Product Brief

CoolMOS™ CE

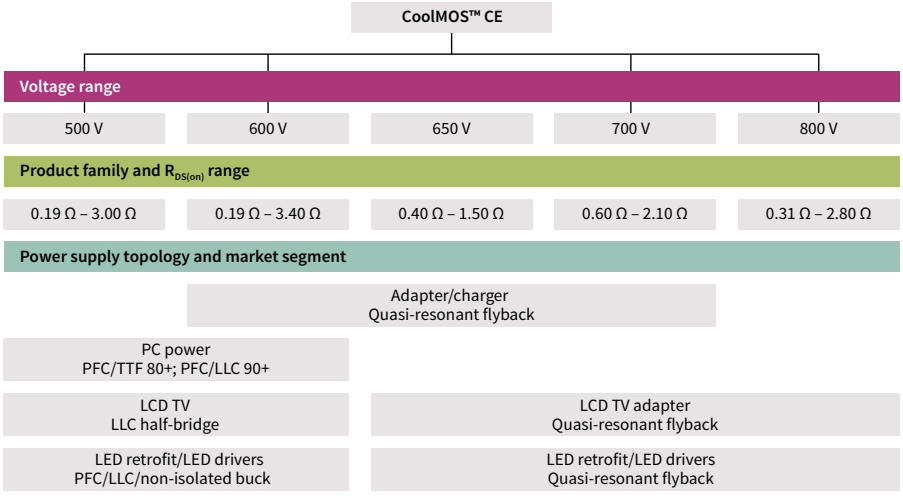
Best price/performance SJ for consumer and lighting applications

CoolMOS™ CE is a technology platform of Infineon's market leading high voltage power MOSFET designed according to the superjunction principle (SJ) and conceived to fulfill consumer requirements. With the extended family, Infineon offers now 500 V, 600 V, 650 V, 700 V and 800 V devices targeting low power chargers for mobile devices and power tools, LCD, LED TV and LED lighting applications.

This series of CoolMOS™ is cost optimized to meet typical requirements in consumer with no compromise on proven CoolMOS™ quality and reliability while still price attractive.

CoolMOS™ CE is suitable for hard and soft switching applications and as modern SJ, it delivers low conduction and switching losses improving efficiency and ultimately reduces power consumption. CoolMOS™ CE ease-of-use enables customers to reduce the design-in cycle and compete in dynamic markets.

CoolMOS™ CE targets a broad range of consumer and lighting applications



Main features

Thermal behavior

- ≤ 90°C on device, open case
- ≤ 50°C/70°C close case temperature
- EMI within EN55022B standard
- Ease-of-use and fast design-in

Key benefits

- Low conduction losses from large margin between $R_{DS(on)}$ typical to nominal
- Low switching losses from optimized output capacitance (E_{oss})
- Optimized EMI to balance switching speed and EMI behavior
- Good controllability given the integrated R_G

Applications

- Low power chargers
- Adapters
- PC power
- LCD TV
- LED retrofit
- LED drivers

www.infineon.com/ce

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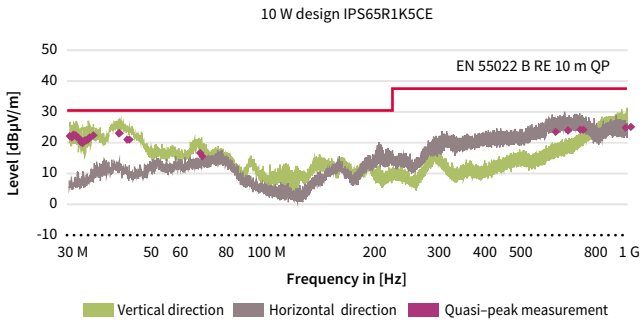
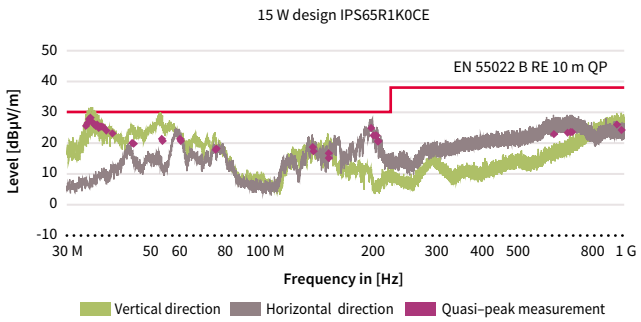
CoolMOS™ CE EMI performance in low power chargers for mobile devices





