

General Description

The CMD4932 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

Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	-60	V
V_{GS}	Gate-Source Voltage	± 20	V
$I_D@T_C=25^\circ\text{C}$	Continuous Drain Current	-30	A
$I_D@T_C=100^\circ\text{C}$	Continuous Drain Current	-16	A
I_{DM}	Pulsed Drain Current ¹	-100	A
$P_D@T_C=25^\circ\text{C}$	Total Power Dissipation	42	W
T_{STG}	Storage Temperature Range	-55 to 150	$^\circ\text{C}$
T_J	Operating Junction Temperature Range	-55 to 150	$^\circ\text{C}$

Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
$R_{\theta JA}$	Thermal Resistance Junction-ambient	---	50	$^\circ\text{C/W}$
$R_{\theta JC}$	Thermal Resistance Junction -Case	---	3	$^\circ\text{C/W}$

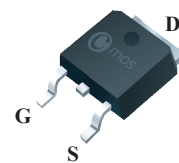
Product Summary

BVDSS	RDS(ON)	ID
-60V	36m Ω	-30A

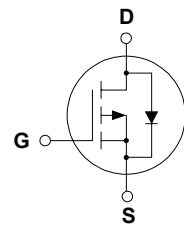
Applications

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

TO-252 Pin Configuration



TO-252
(CMD4932)



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

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V$, $I_D=-250\mu A$	-60	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance ³	$V_{GS}=-7V$, $I_D=-20A$	---	---	55	$m\Omega$
		$V_{GS}=-10V$, $I_D=-25A$	---	---	36	
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=V_{GS}$, $I_D=-250\mu A$	-1	---	-3	V
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=-48V$, $V_{GS}=0V$	---	---	-1	μA
		$V_{DS}=-40V$, $V_{GS}=0V$, $T_J=55^\circ\text{C}$	---	---	-10	
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 20V$, $V_{DS}=0V$	---	---	± 100	nA
g_{fs}	Forward Transconductance ³	$V_{DS}=-5V$, $I_D=-25A$	---	15	---	S
Q_g	Total Gate Charge ²	$V_{DS}=-30V$, $V_{GS}=-10V$, $I_D=-25A$	---	39	---	nC
Q_{gs}	Gate-Source Charge ²		---	13	---	
Q_{gd}	Gate-Drain Charge ²		---	8	---	
$T_{d(on)}$	Turn-On Delay Time ²	$V_{DS}=-30V$, $R_L=1\Omega$ $I_D=-20A$, $V_{GS}=-10V$, $R_G=6\Omega$	---	30	---	ns
T_r	Rise Time ²		---	90	---	
$T_{d(off)}$	Turn-Off Delay Time ²		---	70	---	
T_f	Fall Time ²		---	15	---	
C_{iss}	Input Capacitance	$V_{DS}=-30V$, $V_{GS}=0V$, $f=1\text{MHz}$	---	2500	---	pF
C_{oss}	Output Capacitance		---	240	---	
C_{rss}	Reverse Transfer Capacitance		---	120	---	

