

General Description

The 060N10 uses advanced technology and design to provide excellent RDS(ON) . This device is suitable for PWM, load switching and general purpose applications.

Features

- Low On-Resistance
- 100% avalanche tested
- RoHS Compliant

Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	100	V
V_{GS}	Gate-Source Voltage	±20	V
$I_D@T_C=25^{\circ}C$	Continuous Drain Current	90	A
$I_D@T_C=100^{\circ}C$	Continuous Drain Current	72	A
I_{DM}	Pulsed Drain Current	360	A
EAS	Single Pulse Avalanche Energy ¹	612	mJ
P_D	Total Power Dissipation	265	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	---	60	°C/W
$R_{\theta JC}$	Thermal Resistance Junction -Case	---	0.47	°C/W

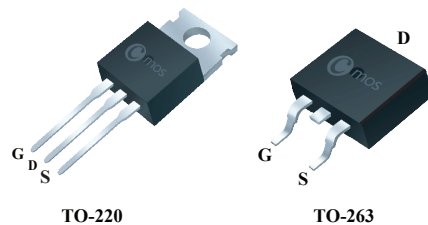
Product Summary

BVDSS	R _{DS(on)} max.	ID
100V	7.0mΩ	90A

Applications

- Synchronous Rectification for power supply
- Ideal for boost converters

TO-220/263 Pin Configuration



Type	Package	Marking
CMP060N10	TO-220	CMP060N10
CMB060N10	TO-263	CMB060N10

Electrical Characteristics (T_J=25°C , unless otherwise noted)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V , I _D =250μA	100	---	---	V
R _{DS(ON)}	Static Drain-Source On-Resistance	V _{GS} =10V , I _D =20A	---	6.2	7.0	mΩ
V _{GS(th)}	Gate Threshold Voltage	V _{GS} =V _{DS} , I _D =250uA	2	---	4	V
I _{DSS}	Drain-Source Leakage Current	V _{DS} =50V , V _{GS} =0V	---	---	1	μA
I _{GSS}	Gate-Source Leakage Current	V _{GS} =±20V , V _{DS} =0V	---	---	±100	nA
g _{fs}	Forward Transconductance	V _{DS} =10V, I _D =25A	---	24	---	S
R _g	Gate Resistance	V _{DS} =0V , V _{GS} =0V , f=1MHz	---	2.0	---	Ω
Q _g	Total Gate Charge	I _D =27.5A	---	45	---	nC
Q _{gs}	Gate-Source Charge	V _{DS} =50V	---	12	---	
Q _{gd}	Gate-Drain Charge	V _{GS} =10V	---	9	---	
T _{d(on)}	Turn-On Delay Time	V _{DS} =50V	---	16	---	ns
T _r	Rise Time	I _D =25A	---	11	---	
T _{d(off)}	Turn-Off Delay Time	R _G =1.6Ω	---	30	---	
T _f	Fall Time	V _{GS} =10V	---	9	---	
C _{iss}	Input Capacitance	V _{DS} =50V , V _{GS} =0V , f=1MHz	---	3500	---	pF
C _{oss}	Output Capacitance		---	1250	---	
C _{rss}	Reverse Transfer Capacitance		---	80	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I _S	Continuous Source Current	V _G =V _D =0V , Force Current	---	---	90	A
I _{SM}	Pulsed Source Current		---	---	360	A
V _{SD}	Diode Forward Voltage	V _{GS} =0V , I _S =50A , T _J =25°C	---	---	1.2	V

Notes:

