CMP70P06/CMB70P06

Cmos

P-Channel Enhancement Mode MOSFET

General Description

The 70P06 uses advanced

trench technology and design

to provide excellent RDS(ON).

It can be used in a wide variety

of applications.

Features

- Fast switching
- 100% avalanche tested
- Lower On-resistance
- RoHS Compliant

Product Summary

BVDSS	RDSON	ID
-60V	15mΩ	-70A

Applications

- Inverters
- Motor drive
- DC / DC converter

TO-220/TO-263 Pin Configuration

TO-220   TO-263
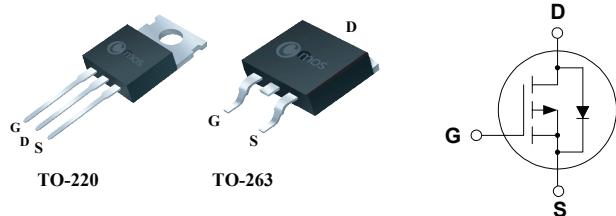
Type	Package	Marking
CMP70P06	TO-220	CMP70P06
CMB70P06	TO-263	CMB70P06

Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	-60	V
V_{GS}	Gate-Source Voltage	±20	V
$I_D@T_C=25℃$	Continuous Drain Current	-70	A
$I_D@T_C=100℃$	Continuous Drain Current	-56	A
I_{DM}	Pulsed Drain Current	-210	A
EAS	Single Pulse Avalanche Energy	435	mJ
$P_D@T_C=25℃$	Total Power Dissipation	130	W
T_{STG}	Storage Temperature Range	-55 to 175	℃
T_J	Operating Junction Temperature Range	-55 to 175	℃

Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
$R_{θJA}$	Thermal Resistance Junction-ambient	---	62.5	℃/W
$R_{θJC}$	Thermal Resistance Junction-case	---	0.95	℃/W

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Electrical Characteristics (T$_J$=25℃ , 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$_D$=-20A	---	---	15	mΩ
R$_{DS(ON)}$	Static Drain-Source On-Resistance	V$_{GS}$=-4.5V , I$_D$=-10A	---	---	24	mΩ
V$_{GS(th)}$	Gate Threshold Voltage	V$_{GS}$=V$_{DS}$, I$_D$ =-250uA	-1	---	-3	V
I$_{DSS}$	Drain-Source Leakage Current	V$_{DS}$=-55V, V$_{GS}$=0V	---	---	1	uA
I$_{GSS}$	Gate-Source Leakage Current	V$_{GS}$ = ±20V , V$_{DS}$=0V	---	---	±100	nA
gfs	Forward Transconductance	V$_{DS}$=-5V , I$_D$=-15A	---	21	---	S
R$_g$	Gate Resistance	V$_{DS}$=0V , V$_{GS}$=0V , f=1MHz	---	34	---	Ω
Q$_g$	Total Gate Charge	I$_D$ =-25A	---	89	---	nC
Q$_{gs}$	Gate-Source Charge	V$_{DS}$ =-30V	---	13	---	
Q$_{gd}$	Gate-Drain Charge	V$_{GS}$ =-10V	---	20	---	
T$_{d(on)}$	Turn-On Delay Time	V$_{DD}$ =-30V, I$_{DS}$ =-1A	---	16	---	ns
T$_r$	Rise Time	R$_L$ =30Ω	---	12	---	
T$_{d(off)}$	Turn-Off Delay Time	R$_G$ =6Ω	---	120	---	
T$_f$	Fall Time	V$_{GEN}$ =-10V	---	61	---	
C$_{iss}$	Input Capacitance		---	5800	---	pF
C$_{oss}$	Output Capacitance	V$_{DS}$=-30V , V$_{GS}$=0V , f=1MHz	---	495	---	
C$_{rss}$	Reverse Transfer Capacitance		---	281	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I$_S$	Continuous Source Current	V$_G$=V$_D$=0V , Force Current	---	---	-70	A
I$_{SM}$	Pulsed Source Current		---	---	-210	A
V$_{SD}$	Diode Forward Voltage	V$_{GS}$=0V , I$_S$=-10A ,T$_J$=25℃	---	---	-1.2	V

Note :

This product has been designed and qualified for the counsumer market.
Cmos assumes no liability for customers' product design or applications.
Cmos reserver the right to improve product design ,functions and reliability withtout notice.