

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

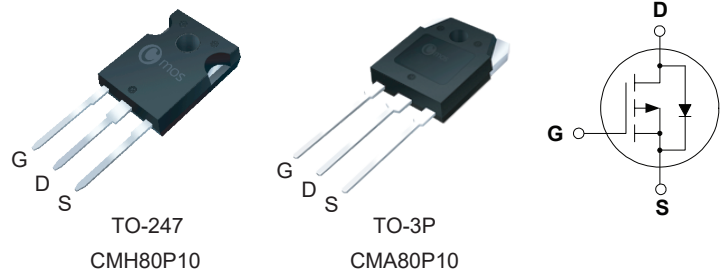
Product Summary

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

Applications

- Inverters
- Motor drive
- DC / DC converter

TO-247/TO-3P 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	1058	mJ
P _D @T _C =25°C	Total Power Dissipation	300	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	---	0.42	°C/W

CMH80P10/CMA80P10

-100V, 22mΩ typ., -80A P-Channel MOSFET

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

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V$, $I_D=-250\mu A$	-100	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	$V_{GS}=-10V$, $I_D=-20A$	---	22	25	mΩ
$V_{GS(th)}$	Gate Threshold Voltage	$V_{GS}=V_{DS}$, $I_D=-250\mu A$	-2	---	-4	V
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=-100V$, $V_{GS}=0V$	---	---	-1	μA
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 20V$, $V_{DS}=0V$	---	---	± 100	nA
g_{fs}	Forward Transconductance	$V_{DS}=-10V$, $I_D=-10A$	---	40	---	S
R_g	Gate Resistance	$V_{DS}=0V$, $V_{GS}=0V$, $f=1\text{MHz}$	---	16	---	Ω
Q_g	Total Gate Charge	$I_D=-80A$	---	100	---	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	$R_L=0.56\Omega$, $R_G=1\Omega$	---	150	---	
T_f	Fall Time	$V_{GS}=-10V$	---	870	---	
C_{iss}	Input Capacitance	$V_{DS}=-25V$, $V_{GS}=0V$, $f=1\text{MHz}$	---	13000	---	pF
C_{oss}	Output Capacitance		---	400	---	
C_{rss}	Reverse Transfer Capacitance		---	390	---	

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	$V_{GS}=0V$, $I_S=-10A$	---	-0.8	-1.2	V

Notes:

1.The EAS data shows Max. rating .The test condition is $V_{DS}=-50V$, $V_{GS}=-10V$, $L=1\text{mH}$, $I_{AS}=-46A$.

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

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Cmos reserver the right to improve product design ,functions and reliability wihtout notice.

Typical Characteristics

