

# Third Generation thinQ!<sup>TM</sup> Silicon Carbide Schottky Diodes Making Improved Efficiency now more affordable

THE NEW THIRD GENERATION of Infineon SiC Schottky diodes features the industry's lowest device capacitance for any given current rating, which further enhances overall system efficiency, especially at higher switching frequencies and under low load conditions. Additionally, Infineon provides the industry's broadest SiC Schottky diode portfolio which not only includes the TO-220 package (real 2pin version) but also the DPAK package for high power density surface mount designs.

## Features

- Lowest switching losses due to lowest  $Q_c$  ( $Q_n$ ) for any current rating in the market
- Fully surge-current stable, high reliability and ruggedness
- Lower cost

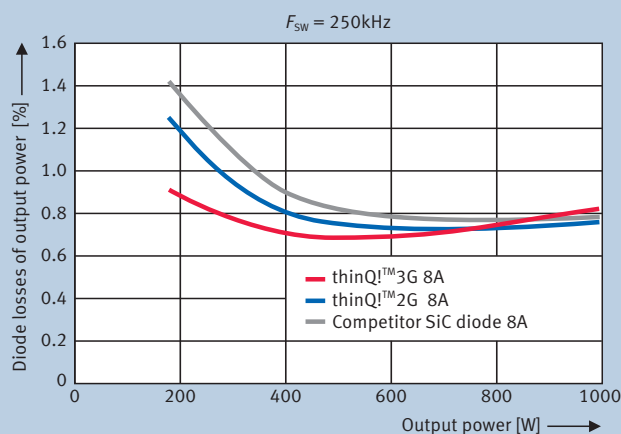
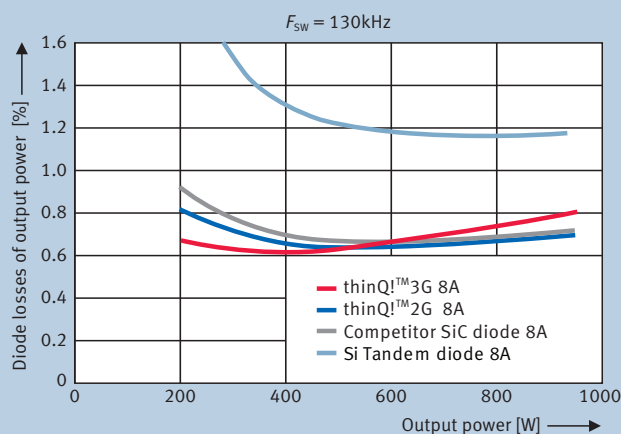
## Applications

- SMPS e.g. CCM PFC
- LCD, PDP
- Lighting
- UPS, Solar applications
- Motor Drives

## Benefits

- System efficiency improvements at light & medium load
- Enabling higher frequency designs and increased power density solutions
- Lower system costs due to reduced cooling requirements
- Broadest range of current ratings and lower costs/Amp. for cost-effective performance improvements

### Target Application CCM PFC



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## Silicon Carbide Schottky Diodes

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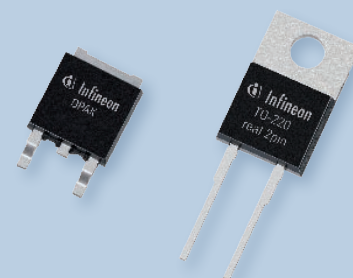
#### Product Portfolio

##### DPAK (TO-252)

Voltage	$I_F$ [A]	$Q_c$ (typ.) [nC]	$I_{F,SM}$ [A]	Type	Status
600V	3	3.2	11.5	IDD03SG60C	In production
	4	4.5	18.0	IDD04SG60C	March 09
	5	6.0	26.0	IDD05SG60C	March 09
	6	8.0	31.0	IDD06SG60C	In production
	8	12.0	42.0	IDD08SG60C	In production
	9	15.0	49.0	IDD09SG60C	In production
	10	16.0	51.0	IDD10SG60C	March 09
	12	19.0	59.0	IDD12SG60C	In production

##### TO-220 real 2pin

Voltage	$I_F$ [A]	$Q_c$ (typ.) [nC]	$I_{F,SM}$ [A]	Type	Status
600V	3	3.2	11.5	IDH03SG60C	In production
	4	4.5	18.0	IDH04SG60C	March 09
	5	6.0	26.0	IDH05SG60C	March 09
	6	8.0	32.0	IDH06SG60C	March 09
	8	12.0	42.0	IDH08SG60C	In production
	9	15.0	49.0	IDH09SG60C	March 09
	10	16.0	51.0	IDH10SG60C	March 09
	12	19.0	59.0	IDH12SG60C	In production
1200V	2	7	14	IDH02SG120	April 09
	5	18	29	IDH05S120	March 09
	8	27	39	IDH08S120	March 09
	10	36	58	IDH10S120	March 09
	15	54	78	IDH15S120	March 09



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