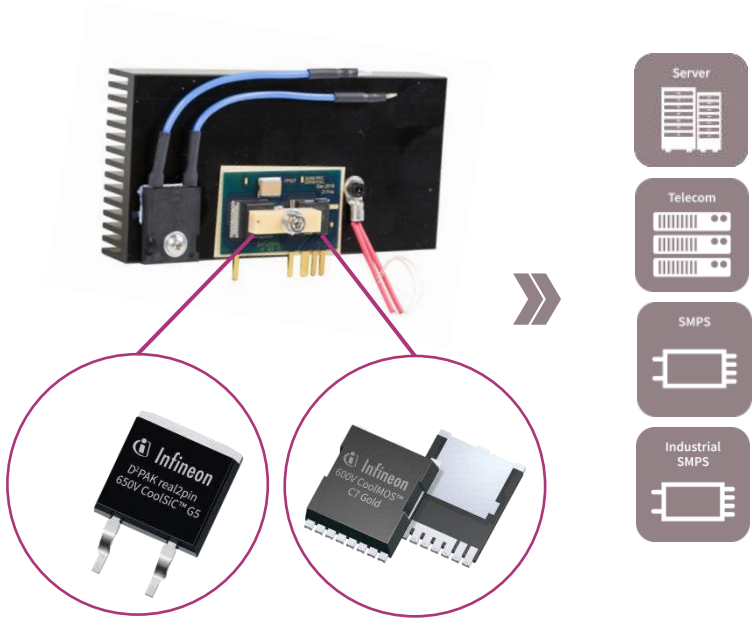
Expert kit KIT_2K5W_CCM_TOLL

To be used with
EVAL_2K5W_CCM_4P_V2

Zechner Florian (IFAT PMM ACDC AE)

Expert kit

KIT_2K5W_CCM_TOLL



Technical & order details

To be used together with:
EVAL_2K5W_CCM_4P_V2

Parameter	Value
Input voltage	85 V_{AC} ~ 265 V_{AC}
Input current	<14 A_{eff}
Output Voltage & current	400 $V_{DC,}$ 6.25 A
Output power	2.5k W@V_{in}=230 V;
Peak efficiency	>98% @ 230 V_{AC}

Learn more	
Sales name	KIT_2K5W_CCM_TOLL
SAP Mat number	SP001690906
Infineon order code	KIT2K5WCCMTOLLTOBO1

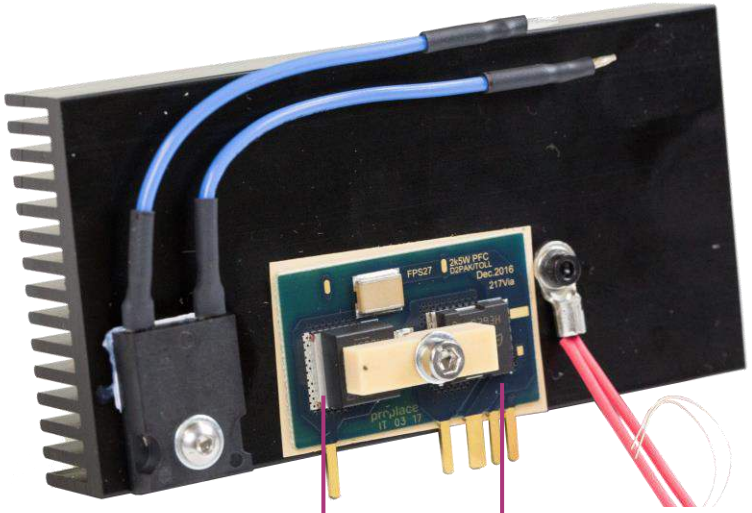
Features

- Convenient SMD upgrade kit for the EVAL_2K5W_CCM_4P_V2 PFC evaluation board
- Modifies the PFC stage to SMD solution by just replacing the heatsink with it´s already assembled devices
- Topology: CCM PFC
- Assembled on heat sink for plug and play

Benefits

- Easy to use SMD solution
- Thermal management example
- SMD vs. THD comparison in same environment
- Plug and play module for CCM PFC

Expert kit
KIT_2K5W_CCM_TOLL



600 V CoolMOS™ G7
(IPT60R028G7)

CoolSiC™ Schottky diode 650 V G5
(IDK12G65C5)

Ordering code:
KIT_2K5W_CCM_TOLL

Expert kit with 600 V CoolMOS™ G7 for EVAL_2.5KW_CCM_4PIN

Board components

- 600 V CoolMOS™ G7 SJ MOSFET (IPT60R028G7)
- CoolSiC™ Schottky diode 650 V G5 (IDK12G65C5)

