CMSB4807

Dual P-Channel Enhancement Mode MOSFET

General Description

The CMSB4807 uses advanced trench technology to provide excellent RDS(ON). This device is suitable for use as a load switch or in PWM applications.

Product Summary

BVDSS	RDSON	ID
-30V	65mΩ	-4A

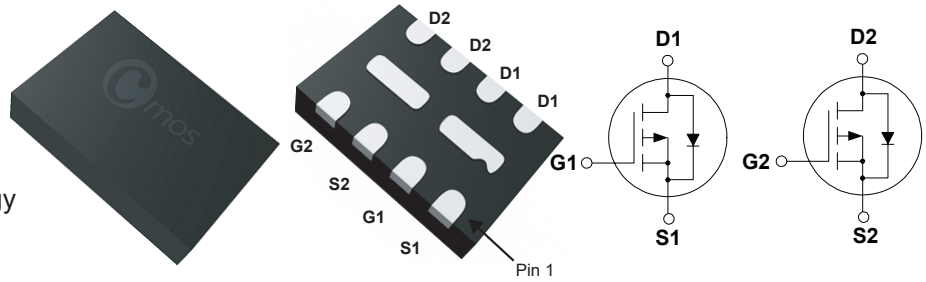
Applications

- Inverter Switch
- Synchronous Rectifier
- Load Switch
- DC/DC Converter

Features

- RDS(ON)=65mΩ @ VGS=-4.5V
- RDS(ON)=85mΩ @ VGS=-2.5V
- Advanced trench process technology
- RoHS Compliant

DFN3*2-8L Pin Configuration



Type	Package	Marking
CMSB4807	DFN3*2-8L	4807

Absolute Maximum Ratings (T_A=25℃ Unless Otherwise Noted)

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	-30	V
V_{GS}	Gate-Source Voltage	±20	V
I_D@T_A=25℃	Continuous Drain Current	-4	A
I_D@T_A=70℃	Continuous Drain Current	-3.2	A
I_{DM}	Pulsed Drain Current	-16	A
P_D@T_A=25℃	Total Power Dissipation	2	W
T_{STG}	Storage Temperature Range	-55 to 150	℃
T_J	Operating Junction Temperature Range	-55 to 150	℃

Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient	50	62.5	℃/W

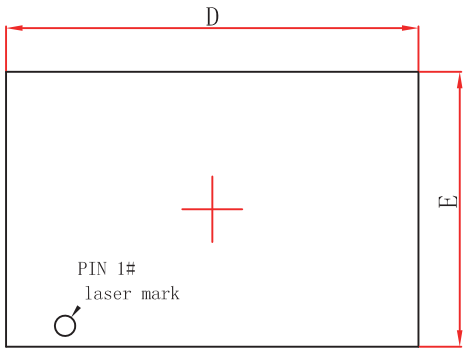
Electrical Characteristics (T_A=25℃ , unless otherwise noted)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS}=0V , I_D=-250μA	-30	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	V_{GS}=-4.5V , I_D=-4A	---	---	65	mΩ
		V_{GS}=-2.5V , I_D=-2A	---	---	85	
$V_{GS(th)}$	Gate Threshold Voltage	V_{GS}=V_{DS} , I_D = -250μA	-0.5	---	-1.5	V
I_{DSS}	Drain-Source Leakage Current	V_{DS}=-24V, V_{GS}=0V	---	---	-1	uA
		V_{DS}=-24V, V_{GS}=0V T_J=55℃	---	---	-5	
I_{GSS}	Gate-Source Leakage Current	V_{GS} =±20V , V_{DS}=0V	---	---	±100	nA
gfs	Forward Transconductance	V_{DS}=-10V , I_D=-5A	---	7	---	S
Q_g	Total Gate Charge	V_{DS}=-15V , V_{GS}=-10V , I_D=-4A	---	6	---	nC
Q_{gs}	Gate-Source Charge		---	1.2	---	
Q_{gd}	Gate-Drain Charge		---	1.5	---	
$T_{d(on)}$	Turn-On Delay Time	V_{DS} =-15V, V_{GS} =-10V , R_L =3.75Ω R_{GEN}=3Ω	---	7	---	ns
T_r	Rise Time		---	6	---	
$T_{d(off)}$	Turn-Off Delay Time		---	20	---	
T_f	Fall Time		---	10	---	
C_{iss}	Input Capacitance	V_{DS}=-15V , V_{GS}=0V , f=1MHz	---	730	---	pF
C_{oss}	Output Capacitance		---	55	---	
C_{rss}	Reverse Transfer Capacitance		---	50	---	

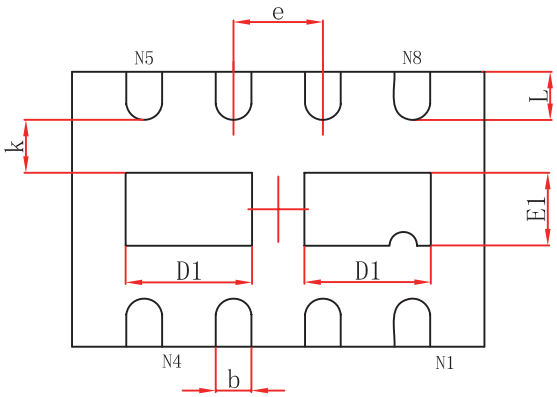
Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_{SD}	Diode Forward Voltage	V_{GS}=0V , I_{SD}=-1A	---	---	-1	V

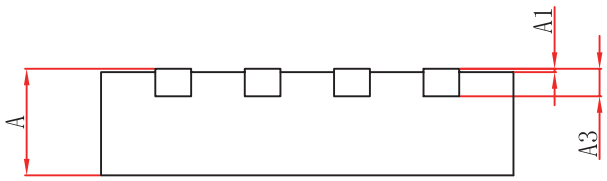
This product has been designed and qualified for the counsumer market.
Cmos assumes no liability for customers' product design or applications.
Cmos reserver the right to improve product design ,functions and reliability wihtout notice.



Top View



Bottom View



Side View

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.700	0.800	0.028	0.031
A1	0.000	0.050	0.000	0.002
A3	0.203REF.		0.008REF.	
D	2.900	3.100	0.114	0.122
E	1.900	2.100	0.075	0.083
D1	0.820	1.020	0.032	0.040
E1	0.200	0.400	0.007	0.016
k	0.200MIN.		0.008MIN.	
b	0.250	0.350	0.010	0.014
e	0.650TYP.		0.026TYP.	
L	0.250	0.450	0.010	0.018