

General Description

The CMS8447B uses advanced trench technology to provide excellent RDS(ON).

This is an all purpose device that is suitable for use in a wide range of power conversion applications.

Features

- Max $r_{DS(on)} = 23m\Omega$ at $V_{GS} = 10V$
- Max $r_{DS(on)} = 27m\Omega$ at $V_{GS} = 4.5V$
- Fast Switching
- RoHS Compliant

Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	40	V
V_{GS}	Gate-Source Voltage	± 20	V
$I_D@T_C=25^\circ C$	Continuous Drain Current	11	A
I_{DM}	Pulsed Drain Current	33	A
$P_D@T_C=25^\circ C$	Total Power Dissipation	2.5	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-ambient	---	50	$^\circ C/W$
$R_{\theta JL}$	Thermal Resistance Junction-Lead	---	20	$^\circ C/W$

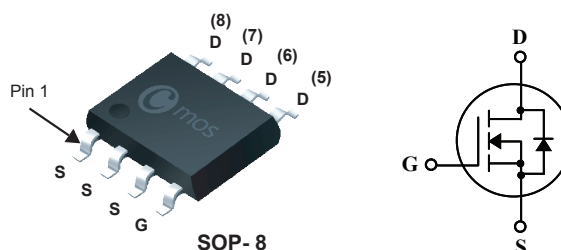
Product Summary

BVDSS	RDS(ON)	ID
40V	23m Ω	11A

Applications

- DC/DC converter
- Portable Equipment

SOP-8 Pin Configuration



Type	Package	Marking
CMS8447B	SOP- 8	CMS8447B

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

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{DS}	Drain-Source Breakdown Voltage	$V_{GS}=0V$, $I_D=250\mu A$	40	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	$V_{GS}=10V$, $I_D=11A$	---	---	23	$m\Omega$
		$V_{GS}=4.5V$, $I_D=8A$	---	---	27	
$V_{GS(th)}$	Gate Threshold Voltage	$V_{GS}=V_{DS}$, $I_D=250\mu A$	1	---	3	V
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=32V$, $V_{GS}=0V$	---	---	1	μA
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 20V$, $V_{DS}=0V$	---	---	± 100	nA
g_{fs}	Forward Transconductance	$V_{DS}=5V$, $I_D=11A$	---	12.8	---	S
Q_g	Total Gate Charge	$I_D=11A$	---	15	---	nC
Q_{gs}	Gate-Source Charge	$V_{DS}=20V$	---	2.5	---	
Q_{gd}	Gate-Drain Charge	$V_{GS}=10V$	---	4	---	
$T_{d(on)}$	Turn-On Delay Time	$V_{DS}=20V$	---	7	---	ns
T_r	Rise Time	$I_D=11A$	---	13	---	
$T_{d(off)}$	Turn-Off Delay Time	$R_{GEN}=6\Omega$	---	29	---	
T_f	Fall Time	$V_{GS}=10V$	---	6	---	
C_{iss}	Input Capacitance	$V_{DS}=20V$, $V_{GS}=0V$, $f=1MHz$	---	1150	---	pF
C_{oss}	Output Capacitance		---	185	---	
C_{rss}	Reverse Transfer Capacitance		---	90	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_{SD}	Diode Forward Voltage	$V_{GS}=0V$, $I_S=3A$	---	0.79	1.2	V

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