CMD4932/CMU4932

60V P-Channel MOSFET

General Description

The 4932 uses advanced trench technology and design to provide excellent RDS(ON) with low gate charge. It can be used in a wide variety of applications.

Features

- Advanced high cell density Trench technology
- Fast switching speed
- Lower On-resistance
- 100% EAS Guaranteed
- Simple Drive Requirement

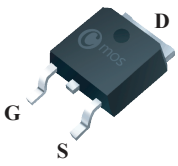
Product Summary

BVDSS	RDSON	ID
-60V	36mΩ	-30A

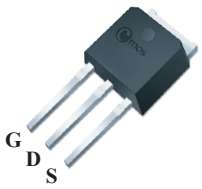
Applications

- DC-DC Converters
- High Side Switch for Full Bridge Converter
- LED controller

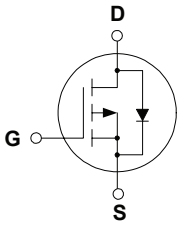
TO252 / TO251 Pin Configuration



TO-252
CMD4932



TO-251
CMU4932



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°C	Continuous Drain Current	-30	A
I_D@T_C=100°C	Continuous Drain Current	-16	A
I_{DM}	Pulsed Drain Current	-120	A
EAS	Single Pulse Avalanche Energy [1]	180	mJ
P_D@T_C=25°C	Total Power Dissipation	42	W
T_{STG}	Storage Temperature Range	-55 to 150	°C
T_J	Operating Junction Temperature Range	-55 to 150	°C

Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
$R_{\theta JA}$	Thermal Resistance Junction-ambient	---	50	°C/W
$R_{\theta JC}$	Thermal Resistance Junction -Case	---	3	°C/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	-60	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	V_{GS}=-5V , I_D=-10A	---	---	55	mΩ
		V_{GS}=-10V , I_D=-15A	---	---	36	
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS}=V_{GS} , I_D=-250uA	-1	---	-3	V
I_{DSS}	Drain-Source Leakage Current	V_{DS}=-48V, V_{GS}=0V	---	---	-1	uA
		V_{DS}=-40V, V_{GS}=0V , T_J=55℃	---	---	-10	
I_{GSS}	Gate-Source Leakage Current	V_{GS}=±20V , V_{DS}=0V	---	---	±100	nA
gfs	Forward Transconductance	V_{DS}=-5V , I_D=-25A	---	25	---	S
Q_g	Total Gate Charge	V_{DS}=-30V, V_{GS}=-10V , I_D=-25A	---	39	---	nC
Q_{gs}	Gate-Source Charge		---	13	---	
Q_{gd}	Gate-Drain Charge		---	8	---	
$T_{d(on)}$	Turn-On Delay Time	V_{DS}=-30V,R_L=1Ω I_D=-20A, V_{GS}=-10V , R_G=6Ω	---	30	---	ns
T_r	Rise Time		---	90	---	
$T_{d(off)}$	Turn-Off Delay Time		---	70	---	
T_f	Fall Time		---	15	---	
C_{iss}	Input Capacitance	V_{DS}=-30V, V_{GS}=0V , f=1MHz	---	2500	---	pF
C_{oss}	Output Capacitance		---	130	---	
C_{rss}	Reverse Transfer Capacitance		---	70	---	

Diode Characteristics

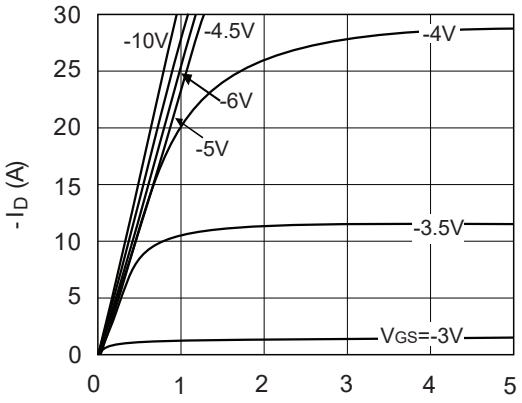
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I_S	Continuous Source Current		---	---	-30	A
V_{SD}	Diode Forward Voltage	V_{GS}=0V , I_F=-25A , T_J=25℃	---	---	-1.3	V

Notes:

