

Dual N-Channel Enhancement Mode MOSFET

General Description

The CMS4892B uses advanced Technology, which provides low on-state resistance, high switching performance and excellent reliability.

Features

- $R_{DS(ON)} < 135m\Omega$ @ $V_{GS}=10V$
- $R_{DS(ON)} < 150m\Omega$ @ $V_{GS}=4.5V$
- Dual MOSFET in surface mount package.
- Extremely low on-resistance $R_{DS(on)}$

Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	100	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Continuous Drain Current	3	A
I_{DM}	Pulsed Drain Current	12	A
$P_D@T_C=25^\circ C$	Total Power Dissipation	2	W
T_{STG}	Storage Temperature Range	-55 to 150	$^\circ C$
T_J	Operating Junction Temperature Range	-55 to 150	$^\circ C$

Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient (PCB mounted)	---	62.5	$^\circ C/W$

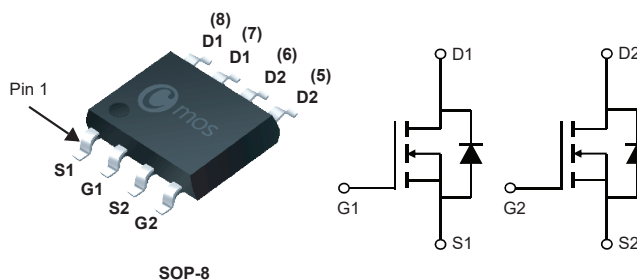
Product Summary

BVDSS	RDSON	ID
100V	135m Ω	3A

Applications

- Motor control and drive
- Battery management
- UPS (Uninterruptible Power Supplies)

SOP-8 Pin Configuration



Type	Package	Marking
CMS4892B	SOP-8	CMS4892B

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

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V$, $I_D=250\mu A$	100	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	$V_{GS}=10V$, $I_D=5A$	---	---	135	m Ω
		$V_{GS}=4.5V$, $I_D=3A$	---	---	150	
$V_{GS(th)}$	Gate Threshold Voltage	$V_{GS}=V_{DS}$, $I_D=250\mu A$	1	---	3	V
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=85V$, $V_{GS}=0V$	---	---	1	μA
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 20V$, $V_{DS}=0V$	---	---	± 100	nA
g_{fs}	Forward Transconductance	$V_{DS}=10V$, $I_D=5A$	---	10	---	S
R_g	Gate Resistance	$V_{DS}=0V$, $V_{GS}=0V$, $f=1\text{MHz}$	---	6.5	---	Ω
Q_g	Total Gate Charge	$V_{DS}=50V$, $V_{GS}=10V$, $I_D=3A$	---	21	---	nC
Q_{gs}	Gate-Source Charge		---	4	---	
Q_{gd}	Gate-Drain Charge		---	7	---	
$T_{d(on)}$	Turn-On Delay Time	$V_{DD}=50V$, $R_{GEN}=2.5\Omega$ $R_L=15\Omega$, $V_{GS}=10V$	---	10	---	ns
T_r	Rise Time		---	7	---	
$T_{d(off)}$	Turn-Off Delay Time		---	34	---	
T_f	Fall Time		---	9	---	
C_{iss}	Input Capacitance	$V_{DS}=50V$, $V_{GS}=0V$, $f=1\text{MHz}$	---	480	---	pF
C_{oss}	Output Capacitance		---	37	---	
C_{rss}	Reverse Transfer Capacitance		---	27	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I_S	Continuous Source Current	$V_G=V_D=0V$, Force Current	---	---	3	A
I_{SM}	Pulsed Source Current		---	---	12	A
V_{SD}	Diode Forward Voltage	$V_{GS}=0V$, $I_S=5A$, $T_J=25^{\circ}\text{C}$	---	---	1	V

Notes:

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.