CMH65R115P



General Description

CMH65R115P is power MOSFET using Cmos's advanced super junction technology that can realize very low on-resistance and gate charge. It will provide much high efficiency by using optimized charge coupling technology. These parts can be adopted quickly into new and existing offline power supply designs.

Features

- Low On-Resistance
- 100% Avalanche Tested
- RoHS Compliant

N-Channel Super Junction Power MOSFET

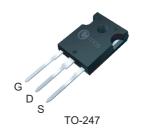
Product Summary

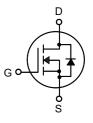
BVDSS	RDSON	ID
650V	115mΩ	33A

Applications

- DC-DC Converters
- Adapter
- PFC Power Supply Stages
- Switching Applications

TO-247 Pin Configuration





Туре	Package Marking	
CMH65R115P	TO-247	CMH65R115P

Absolute Maximum Ratings

Symbol	Parameter	Rating	Units	
V _{DS}	Drain-Source Voltage 650		V	
V _{GS}	Gate-Source Voltage	±30	V	
I _D @T _C =25℃	Continuous Drain Current 33		А	
I _D @T _C =100℃	Continuous Drain Current 21		А	
I _{DM}	Pulsed Drain Current 132		А	
EAS	Single Pulse Avalanche Energy ¹ 211		mJ	
P _D @T _C =25℃	Total Power Dissipation 250		W	
T _{STG}	Storage Temperature Range -55 to 150		°C	
TJ	Operating Junction Temperature Range -55 to 150		°C	

Thermal Data

Symbol	Parameter	Rating	Unit
R _{θJA}	Thermal Resistance Junction-ambient	62.5	°C/W
R _{θJC}	Thermal Resistance Junction-case	0.49	°C/W

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

Symbol	Parameter	Conditions	Min.	Тур.	Max.	Unit
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V , I _D =250uA	650			V
R _{DS(ON)}	Static Drain-Source On-Resistance	V _{GS} =10V , I _D =15A		95	115	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} =600V , V _{GS} =0V			1	uA
I _{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 30V$, $V_{DS}=0V$			±100	nA
gfs	Forward Transconductance	V _{DS} =10V , I _D =15A		24		S
Qg	Total Gate Charge	I _D =33A		75		
Q_gs	Gate-Source Charge	V _{DS} =480V		15		nC
Q_{gd}	Gate-Drain Charge	V _{GS} =10V		34		
T _{d(on)}	Turn-On Delay Time	V _{DS} =300V		50		
Tr	Rise Time	V _{BS} =300V V _{GS} =10V		105		
$T_{d(off)}$	Turn-Off Delay Time	I _D =33A		240		ns
T _f	Fall Time	$R_G=25\Omega$		80		
C _{iss}	Input Capacitance			2900		
C _{oss}	Output Capacitance	V _{DS} =25V,V _{GS} =0V,f=1MHz		1800		pF
C _{rss}	Reverse Transfer Capacitance			110		

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Тур.	Max.	Unit
ls	Continuous Source Current	$-V_G=V_D=0V$, Force Current			33	А
I _{SM}	Pulsed Source Current				132	Α
V _{SD}	Diode Forward Voltage	V _{GS} =0V , I _S =15A			1.4	V
trr	Reverse Recovery Time	V _{DD} =100V, I _S =33A		488		ns
Qrr	Reverse Recovery Charge	dI _F /dt =100A/μs		9.4		μC

Notes:

1. The EAS data shows Max. rating . The test condition is VDD=80V , VGs=10V , L=1mH , ID=6.5A

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