Diode Characteristics

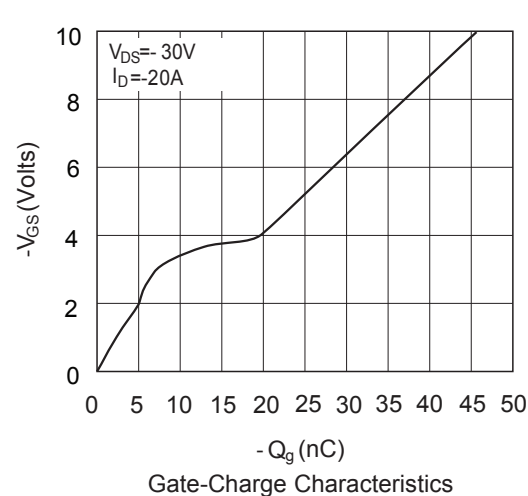
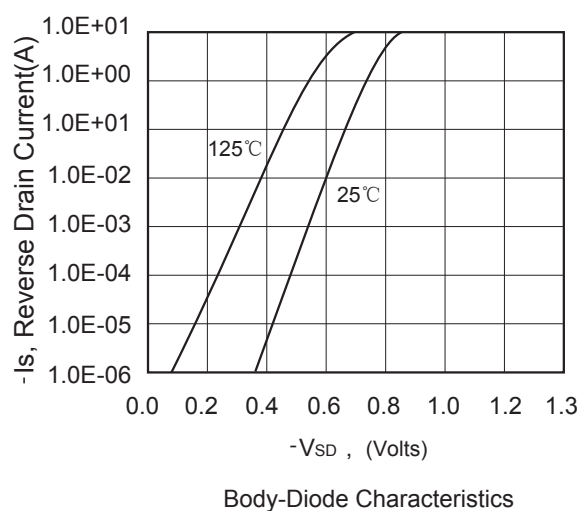
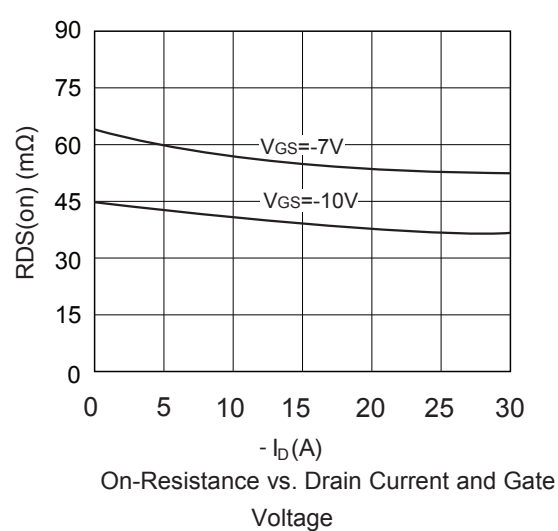
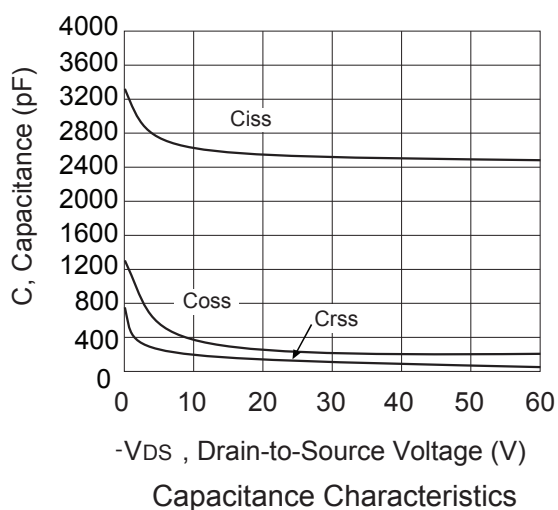
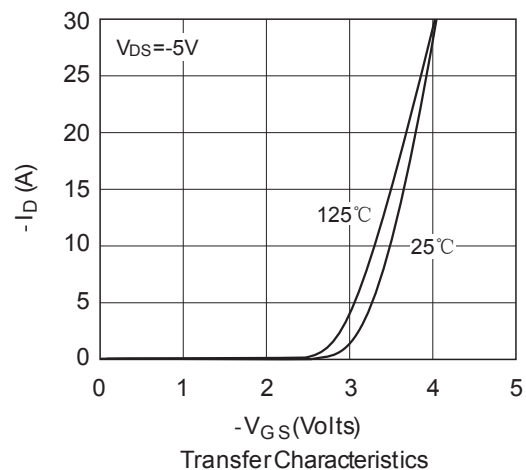
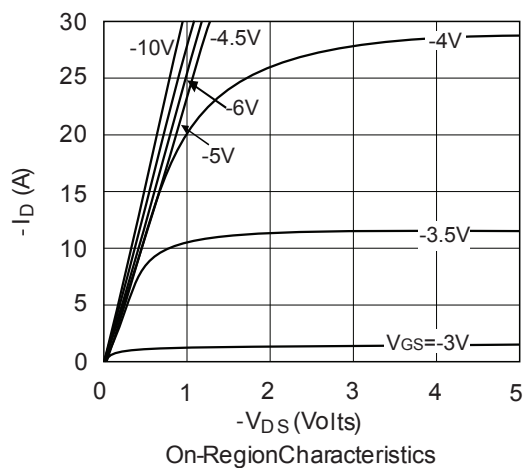
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I_S	Continuous Source Current		---	---	-30	A
V_{SD}	Diode Forward Voltage ³	$V_{GS}=0V$, $I_F=-25A$, $T_J=25^\circ\text{C}$	---	---	-1.3	V

Note :

- 1.Pulse width limited by maximum junction temperature.
- 2.Independent of operating temperature.
- 3.Pulse test : Pulse Width $\leq 300 \mu\text{sec}$, Duty Cycle $\leq 2\%$.

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



Physical Dimensions

TO-252 Package Outline Drawing

