

General Description

This Power MOSFET is produced using Cmos's advanced planar stripe DMOS technology. These devices are well suited for high efficiency switching DC/DC converters.

Features

- Fast Switching
- Improved dv/dt capability
- 100% avalanche tested
- RoHS Compliant

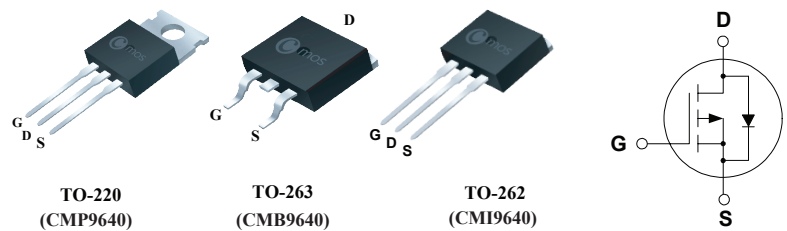
Product Summary

BVDSS	RDSON	ID
-200V	360mΩ	-15A

Applications

- Inverters
- Motor drive
- DC / DC converter

TO-220/263/262 Pin Configuration



Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	-200	V
V_{GS}	Gate-Source Voltage	±20	V
$I_D@T_C=25^\circ C$	Continuous Drain Current	-15	A
$I_D@T_C=100^\circ C$	Continuous Drain Current	-10.5	A
I_{DM}	Pulsed Drain Current	-60	A
EAS	Single Pulse Avalanche Energy ¹	1690	mJ
$P_D@T_C=25^\circ C$	Total Power Dissipation	139	W
T_{STG}	Storage Temperature Range	-55 to 150	°C
T_J	Operating Junction Temperature Range	-55 to 150	°C

Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
$R_{\theta JA}$	Thermal Resistance Junction-ambient	---	62.5	°C/W
$R_{\theta JC}$	Thermal Resistance Junction-case	---	0.9	°C/W

Electrical Characteristics ($T_J=25\text{ }^\circ\text{C}$, unless otherwise noted)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=-250\mu A$	-200	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	$V_{GS}=-10V, I_D=-5.5A$	---	300	360	m Ω
$V_{GS(th)}$	Gate Threshold Voltage	$V_{GS}=V_{DS}, I_D=-250\mu A$	-2	---	-4	V
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=-160V, V_{GS}=0V$	---	---	-1	μA
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 20V, V_{DS}=0V$	---	---	± 100	nA
gfs	Forward Transconductance	$V_{DS}=-20V, I_D=-5.5A$	---	7	---	S
Q_g	Total Gate Charge	$I_D=-13.5A$	---	52	---	nC
Q_{gs}	Gate-Source Charge	$V_{DS}=-160V$	---	9	---	
Q_{gd}	Gate-Drain Charge	$V_{GS}=-10V$	---	25	---	
$T_{d(on)}$	Turn-On Delay Time	$V_{DS}=-100V$	---	28	---	ns
T_r	Rise Time	$I_D=-13.5A$	---	75	---	
$T_{d(off)}$	Turn-Off Delay Time	$R_G=25\Omega$	---	260	---	
T_f	Fall Time	$V_{GS}=-10V$	---	120	---	
C_{iss}	Input Capacitance	$V_{DS}=-25V, V_{GS}=0V, f=1MHz$	---	1500	---	pF
C_{oss}	Output Capacitance		---	220	---	
C_{rss}	Reverse Transfer Capacitance		---	150	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I_S	Continuous Source Current	$V_G=V_D=0V$, Force Current	---	---	-15	A
I_{SM}	Pulsed Source Current		---	---	-60	A
V_{SD}	Diode Forward Voltage	$V_{GS}=0V, I_S=-10A$	---	---	-5	V

Notes:

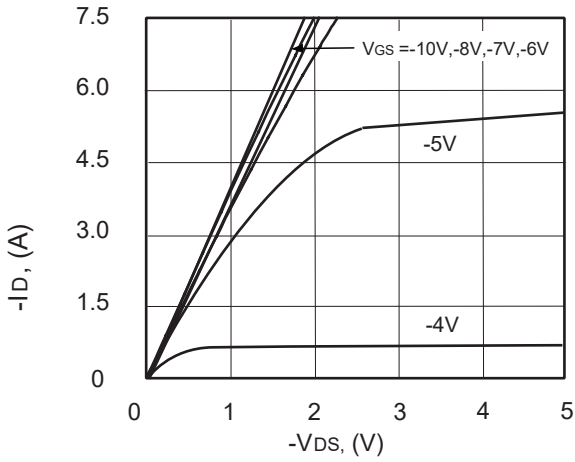
1.The EAS data shows Max. rating .The test condition is $V_{DS}=-80V, V_{GS}=-10V, L=20mH, I_{AS}=-13A$.