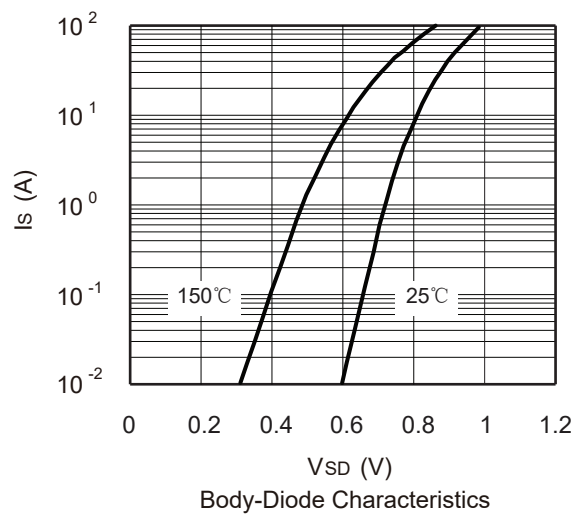
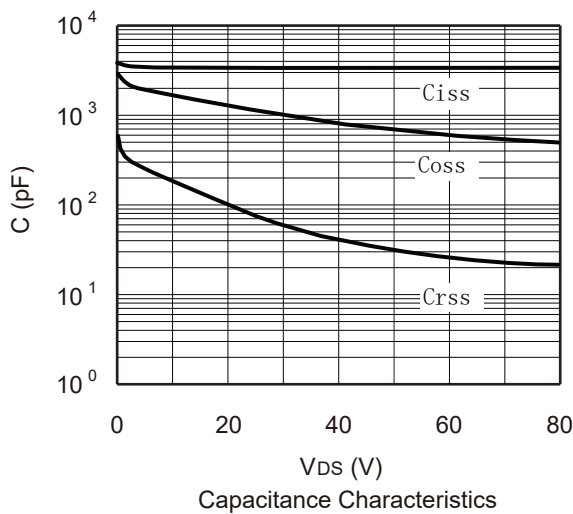
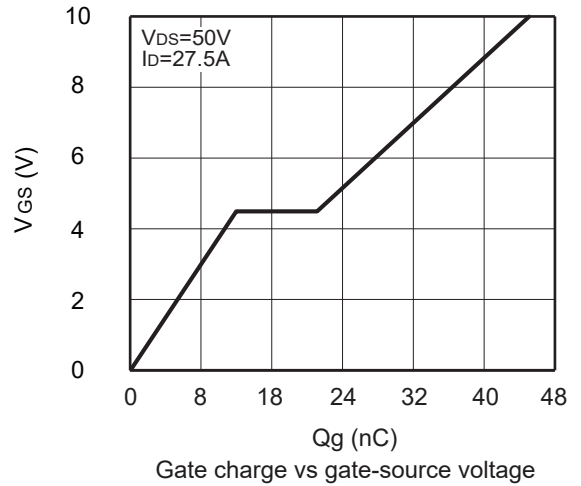
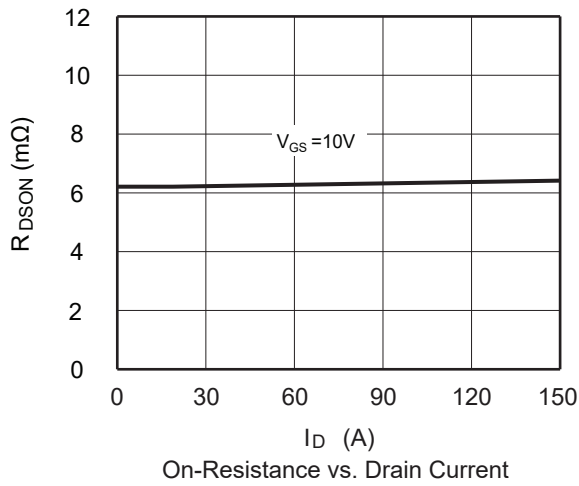
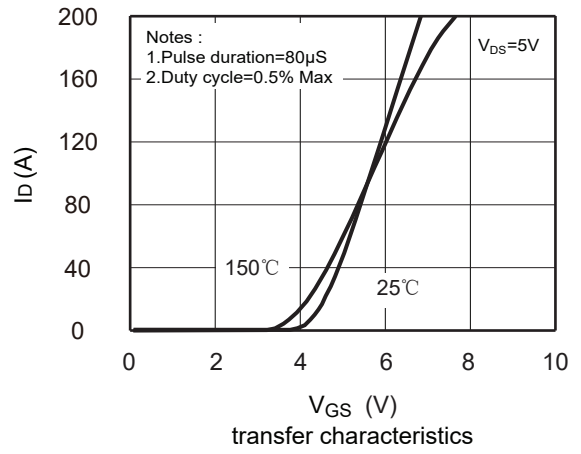
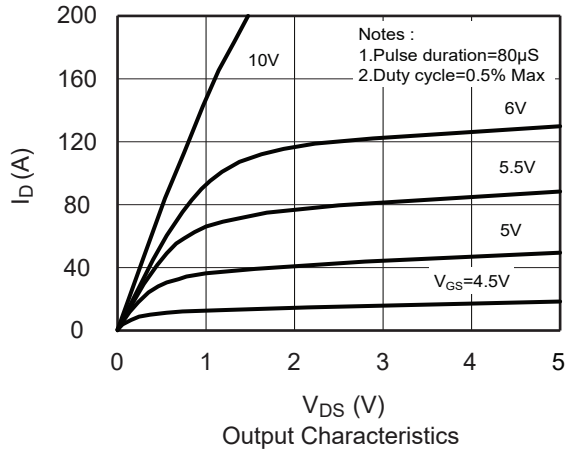
1.The EAS data shows Max. rating . The test condition is V_{DD}=40V , V_{GS}=10V , L=0.5mH , I_D=49.5A