To be used with the following board

- EVAL_2K5W_CCM_4P_V2

Target applications

- Telecom
- Server
- Industrial
- General SMPS

Component features

IPT60R028G7

CoolMOS™ C7 Gold SJ MOSFET in TO-Leadless (G7) - a new SMD package using Kelvin source concept

The 600 V CoolMOS™ C7 Gold (G7) SJ MOSFET technology for the first time brings together the benefits of the improved 600 V CoolMOS™ G7 technology, 4pin Kelvin source capability and the improved thermal properties of the TO-Leadless package. This enables now SMD solution for high current hard switching topologies such as power factor correction (PFC) up to 3 kW.

The 600 V CoolMOS™ G7 further more offers new SMD design solutions also for resonant circuits such as high end LLC topologies.

IDK12G65C5

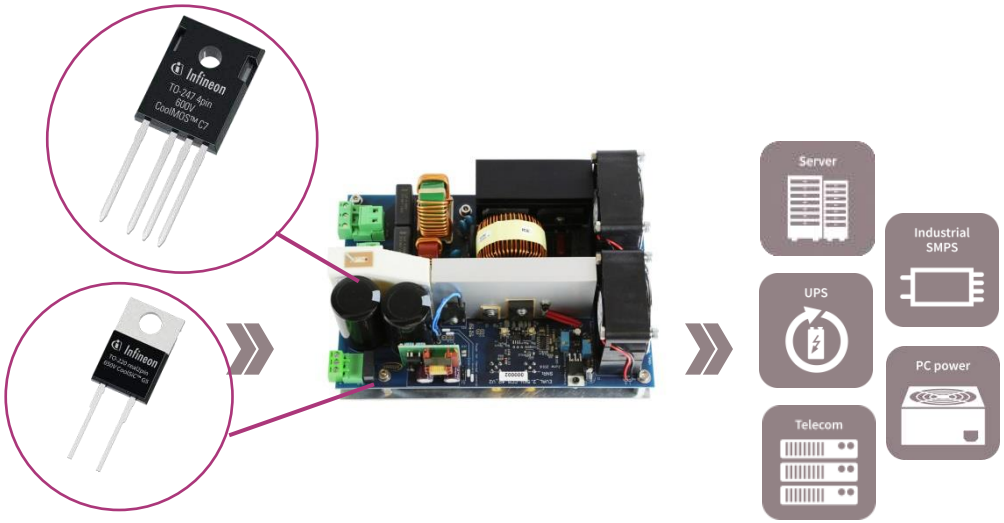
CoolSiC™ Schottky diode 650 V G5

CoolSiC™ generation 5 represents Infineon's leading edge technology for SiC Schottky barrier diodes. The Infineon proprietary diffusion soldering process, already introduced with G3, is now combined with a new, more compact design and thin wafer technology. The result is a new family of products showing improved efficiency over all load conditions, coming from both the improved thermal characteristics and a lower figure of merit (Q_c x V_f). Benchmark switching behaviour.

- No reverse recovery charge
- Smooth recovery curve
- Temperature independent switching behaviour
- High operating temperature (T_j max = 175°C)

To be used with evaluation board EVAL_2K5W_CCM_4P_V2

EVAL_2K5W_CCM_4P_V2



Technical & order details

Parameter	Value
Input voltage	85 V_{AC} ~ 265V_{AC}
Output voltage	400 V
Output power	2.5k W @ V_{in} = 230 V_{AC} 1kW @ V_{in} = 90 V_{AC}
Peak Efficiency	>98%

Learn more	
Sales name	EVAL_2K5W_CCM_4P_V2
SAP Mat number	SP001712686
Infineon Order Code	EVAL2K5WCCM4PV2TOBO1

Features

- The board is developed for the laboratory use
- This evaluation board help's customers to get familiar with Infineon products and to evaluate different behaviour of conventional 3pin devices compared to the high performance CoolMOS™ C7 devices in TO-247 4pin within a PFC application
- The version V2 also enables the evaluation of the SMD TOLL adaptor kit **KIT_2K5W_CCM_TOLL**
- Variable switching frequency: 40-200 kHz

Benefits

- Able to analyse the switching performance of different package variants in a very common used PFC topology. It helps to understand the switching behaviour and parasitic influences
- With the various option settings via "solder jumper" it is possible to modify the circuit without changing any layout
- Therefore the evaluation board offers plenty investigation variants
- It shows how to boost the efficiency in a standard PFC topology

