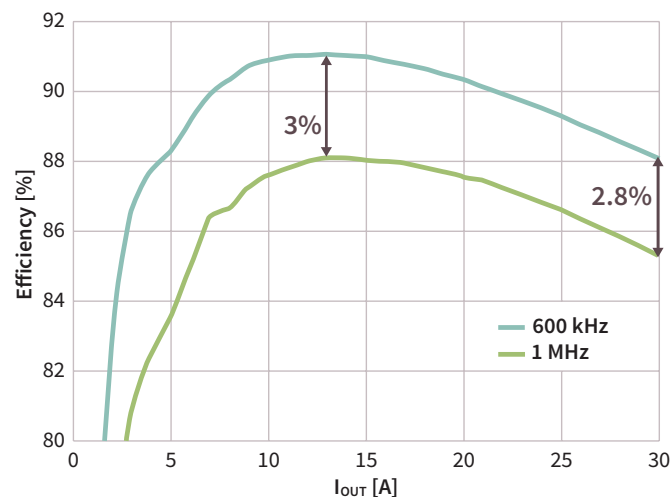
$t_1 = 144.2$ ns

$t_2 = 153.6$ 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.

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