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

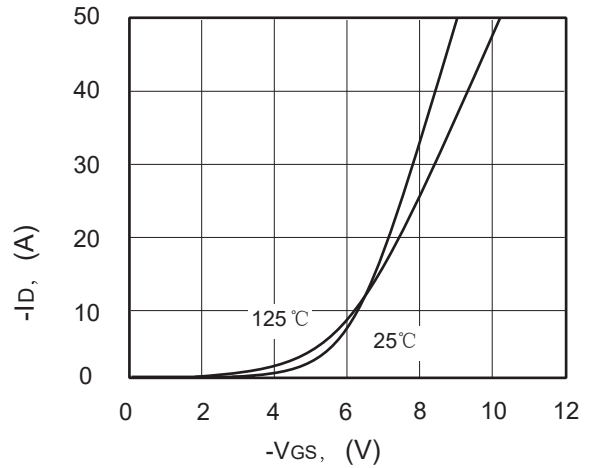
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Cmos reserves the right to improve product design ,functions and reliability without notice.

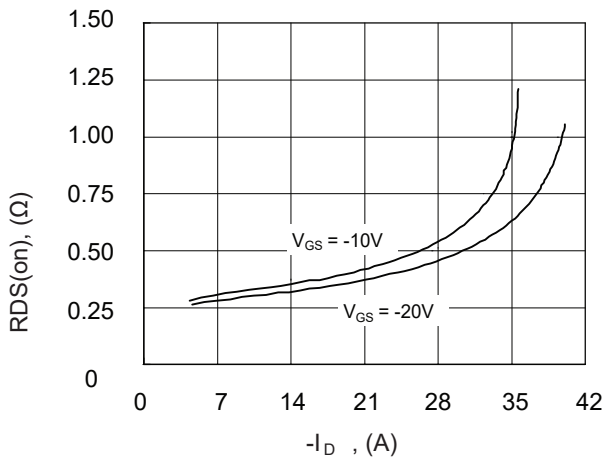
Typical Characteristics



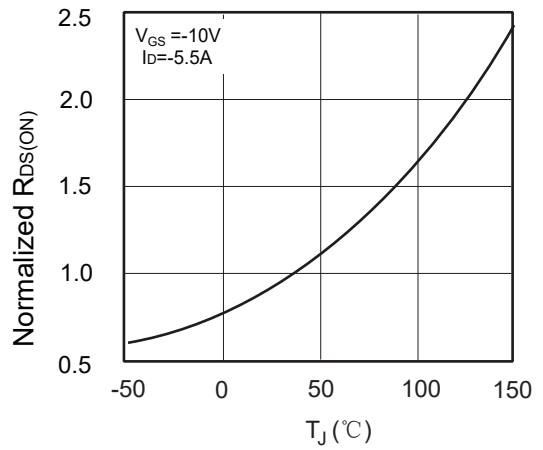
Typical Output Characteristics



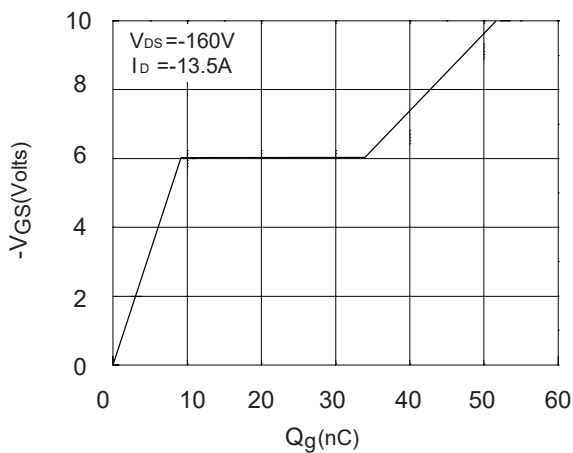
Transfer characteristics



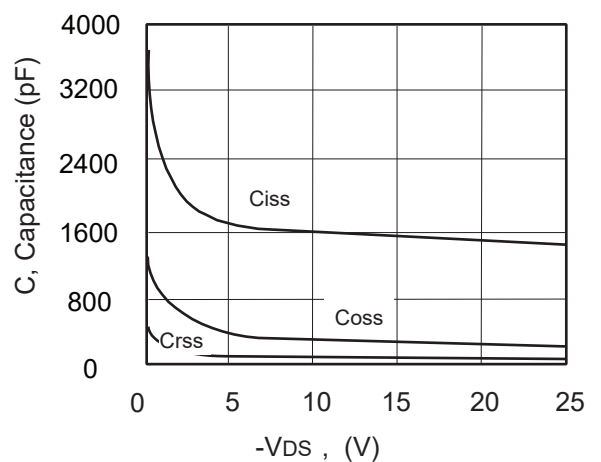
On-Resistance vs. Drain Current



On-Resistance vs. Junction Temperature



Gate Charge Characteristics



Capacitance Characteristics