Product Brief

800 V CoolSET™

AC-DC integrated power stage

Quasi resonant CoolSET™

The quasi resonant CoolSET™ series continues to deliver design agility and miniaturization. Upon the successful F3 CoolSET™, it offers the possibility of higher efficiency and better EMI performance. The digital frequency reduction feature scores a very stable operation with decreasing load change.

Fixed frequency CoolSET™

Infineon's AC-DC integrated power stage 800 V CoolSET™ fixed frequency offers lowest standby power consumption < 300 mW at no load condition and lowest on-resistance for record efficiency levels. 650 V or 800 V avalanche rugged CoolMOS™ Power MOSFET is integrated optionally.

Quasi-resonant CoolSET™ 800 V

P_{out} [1] 85 V_{AC} ... 265 V_{AC}	18 W	24 W	37 W	47 W
$R_{DS(on)}$	4.7 Ω	2.2 Ω	1.0 Ω	0.6 Ω
Package	800 V depletion CoolMOS™			
DIP-7	ICE2QR4780Z	ICE2QR2280Z ICE2QR2280Z-1		ICE2QR0680Z
DSO-12	ICE2QR4780G	ICE2QR2280G ICE2QR2280G-1	ICE2QR1080G	ICE2QR0680Z

[1] Output power assume 78~83% efficiency. T_a = 50°C, T_j = 125°C and no copper area for 650 V device and 232 mm² copper area for 800 V device.

Fixed frequency PWM IC and CoolSET™ 800 V

P_{out} [2] 85 V_{AC} ... 265 V_{AC}	11 W	16 W	22 W	30 W	37 W	43 W
$R_{DS(on)}$	10.0 Ω	4.7 Ω	2.2 Ω	1.5 Ω	1.0 Ω	0.6 Ω
Package	800 V depletion CoolMOS™					
DIP-7	ICE3AR10080JZ ICE3AR10080CJZ	ICE3AR4780JZ ICE3AR4780VJZ ICE3AR4780CJZ	ICE3AR2280JZ ICE3AR2280JZ-T ICE3AR2280CJZ ICE3AR2280VJZ ICE3BR2280JZ	ICE3AR1580VJZ	ICE3AR1080VJZ	ICE3AR0680JZ ICE3AR0680VJZ ICE3BR0680JZ
DSO-12		ICE3AR4780JG	ICE3AR2280JG		ICE3AR1080JG	

[2] Output power assume 76~83% efficiency. T_a = 50°C, T_j = 125°C and no copper area

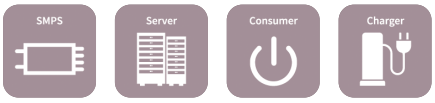
Product highlights

800 V quasi-resonant CoolSET™

- Digital frequency reduction with decreasing load
- Cycle-by-cycle current limitation with fold-back correction
- Built-in digital soft-start
- Active burst mode for lowest standby power < 50 mW
- Latch-off mode for short-winding and output voltage
- Enhanced integrated protection functions

800 V fixed frequency CoolSET™

- 800 V avalanche rugged CoolMOS™ with startup cell
- Active burst mode to reach the lowest standby power < 100 mW
- Selectable enter and exit burst mode level
- Adjustable blanking window for high load jumps
- Frequency jitter and soft driving for low EMI

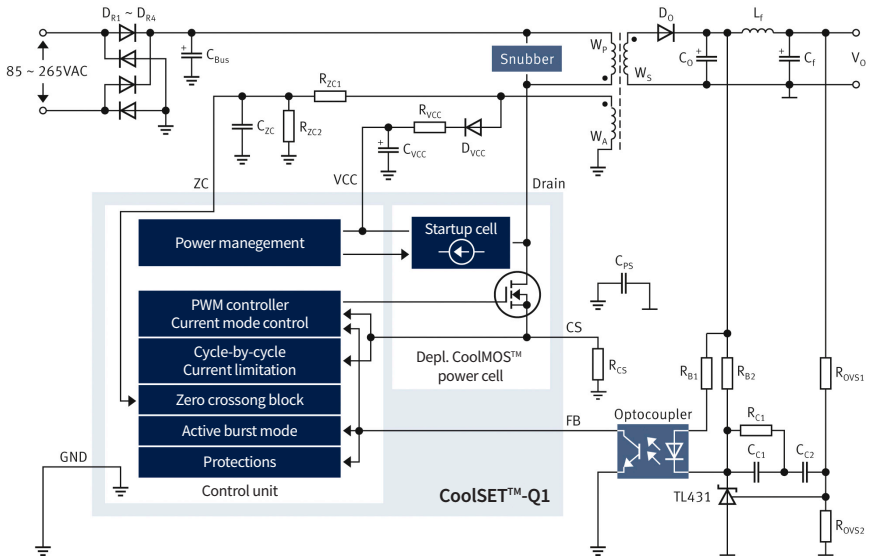


www.infineon.com/coolset

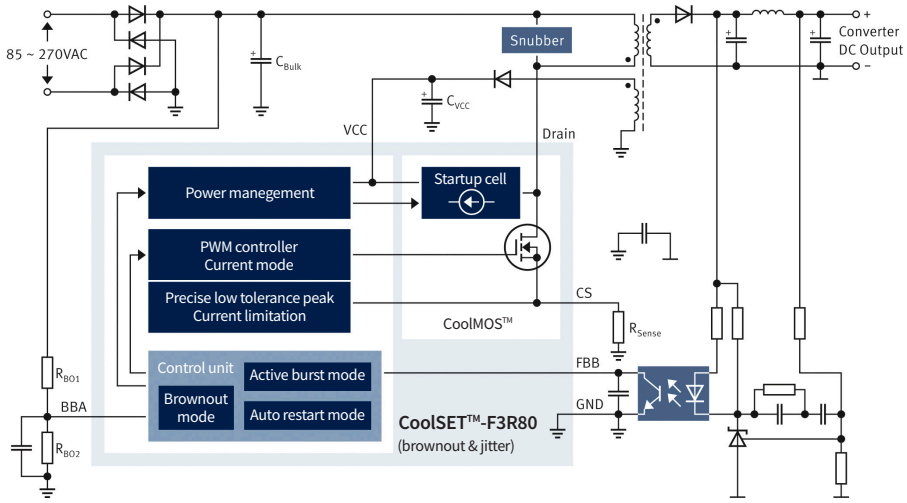
800 V CoolSET™

AC-DC integrated power stage

Application diagram – 800 V quasi-resonant CoolSET™



Application diagram – 800 V fixed frequency CoolSET™



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Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

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