

### General Description

The CMP4668 uses advanced process technology and design to provide excellent RDS(ON).

These devices are well suited for high efficient switched mode power supplies and active power factor correction.

### Features

- Lower On-resistance
- 100% avalanche tested
- RoHS Compliant

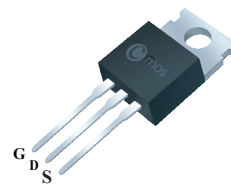
### Product Summary

BVDSS	RDSON	ID
200V	15mΩ	130A

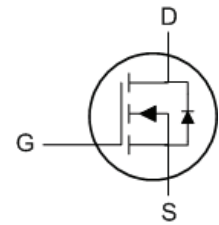
### Applications

- DC-AC converters
- Motor Control
- UPS (Uninterruptible Power Supply)

### TO-220 Pin Configuration



TO-220  
CMP4668



### Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
$V_{DS}$	Drain-Source Voltage	200	V
$V_{GS}$	Gate-Source Voltage	±20	V
$I_D@T_C=25^\circ\text{C}$	Continuous Drain Current	130	A
$I_D@T_C=100^\circ\text{C}$	Continuous Drain Current	91	A
$I_{DM}$	Pulsed Drain Current	520	A
EAS	Single Pulse Avalanche Energy <sup>1</sup>	1500	mJ
$P_D@T_C=25^\circ\text{C}$	Total Power Dissipation	430	W
$T_{STG}$	Storage Temperature Range	-55 to 175	°C
$T_J$	Operating Junction Temperature Range	-55 to 175	°C

### Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
$R_{\theta JA}$	Thermal Resistance Junction-ambient	---	60	°C/W
$R_{\theta JC}$	Thermal Resistance Junction-case	---	0.35	°C/W

**Electrical Characteristics (T<sub>J</sub>=25°C , unless otherwise noted)**

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV <sub>DSS</sub>	Drain-Source Breakdown Voltage	V <sub>GS</sub> =0V , I <sub>D</sub> =250uA	200	---	---	V
R <sub>DS(ON)</sub>	Static Drain-Source On-Resistance	V <sub>GS</sub> =10V , I <sub>D</sub> =18A	---	11	15	mΩ
V <sub>GS(th)</sub>	Gate Threshold Voltage	V <sub>GS</sub> =V <sub>DS</sub> , I <sub>D</sub> =250uA	3	3.75	4.5	V
I <sub>DSS</sub>	Drain-Source Leakage Current	V <sub>DS</sub> =200V, V <sub>GS</sub> =0V	---	---	1	uA
I <sub>GSS</sub>	Gate-Source Leakage Current	V <sub>GS</sub> = ±20V , V <sub>DS</sub> =0V	---	---	±100	nA
g <sub>fs</sub>	Forward Transconductance	V <sub>DS</sub> =10V , I <sub>D</sub> =18A	---	37	---	S
R <sub>g</sub>	Gate Resistance	V <sub>DS</sub> =0V , V <sub>GS</sub> =0V , f=1MHz	---	3	---	Ω
Q <sub>g</sub>	Total Gate Charge	I <sub>D</sub> =20A	---	55	---	nC
Q <sub>gs</sub>	Gate-Source Charge	V <sub>DD</sub> =100V	---	18	---	
Q <sub>gd</sub>	Gate-Drain Charge	V <sub>GS</sub> =10V	---	5	---	
T <sub>d(on)</sub>	Turn-On Delay Time	V <sub>DD</sub> =100V	---	15	---	ns
T <sub>r</sub>	Rise Time	V <sub>GS</sub> =10V	---	22	---	
T <sub>d(off)</sub>	Turn-Off Delay Time	I <sub>D</sub> =20A	---	40	---	
T <sub>f</sub>	Fall Time	R <sub>G</sub> =10Ω	---	10	---	
C <sub>iss</sub>	Input Capacitance	V <sub>DS</sub> =25V , V <sub>GS</sub> =0V , f=1MHz	---	7000	---	pF
C <sub>oss</sub>	Output Capacitance		---	2800	---	
C <sub>rss</sub>	Reverse Transfer Capacitance		---	180	---	

**Diode Characteristics**

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I <sub>S</sub>	Continuous Source Current	V <sub>G</sub> =V <sub>D</sub> =0V , Force Current	---	---	130	A
I <sub>SM</sub>	Pulsed Source Current		---	---	390	A
V <sub>SD</sub>	Diode Forward Voltage	V <sub>GS</sub> =0V , I <sub>S</sub> =18A , T <sub>J</sub> =25°C	---	---	1.2	V

Note :