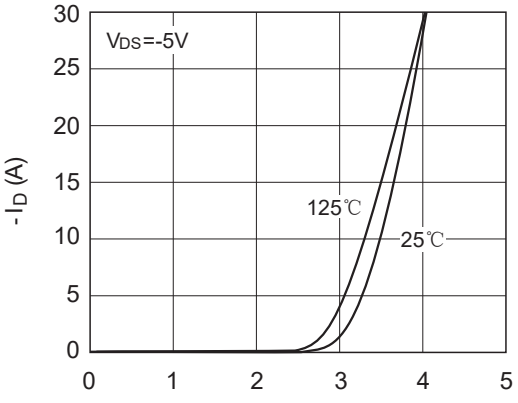
1.The EAS data shows Max. rating .The test condition is V_{DS}=-30V , V_{GS}=-10V , L=1mH , I_{AS}=-19A.

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.

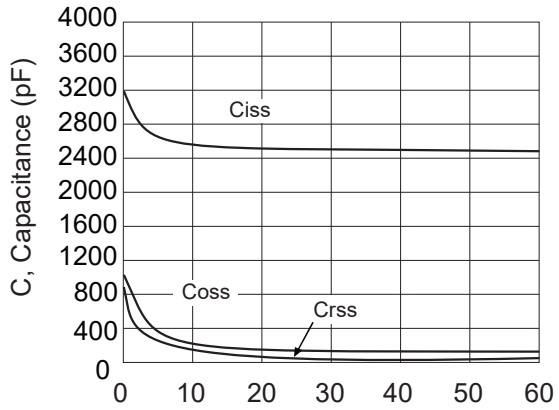
Typical Characteristics



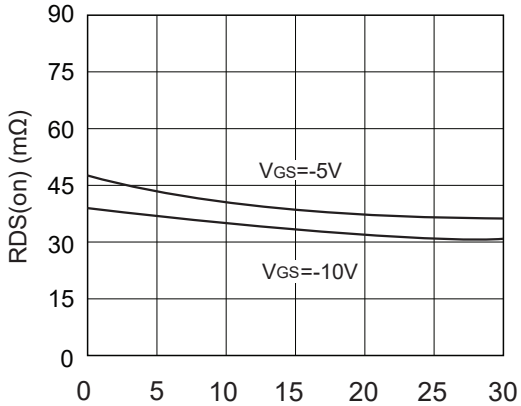
On-RegionCharacteristics



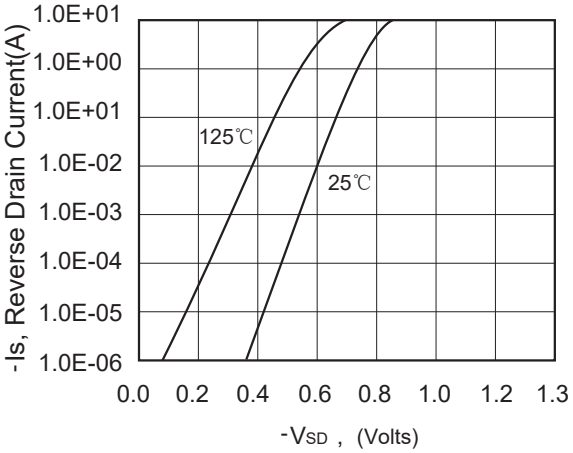
TransferCharacteristics



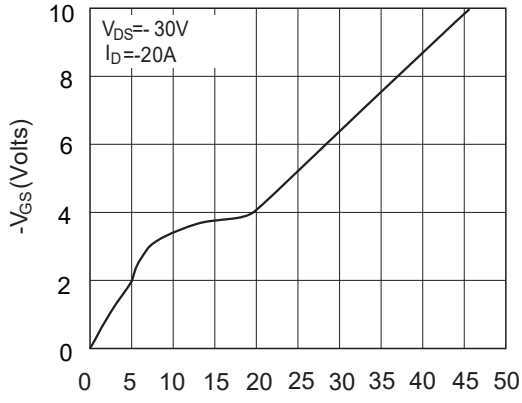
Capacitance Characteristics



On-Resistance vs. Drain Current and Gate Voltage



Body-Diode Characteristics



Gate-Charge Characteristics

Physical Dimensions

TO-252 Package Outline Drawing

