

Product Brief

Fixed Frequency and Quasi-Resonant CoolSET™ in DSO-12 package

Infineon is extending the products portfolio with Fixed Frequency (FF) and Quasi-Resonant (QR) CoolSET™ in SMD package (DSO-12) in order to meet the increasing demand of SMD package used in PCB designs. By leveraging the CoolMOS™ technology, the new CoolSET™ are enabled to deliver high power in SMD package.

Applications

- > LCD monitor, blue ray/DVD player, set-top box
- > Auxiliary power supply in white goods, server, telecom, PC silverbox, TV, printer and audio system
- > Adapter/charger

Product summary

Topology	V _{DS} [V]	Frequency [kHz]	Sales product name	P _{OUT} [W]	R _{DS(on)} [Ω]
Quasi-Resonant flyback (QR)	800	n/a	ICE2QR4780G <i>New</i>	14	4.7
	800	n/a	ICE2QR2280G	20	2.2
	800	n/a	ICE2QR2280G(-1)	20	2.2
	800	n/a	ICE2QR1080G <i>New</i>	31	1.0
	650	n/a	ICE2QR4765G	14	4.7
	650	n/a	ICE2QR1765G	23	1.7
	650	n/a	ICE2QR0665G	38	0.6
Fixed Frequency flyback (FF)	650	67	ICE3RBR4765JG <i>New</i>	14	4.7
	650	67	ICE3RBR1765JG <i>New</i>	23	1.7
	650	67	ICE3RBR0665JG <i>New</i>	37	0.6
	800	100	ICE3AR4780JG <i>New</i>	14	4.7
	800	100	ICE3AR2280JG <i>New</i>	19	2.2
	800	100	ICE3AR1080JG <i>New</i>	30	1.0

Key features

- > 650/800 V avalanche rugged CoolMOS™ with startup cell
- > Active burst mode for lowest standby power
- > 65/100 kHz internally fixed switching frequency with jittering feature (FF)
- > Quasi-Resonant operation until very low load with digital frequency reduction (QR)
- > Cycle-by-cycle current mode control
- > Adjustable brown-in/brown-out features (FF)
- > Various protection features for robust system design

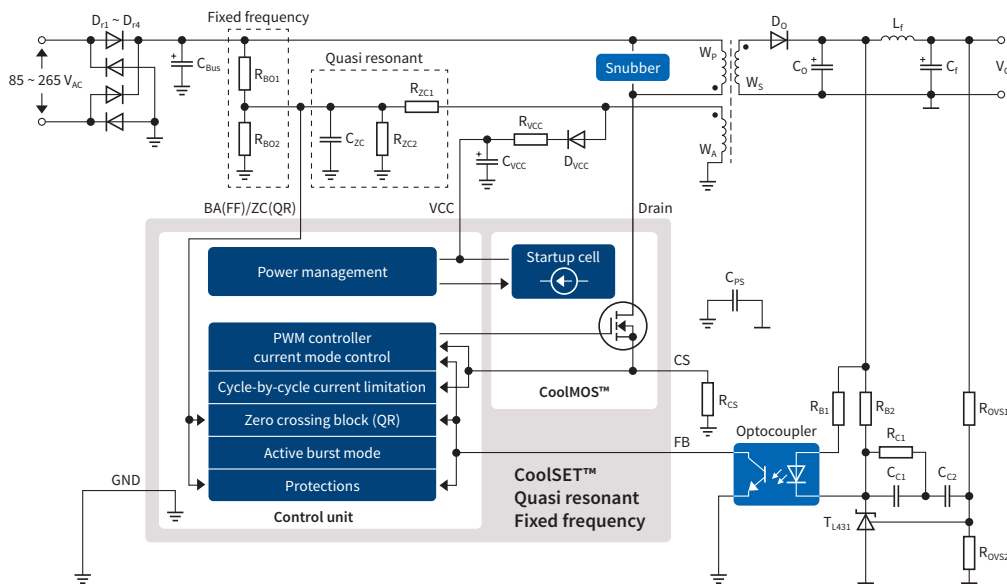
Key benefits

- > High power delivery capability in DSO-12 package
- > Smaller PCB size, slim and compact design
- > SMD package enable full automation in production
- > Robust avalanche rugged CoolMOS™ inside
- > Low standby power
- > Low EMI emission
- > High efficiency

DSO-12 CoolSET™

Fixed Frequency and Quasi-Resonant

Typical application schematic using QR/FF CoolSET™



Evaluation boards



Evaluation boards – product overview

Topology	Sales product name	V_{DS} [V]	P_{OUT} [W]	V_{OUT} [V]	CoolSET™
Quasi-Resonant flyback (QR)	DEMO-2QR4780G New	800	12	12	ICE2QR4780G New
	EVAL-2QR2280G-1	800	20	5	ICE2QR2280G ICE2QR2280G-1
	DEMO-2QR1080G New	800	28	12	ICE2QR1080G New
	EVALQRC-ICE2QR4765G	650	10	5	ICE2QR4765G
	EVAL-2QR1765G-18W	650	18	5	ICE2QR1765G
	EVAL-2QR0665G-28W 16V	650	28	16	ICE2QR0665G
Fixed Frequency flyback (FF)	DEMO-3RBR4765JG New	650	12	12	ICE3RBR4765JG New
	DEMO-3RBR1765JG New	650	20	12	ICE3RBR1765JG New
	DEMO-3RBR0665JG New	650	30	12	ICE3RBR0665JG New
	DEMO-3AR4780JG New	800	12	12	ICE3AR4780JG New
	DEMO-3AR2280JG New	800	18	12	ICE3AR2280JG New
	DEMO-3AR1080JG New	800	28	12	ICE3AR1080JG New

Published by
Infineon Technologies AG
81726 Munich, Germany

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