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

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

Cmos reserves the right to improve product design ,functions and reliability without notice.Please refer to the latest version of specification.

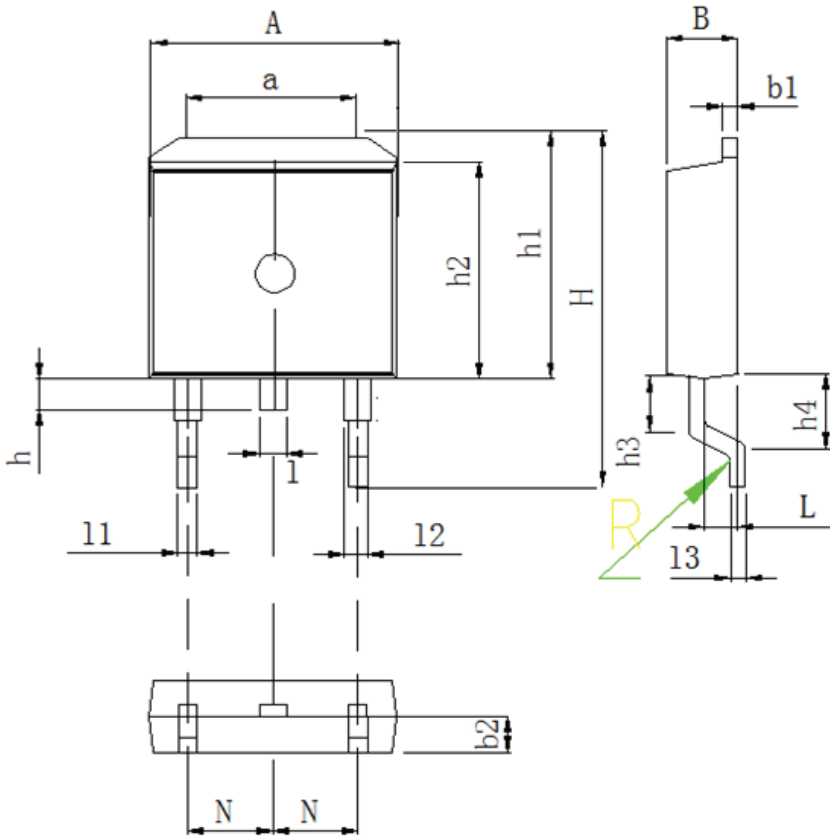
Typical Characteristics



Package Dimension

TO-263

Unit :mm



DIM	MILLIMETERS
A	9.8 ± 0.2
a	7.4 ± 0.4
B	4.5 ± 0.2
b1	1.3 ± 0.05
b2	2.4 ± 0.2
H	15.5 ± 0.3
h	1.54 ± 0.2
h1	10.5 ± 0.2
h2	9.2 ± 0.1
h3	1.54 ± 0.2
h4	2.7 ± 0.2
L	2.4 ± 0.2
l	1.3 ± 0.1
l1	0.8 ± 0.1
l2	1.3 ± 0.1
l3	0.5 ± 0.1
N	2.54 ± 0.1
R	$0.5R \pm 0.05$