

Product Brief

600/650V CoolMOS™ C6/E6 Series

Best in class on-resistance

Infineon announce five new Best in class $R_{DS(on)}$ devices in DPAK, TO-220 and TO-247. The low $R_{DS(on)}$ enables reduced conduction losses, improved efficiency and increased power density. CoolMOS™ C6/E6 is Infineon's sixth generation of high voltage power MOSFETs designed according to the revolutionary superjunction (SJ) principle.

The new CoolMOS™ C6/E6 series combines our experience as the leading SJ MOSFET supplier with Best in class innovation. The resulting C6/E6 devices provide all benefits of a fast switching SJ MOSFET while not sacrificing ease of use. C6/E6 achieves extremely low conduction and switching losses and can make switching applications more efficient, more compact, lighter and cooler.

Moreover, it has the best cost / performance ratio on the market today. The C6 devices have been optimized for ease of use - the E6 devices have been optimized for highest efficiency in DCM applications.

CoolMOS™ C6/E6 lowest $R_{DS(on)}$ Features and Benefits

- Lowest $R_{DS(on)}$ for DPAK, TO-220 and TO-247
- Lower conduction losses enabling higher efficiency and higher power density

Key Features

- Lowest $R_{DS(on)}$ in DPAK, TO-220, TO-247
- Improved body diode ruggedness (Q_r and d_i/d_c)
- Significant Q_g reduction
- Reduced energy stored in output capacitance (E_{oss}) @400V
- Integrated Gate Resistor
- Outstanding CoolMOS™ quality

Key Benefits

- Improved power density
- Improved reliability
- General purpose part can be used in Soft and Hard Switching topologies
- Better light load efficiency
- Improved efficiency in Hard Switching applications
- Improved ease of use. Reduces possible ringing due to pcb layout and package parasitic effects

Applications

- PFC stages for Server, PC Silverbox, LCD & PDP TV, lighting, adapter
- PWM stages for server, PC Silverbox, lighting, adapter, solar

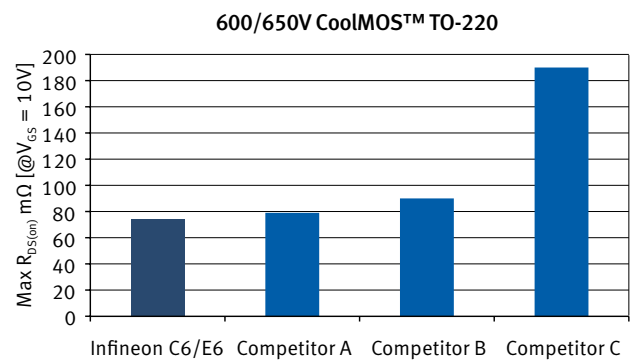
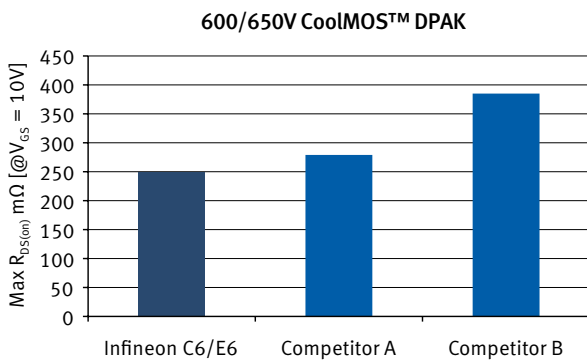


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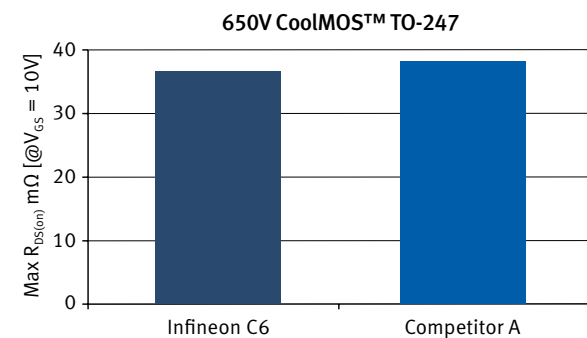
Best in class $R_{DS(on)}$ for TO-220, DPAK and TO-247

Product Type	Package	Name	$R_{DS(on)}$ [mΩ]	Voltage
CoolMOS™ C6 600V	TO-220	IPP60R074C6	74	600
CoolMOS™ C6 650V		IPP65R074C6	74	650
CoolMOS™ C6 650V	DPAK	IPD65R250C6	250	650
CoolMOS™ E6 650V		IPD65R250E6	250	650
CoolMOS™ C6 650V	TO-247	IPW65R037C6	37	650

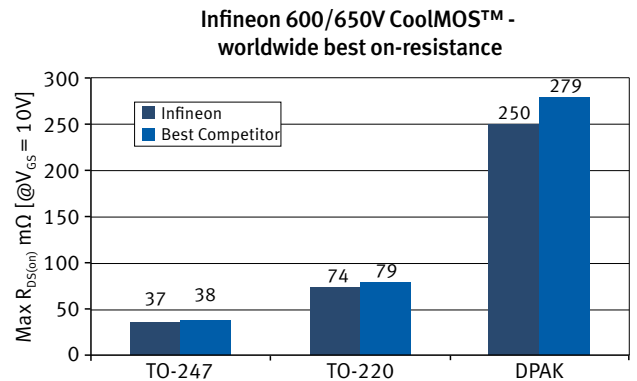


Infineon new CoolMOS™ Best in class DPAK part has 10% lower $R_{DS(on)}$ than the nearest competitor

Infineon new CoolMOS™ Best in class TO-220 part has 6% lower $R_{DS(on)}$ than the nearest competitor



Infineon new CoolMOS™ Best in class TO-247 part has 3% lower $R_{DS(on)}$ than the nearest competitor



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