

Dual N-Channel Enhancement Mode MOSFET

General Description

The CMS4892 uses advanced Technology, which provides low on-state resistance, high switching performance and excellent reliability.

Features

- $R_{DS(ON)} < 120\text{m}\Omega$ @ $V_{GS} = 10\text{V}$
- $R_{DS(ON)} < 200\text{m}\Omega$ @ $V_{GS} = 4.5\text{V}$
- 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	5	A
I_{DM}	Pulsed Drain Current	15	A
$P_D @ T_C = 25^\circ\text{C}$	Total Power Dissipation	2	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-to-Ambient (PCB mounted)	---	62.5	$^\circ\text{C}/\text{W}$

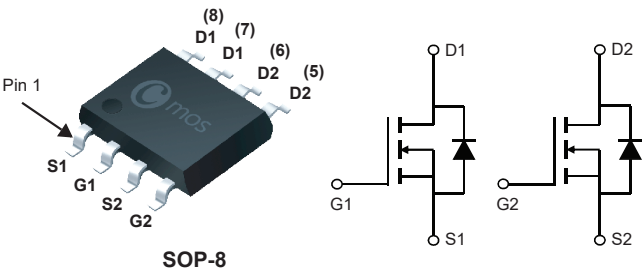
Product Summary

BVDSS	$R_{DS(ON)}$	ID
100V	120m Ω	5A

Applications

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

SOP-8 Pin Configuration



Type	Package	Marking
CMS4892	SOP- 8	CMS4892

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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	$V_{GS}=10V$, $I_D=5A$	---	---	120	$m\Omega$
		$V_{GS}=4.5V$, $I_D=3A$	---	---	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	$V_{DS}=100V$, $V_{GS}=0V$	---	---	1	μA
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 20V$, $V_{DS}=0V$	---	---	± 100	nA
g_{fs}	Forward Transconductance	$V_{DS}=10V$, $I_D=3A$	---	4.5	---	S
R_g	Gate Resistance	$V_{DS}=0V$, $V_{GS}=0V$, $f=1\text{MHz}$	---	8	---	Ω
Q_g	Total Gate Charge	$V_{DS}=50V$, $V_{GS}=10V$, $I_D=5A$	---	6.5	---	nC
Q_{gs}	Gate-Source Charge		---	1.5	---	
Q_{gd}	Gate-Drain Charge		---	1.5	---	
$T_{d(on)}$	Turn-On Delay Time	$V_{DS}=50V$, $R_{GEN}=3\Omega$, $V_{GS}=10V$ $R_L=12.5\Omega$	---	5	---	ns
T_r	Rise Time		---	2	---	
$T_{d(off)}$	Turn-Off Delay Time		---	15	---	
T_f	Fall Time		---	2	---	
C_{iss}	Input Capacitance	$V_{DS}=50V$, $V_{GS}=0V$, $f=1\text{MHz}$	---	370	---	pF
C_{oss}	Output Capacitance		---	33	---	
C_{rss}	Reverse Transfer Capacitance		---	3	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I_S	Continuous Source Current	$V_G=V_D=0V$, Force Current	---	---	5	A
I_{SM}	Pulsed Source Current		---	---	15	A
V_{SD}	Diode Forward Voltage	$V_{GS}=0V$, $I_S=4A$, $T_J=25^{\circ}\text{C}$	---	---	1	V

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