

General Description

The 80P10 uses advanced trench technology and design to provide excellent RDS(ON). It can be used in a wide variety of applications.

Features

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

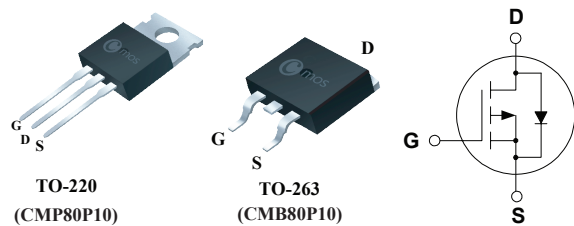
Product Summary

BVDSS	R _{DS(on)} max.	ID
-100V	25mΩ	-80A

Applications

- Inverters
- Motor drive
- DC / DC converter

TO-220/263 Pin Configuration



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	-80	A
I _D @T _C =100°C	Continuous Drain Current	-56	A
I _{DM}	Pulsed Drain Current	-320	A
EAS	Single Pulse Avalanche Energy ¹	841	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	150	°C

Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
R _{θJA}	Thermal Resistance Junction-ambient	---	62	°C/W
R _{θJC}	Thermal Resistance Junction-case	---	0.5	°C/W

CMP80P10/CMB80P10

-100V, 21mΩ typ., -80A P-Channel MOSFET

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	-100	---	---	V
R _{DS(ON)}	Static Drain-Source On-Resistance	V _{GS} =-10V, I _D =-20A	---	21	25	mΩ
V _{GS(th)}	Gate Threshold Voltage	V _{GS} =V _{DS} , I _D =-250 uA	-2	---	-4	V
I _{DSS}	Drain-Source Leakage Current	V _{DSS} =-100V , V _{GS} =0V	---	---	-1	uA
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±20V , V _{DS} =0V	---	---	±100	nA
g _{fs}	Forward Transconductance	V _{DS} =-10V, I _D =-20A	---	30	---	S
Q _g	Total Gate Charge	I _D =-80A	---	95	---	nC
Q _{gs}	Gate-Source Charge	V _{DS} =-50V	---	40	---	
Q _{gd}	Gate-Drain Charge	V _{GS} =-4.5V	---	50	---	
T _{d(on)}	Turn-On Delay Time	V _{DS} =-50V	---	20	---	ns
T _r	Rise Time	I _D =-80A	---	510	---	
T _{d(off)}	Turn-Off Delay Time	R _L =0.56Ω , R _G =1Ω	---	150	---	
T _f	Fall Time	V _{GS} =-10V	---	870	---	
C _{iss}	Input Capacitance	V _{DS} =-25V, V _{GS} =0V , f=1MHz	---	11000	---	pF
C _{oss}	Output Capacitance		---	420	---	
C _{rss}	Reverse Transfer Capacitance		---	60	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I _S	Continuous Source Current	V _G =V _D =0V , Force Current	---	---	-80	A
I _{SM}	Pulsed Source Current		---	---	-320	A
V _{SD}	Diode Forward Voltage	V _{GS} =0V , I _S =-20A	---	-0.84	-1.2	V

Notes:

1.The EAS data shows Max. rating .The test condition is V_{DS}=-50V , V_{GS}=-10V , L=0.5mH , I_{AS}=-58A.

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