

650V CoolMOS™ C6 Power Transistor

IPD65R600C6, IPI65R600C6
IPB65R600C6, IPP65R600C6
IPA65R600C6

1 Description

CoolMOS™ is a revolutionary technology for high voltage power MOSFETs, designed according to the superjunction (SJ) principle and pioneered by Infineon Technologies. CoolMOS™ C6 series combines the experience of the leading SJ MOSFET supplier with high class innovation. The resulting devices provide all benefits of a fast switching SJ MOSFET while not sacrificing ease of use. Extremely low switching and conduction losses make switching applications even more efficient, more compact, lighter, and cooler.

Features

- Extremely low losses due to very low FOM $R_{DS(on)} \cdot Q_g$ and E_{oss}
- Very high commutation ruggedness
- Easy to use/drive
- JEDEC¹⁾ qualified, Pb-free plating, available in Halogen free mold compound²⁾

Applications

PFC stages, hard switching PWM stages and resonant switching PWM stages for e.g. PC Silverbox, Adapter, LCD & PDP TV, Lighting, Server, Telecom and UPS.

Please note: For MOSFET paralleling the use of ferrite beads on the gate or separate totem poles is generally recommended.

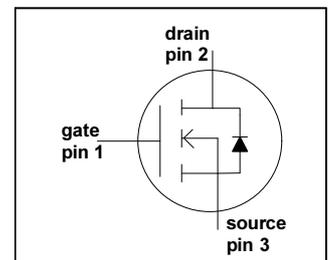
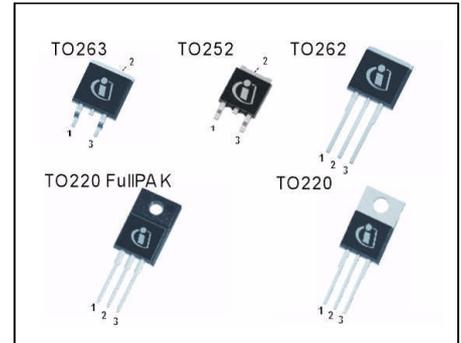


Table 1 Key Performance Parameters

Parameter	Value	Unit
$V_{DS} @ T_{j,max}$	700	V
$R_{DS(on),max}$	0.60	Ω
$Q_{g,typ}$	23	nC
$I_{D,pulse}$	18	A
$E_{oss} @ 400V$	2	μJ
Body diode di/dt	500	$A/\mu s$

Type / Ordering Code	Package	Marking	Related Links
IPD65R600C6	PG-TO252	65C6600	IFX CoolMOS Webpage IFX Design tools
IPI65R600C6	PG-TO262		
IPB65R600C6	PG-TO263		
IPP65R600C6	PG-TO220		
IPA65R600C6	PG-TO220 FullIPAK		

1) J-STD20 and JESD22

2) For PG-TO252: non-Halogen free (OPN: IPD65R600C6BT); Halogen free (OPN: IPD65R600C6AT)