Following expert kits are available

- KIT_2K5W_CCM_TOLL Easy to use SMD solution
- KIT_6W_12V_BIAS_ICE3 DC-DC Bias board
- KIT_6W_12V_BIAS_ICE5 DC-DC Bias board

Support

Technical Material	› Application Notes › Simulation Models › Datasheets › PCB Design Data	› KIT_2K5W_CCM_TOLL - Infineon Technologies › EVAL_2K5W_CCM_4P_V2 - Infineon Technologies
Evaluation Boards	› Evaluation Boards › Demoboards › Reference Designs	› www.infineon.com/evaluationboards
Videos	› Technical Videos › Product Information Videos	› www.infineon.com/mediacenter

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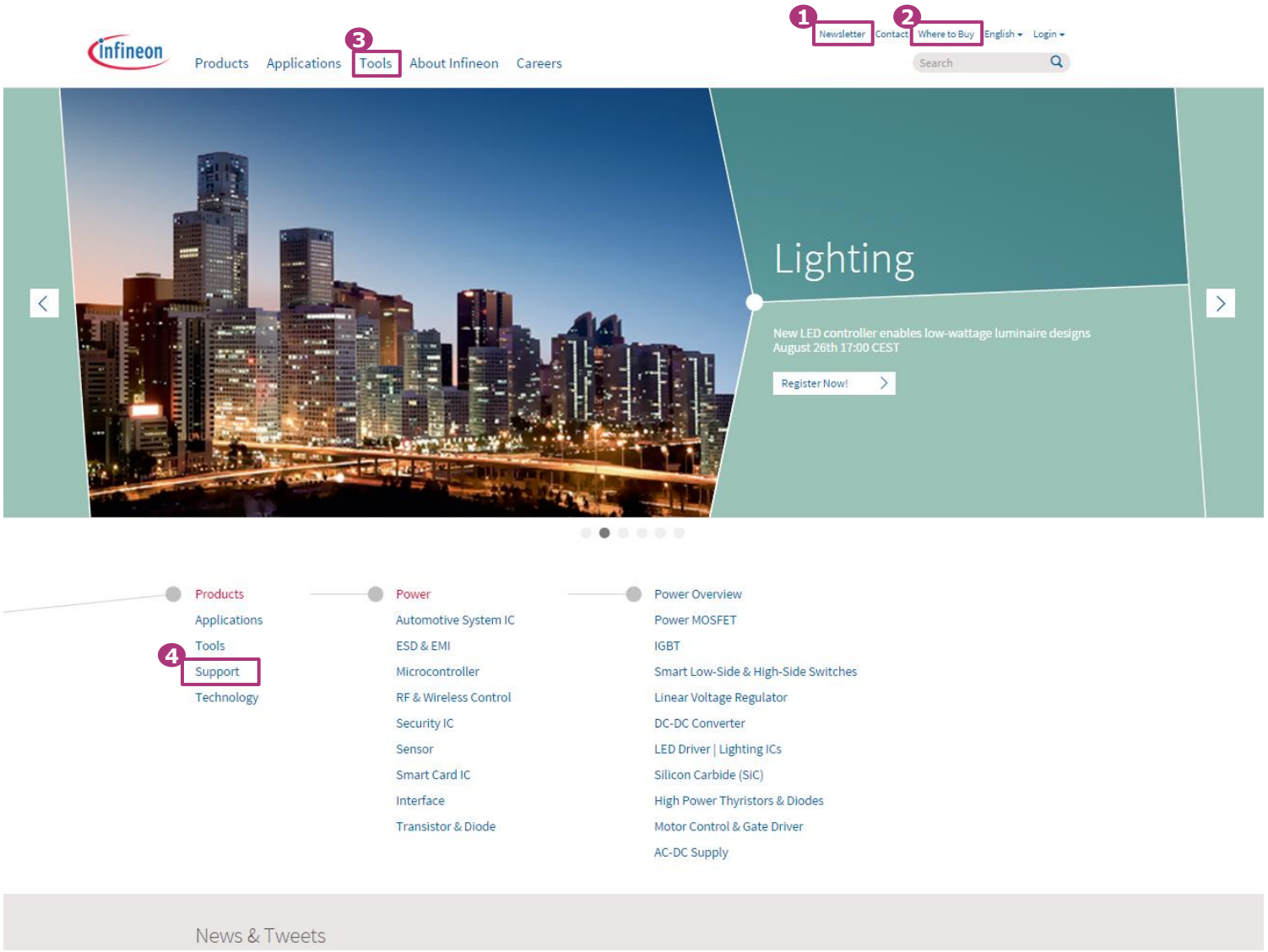

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