

General Description

These Power MOSFETs are produced using Cmos's proprietary, planar stripe, DMOS technology. These devices are well suited for high efficiency switch mode power supplies.

Features

- 100% avalanche tested
- Improved dv/dt capability
- RoHS Compliant

Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	900	V
V_{GS}	Gate-Source Voltage	±30	V
$I_D@T_C=25^{\circ}\text{C}$	Continuous Drain Current	11	A
$I_D@T_C=100^{\circ}\text{C}$	Continuous Drain Current	6.8	A
I_{DM}	Pulsed Drain Current	44	A
EAS	Single Pulse Avalanche Energy (Note 1)	190	mJ
$P_D@T_C=25^{\circ}\text{C}$	Total Power Dissipation	240	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
$R_{\theta JA}$	Thermal Resistance Junction-ambient Max.	---	40	°C/W
$R_{\theta JC}$	Thermal Resistance Junction-case Max.	---	0.52	°C/W

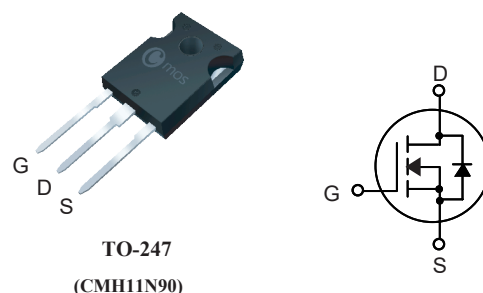
Product Summary

BVDSS	$R_{DS(on)}$ max.	ID
900V	1.2Ω	11A

Applications

- Switch Mode Power Supply
- Uninterruptable Power Supply

TO-247 Pin Configuration



TO-247
(CMH11N90)

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

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V$, $I_D=250\mu A$	900	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	$V_{GS}=10V$, $I_D=5.5A$	---	1	1.2	Ω
$V_{GS(th)}$	Gate Threshold Voltage	$V_{GS}=V_{DS}$, $I_D=250\mu A$	3	---	5	V
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=900V$, $V_{GS}=0V$	---	---	1	μA
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 30V$, $V_{DS}=0V$	---	---	± 100	nA
g_{fs}	Forward Transconductance	$V_{DS}=15V$, $I_D=10A$	---	28	---	S
R_g	Gate Resistance	$V_{DS}=0V$, $V_{GS}=0V$, $f=1MHz$	---	1.1	---	Ω
Q_g	Total Gate Charge	$I_D=9A$	---	55	---	nC
Q_{gs}	Gate-Source Charge	$V_{DS}=720V$	---	12	---	
Q_{gd}	Gate-Drain Charge	$V_{GS}=10V$	---	26	---	
$T_{d(on)}$	Turn-On Delay Time	$V_{DS}=450V$ $I_D=9A$ $R_G=25\Omega$	---	45	---	ns
T_r	Rise Time		---	100	---	
$T_{d(off)}$	Turn-Off Delay Time		---	135	---	
T_f	Fall Time		---	80	---	
C_{iss}	Input Capacitance	$V_{DS}=25V$, $V_{GS}=0V$, $f=1MHz$	---	2600	---	pF
C_{oss}	Output Capacitance		---	180	---	
C_{rss}	Reverse Transfer Capacitance		---	25	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I_S	Continuous Source Current	$V_{GS}=V_{DS}=0V$, Force Current	---	---	11	A
I_{SM}	Pulsed Source Current		---	---	44	A
V_{SD}	Diode Forward Voltage	$V_{GS}=0V$, $I_{SD}=10A$, $T_J=25^{\circ}\text{C}$	---	0.85	1.4	V

Note :

1.The EAS data shows Max. rating . The test condition is $V_{DD}=50V$, $V_{GS}=10V$, $L=1mH$, $I_{AS}=19.5A$.

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

Cmos assumes no liability for customers' product design or applications.

Cmos reserves the right to improve product design ,functions and reliability without notice.

Typical Characteristics

