

General Description

The CMB200N06 uses advanced trench technology and design to provide excellent RDS(ON). This device is ideal for boost converters and synchronous rectifiers for consumer, telecom, industrial power supplies and LED backlighting.

Features

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

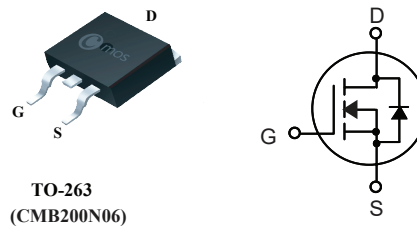
Product Summary

BVDSS	R _{DS(on)} max.	ID
60V	2.6mΩ	180A

Applications

- Motor control and drive
- Battery management
- Uninterruptible Power Supplies

TO-263 Pin Configuration



Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V _{DS}	Drain-Source Voltage	60	V
V _{GS}	Gate-Source Voltage	±25	V
I _D @T _C =25°C	Continuous Drain Current	180	A
I _D @T _C =100°C	Continuous Drain Current	120	A
I _{DM}	Pulsed Drain Current	720	A
EAS	Single Pulse Avalanche Energy ¹	2812	mJ
P _D @T _C =25°C	Total Power Dissipation	250	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 _{θJA}	Thermal Resistance Junction-ambient	---	62.5	°C/W
R _{θJC}	Thermal Resistance Junction-case	---	0.5	°C/W

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 =250uA	60	---	---	V
R _{DS(ON)}	Static Drain-Source On-Resistance	V _{GS} =10V, I _D =40A	---	2.2	2.6	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} =60V, V _{GS} =0V	---	---	1	uA
		V _{DS} =60V, V _{GS} =0V, T _J =100°C	---	---	100	
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±25V, V _{DS} =0V	---	---	±100	nA
g _{fs}	Forward Transconductance	V _{DS} =10V, I _D =20A	---	44	---	S
Q _g	Total Gate Charge	I _D =20A	---	100	---	nC
Q _{gs}	Gate-Source Charge	V _{DD} =30V	---	22	---	
Q _{gd}	Gate-Drain Charge	V _{GS} = 10V	---	15	---	
T _{d(on)}	Turn-On Delay Time	V _{GS} = 10V	---	35	---	ns
T _r	Rise Time	V _{DD} =30V	---	61	---	
T _{d(off)}	Turn-Off Delay Time	I _D =20A	---	95	---	
T _f	Fall Time	R _G =10Ω	---	35	---	
C _{iss}	Input Capacitance	V _{DS} =25V, V _{GS} =0V, f=1MHz	---	7850	---	pF
C _{oss}	Output Capacitance		---	1350	---	
C _{rss}	Reverse Transfer Capacitance		---	930	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I _S	Continuous Source Current	V _{GS} =V _{DS} =0V, Force Current	---	---	180	A
I _{SM}	Pulsed Source Current		---	---	720	A
V _{SD}	Diode Forward Voltage	V _{GS} =0V, I _{SD} =30A, T _J =25°C	---	0.77	1.2	V

Note :

1.The EAS data shows Max. rating . The test condition is V_{DD}=60V, V_{GS}=10V, L=1mH, I_{AS}=75A.

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.

Typical Characteristics