CoolMOS™ CE meets the EMI quasi-peak requirement in both 10 W and 15 W chargers

Product portfolio

	$R_{DS(on)}$ [mΩ]	TO-220 FullPAK	TO-220	TO-252 DPAK	TO-251 IPAK	TO-247	SOT-223	TO-220 FullPAK Narrow Lead
500 V	3000			IPD50R3K0CE	IPU50R3K0CE		IPN50R3K0CE	
	2000			IPD50R2K0CE	IPU50R2K0CE		IPN50R2K0CE	
	1400			IPD50R1K4CE	IPU50R1K4CE		IPN50R1K4CE	
	950	IPA50R950CE		IPD50R950CE	IPU50R950CE		IPN50R950CE	
	800	IPA50R800CE		IPD50R800CE			IPN50R800CE	
	650	IPA50R650CE		IPD50R650CE			IPN50R650CE	
	500	IPA50R500CE	IPP50R500CE	IPD50R500CE				IPAN50R500CE
	380	IPA50R380CE	IPP50R380CE	IPD50R380CE				
	280	IPA50R280CE	IPP50R280CE	IPD50R280CE		IPW50R280CE		
	190	IPA50R190CE	IPP50R190CE			IPW50R190CE		

	$R_{DS(on)}$ [mΩ]	TO-220 FullPAK	TO-252 DPAK	TO-251 IPAK Short Lead	TO-251 IPAK	SOT-223	TO-220 FullPAK Wide Creepage	TO-220 FullPAK Narrow Lead
600 V	3300		IPD60R3K4CE	IPS60R3K4CE	IPU60R3K4CE	IPN60R3K4CE		
	2100		IPD60R2K1CE	IPS60R2K1CE	IPU60R2K1CE	IPN60R2K1CE		
	1500	IPA60R1K5CE	IPD60R1K5CE	IPS60R1K5CE	IPU60R1K5CE	IPN60R1K5CE		
	1000	IPA60R1K0CE	IPD60R1K0CE	IPS60R1K0CE	IPU60R1K0CE	IPN60R1K0CE		
	800	IPA60R800CE	IPD60R800CE	IPS60R800CE				IPAN60R800CE
	650/600	IPA60R650CE	IPD60R650CE	IPS60R650CE			IPAW60R600CE	IPAN60R650CE
	460	IPA60R460CE	IPD60R460CE	IPS60R460CE				
	400/380	IPA60R400CE	IPD60R400CE	IPS60R400CE			IPAW60R380CE	
	280						IPAW60R280CE	
	190						IPAW60R190CE	

	$R_{DS(on)}$ [mΩ]	TO-220 FullPAK	TO-252 DPAK	TO-251 IPAK Short Lead	SOT-223	TO-220 FullPAK Narrow Lead
650 V	1500	IPA65R1K5CE	IPD65R1K5CE	IPS65R1K5CE	IPN65R1K5CE	
	1000	IPA65R1K0CE	IPD65R1K0CE	IPS65R1K0CE		
	650	IPA65R650CE	IPD65R650CE	IPS65R650CE		IPAN65R650CE
	400	IPA65R400CE	IPD65R400CE	IPS65R400CE		

	$R_{DS(on)}$ [mΩ]	TO-262 I²PAK	TO-252 DPAK	TO-251 IPAK Short Lead	SOT-223	TO-251 IPAK Short Lead with ISO Standoff	TO-220 FullPAK Wide Creepage
700 V	2000/2100		IPD70R2K0CE	IPS70R2K0CE	IPN70R2K0CE	IPSA70R2K0CE	
	1400/1500		IPD70R1K4CE	IPS70R1K4CE	IPN70R1K5CE	IPSA70R1K4CE	
	1000				IPN70R1K0CE		
	950	IPI70R950CE	IPD70R950CE	IPS70R950CE		IPSA70R950CE	IPAW70R950CE
	600		IPD70R600CE	IPS70R600CE		IPSA70R600CE	IPAW70R600CE

	$R_{DS(on)}$ [mΩ]	TO-220 FullPAK	TO-252 DPAK	TO-251 IPAK
800 V	2800		IPD80R2K8CE	IPU80R2K8CE
	1400	IPA80R1K4CE	IPD80R1K4CE	IPU80R1K4CE
	1000	IPA80R1K0CE	IPD80R1K0CE	IPU80R1K0CE
	650	IPA80R650CE		
	460	IPA80R460CE		
	310	IPA80R310CE		

Published by
Infineon Technologies Austria AG
9500 Villach, Austria

Order Number: B152-I0063-V2-7600-EU-EC-P
Date: 04 / 2017