CMH60R070P

600V N-C hannel Super-Junction MOSFET

General Description

The CMH60R070P have been fabricated using an advanced high voltage MOSFET process that is designed to deliver high levels of performance and robustness in popular AC-DC applications.These parts can be adopted quickly into new and existing offline power supply designs.

Product Summary

BVDSS	RDSON	ID
600V	65mΩ	55A

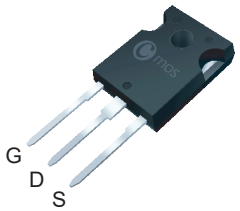
Applications

- Switching applications

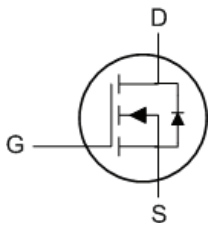
Features

- Low gate input resistance
- 100% avalanche tested
- RoHS Compliant

TO-247 Pin Configuration



TO-247



Type	Package	Marking
CMH60R070P	TO-247	CMH60R070P

Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	600	V
V_{GS}	Gate-Source Voltage	±30	V
I_D@T_C=25℃	Continuous Drain Current	55	A
I_D@T_C=100℃	Continuous Drain Current	44	A
I_{DM}	Pulsed Drain Current	165	A
EAS	Single Pulse Avalanche Energy	1300	mJ
P_D@T_C=25℃	Total Power Dissipation	390	W
T_{STG}	Storage Temperature Range	-55 to 150	℃
T_J	Operating Junction Temperature Range	-55 to 150	℃

Thermal Data

Symbol	Parameter	Rating	Unit
$R_{\theta JA}$	Thermal Resistance Junction-ambient	62	℃/W
$R_{\theta JC}$	Thermal Resistance Junction-case	0.32	℃/W

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	600	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	V_{GS}=10V , I_D=20A	---	---	65	mΩ
$V_{GS(th)}$	Gate Threshold Voltage	V_{GS}=V_{DS} , I_D =250uA	3	---	5	V
I_{DSS}	Drain-Source Leakage Current	V_{DS}=600V , V_{GS}=0V	---	---	1	uA
I_{GSS}	Gate-Source Leakage Current	V_{GS}=± 30V , V_{DS}=0V	---	---	±100	nA
gfs	Forward Transconductance	V_{DS}=15V , I_D=10A	---	26	---	S
Q_g	Total Gate Charge	I_D=53A V_{DS} =480V V_{GS} =10V	---	130	---	nC
Q_{gs}	Gate-Source Charge		---	32	---	
Q_{gd}	Gate-Drain Charge		---	60	---	
$T_{d(on)}$	Turn-On Delay Time	V_{DS} =300V V_{GS} =10V I_D=53A R_G=25Ω	---	72	---	ns
T_r	Rise Time		---	200	---	
$T_{d(off)}$	Turn-Off Delay Time		---	412	---	
T_f	Fall Time		---	163	---	
C_{iss}	Input Capacitance	V_{DS}=25V , V_{GS}=0V , f=1MHz	---	5700	---	pF
C_{oss}	Output Capacitance		---	2970	---	
C_{rss}	Reverse Transfer Capacitance		---	165	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I_S	Continuous Source Current	V_G=V_D=0V , Force Current	---	---	55	A
I_{SM}	Pulsed Source Current		---	---	165	A
V_{SD}	Diode Forward Voltage	V_{GS}=0V , I_S=20A	---	---	1.2	V

Notes:

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 wihtout notice.