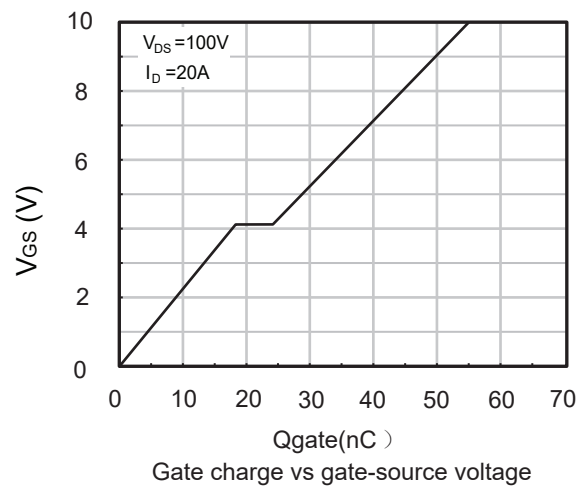
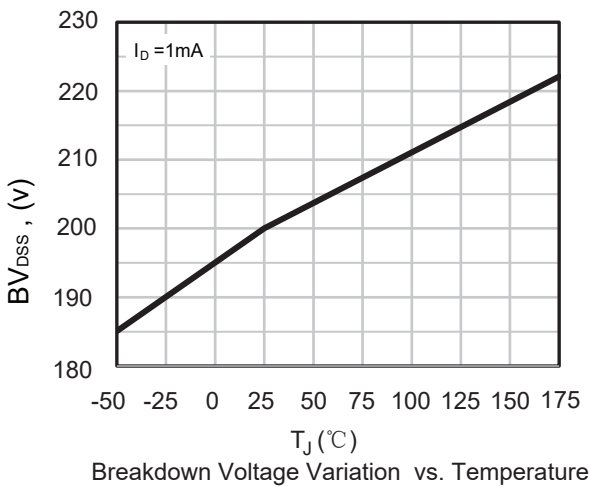
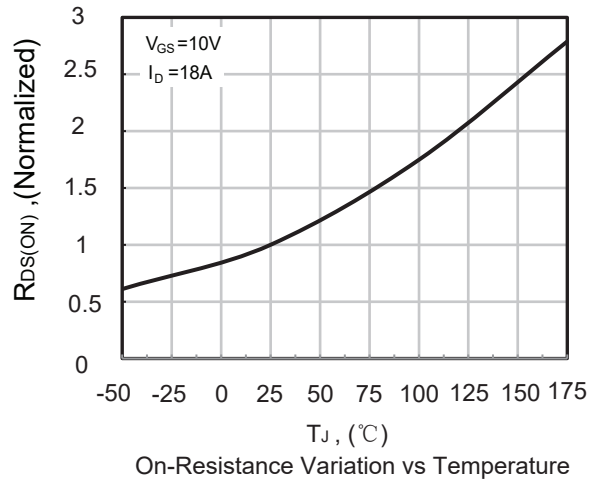
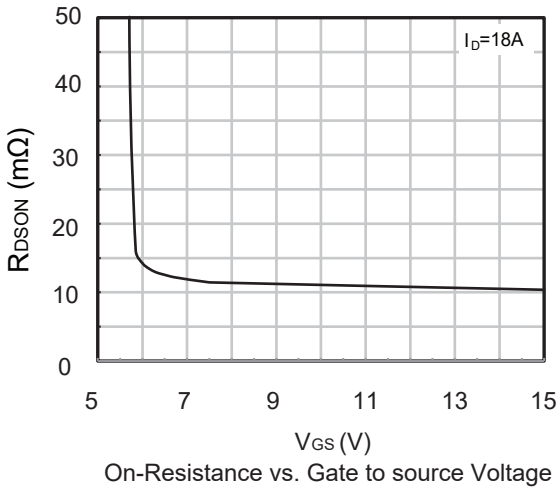
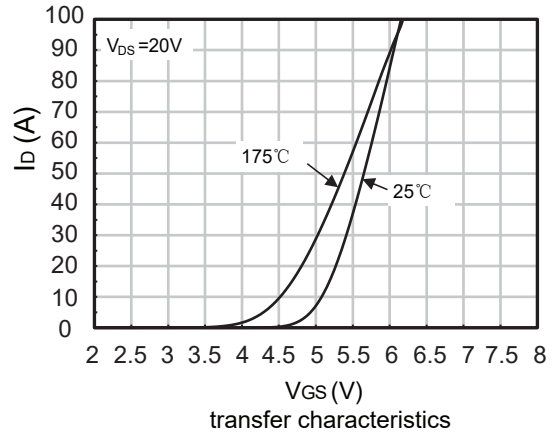
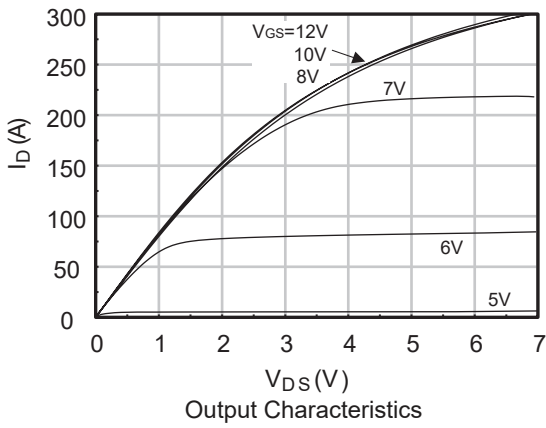
1.The EAS data shows Max. rating . The test condition is V<sub>DD</sub>=50V,V<sub>GS</sub>=10V,L=1mH,I<sub>AS</sub>=55A.

This product has been designed and qualified for the counsumer market.

Cmos assumes no liability for customers' product design or applications.

Cmos reserver the right to improve product design ,functions and reliability wihout notice.

Typical Characteristics



Typical Characteristics

