

General Description

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

Features

- VDS =100V, ID =90A
RDS(ON) <7.0mΩ @ VGS=10V
- Very low on-resistance RDS(ON)
- RoHS and Halogen Free 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°C	Continuous Drain Current	90	A
I _D @T _C =100°C	Continuous Drain Current	72	A
I _{DM}	Pulsed Drain Current	270	A
EAS	Single Pulse Avalanche Energy	490	mJ
P _D	Total Power Dissipation	265	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 _{θJA}	Thermal Resistance Junction-ambient	---	60	°C/W
R _{θJC}	Thermal Resistance Junction -Case	---	0.56	°C/W

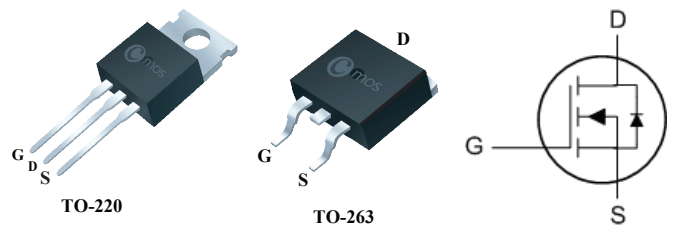
Product Summary

BVDSS	RDS(ON)	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	---	---	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 =20A	---	39	---	nC
Q _{gs}	Gate-Source Charge	V _{DS} =50V	---	13	---	
Q _{gd}	Gate-Drain Charge	V _{GS} =10V	---	13	---	
T _{d(on)}	Turn-On Delay Time	V _{DS} =50V	---	18	---	ns
T _r	Rise Time	R _L =2.5Ω	---	25	---	
T _{d(off)}	Turn-Off Delay Time	R _G =3.0Ω	---	31	---	
T _f	Fall Time	V _{GS} =10V	---	25	---	
C _{iss}	Input Capacitance	V _{DS} =50V , V _{GS} =0V , f=1MHz	---	3500	---	pF
C _{oss}	Output Capacitance		---	1530	---	
C _{rss}	Reverse Transfer Capacitance		---	37	---	

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		---	---	270	A
V _{SD}	Diode Forward Voltage	V _{GS} =0V , I _S =50A , T _J =25°C	---	---	1.2	V

Notes:

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.