

General Description

The CMN2308M uses advanced trench technology to provide excellent RDS(ON). This device is suitable for use as a Battery protection or in other switching application.

Features

- RDS(ON)<65mΩ @ VGS=10V
- RDS(ON)<80mΩ @ VGS=4.5V
- SOT-23-3L Package

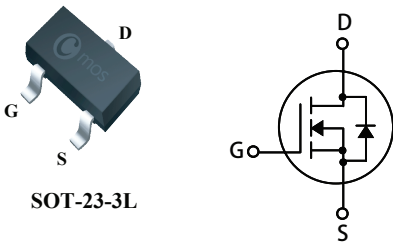
Product Summary

BVDSS	RDSON	ID
60V	65mΩ	6.5A

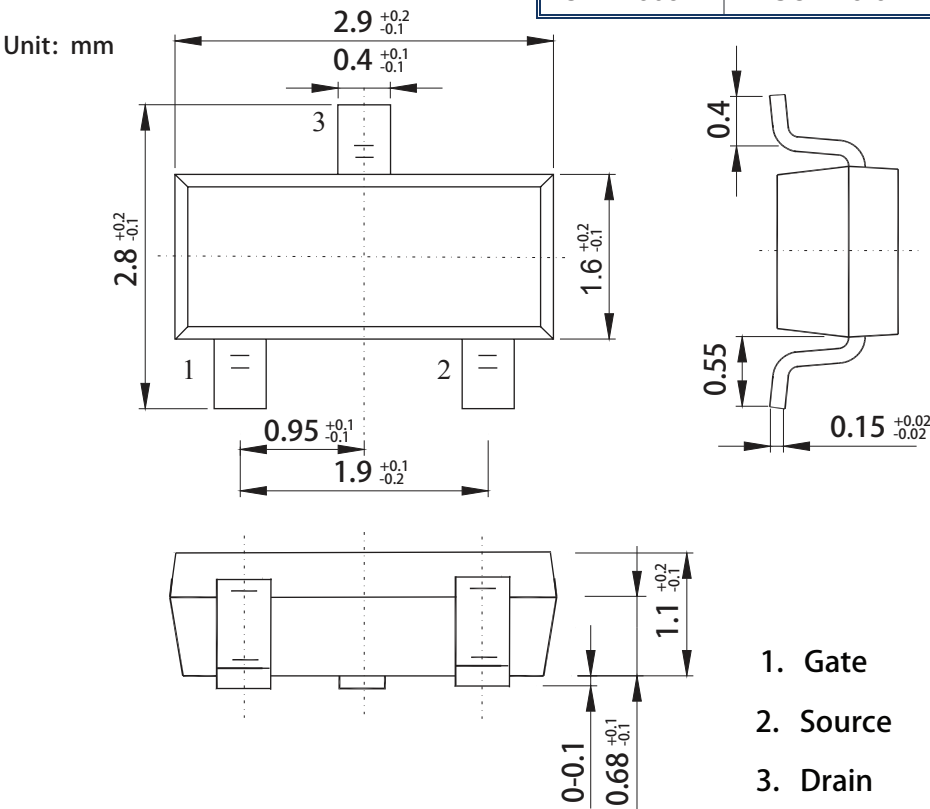
Applications

- DC-DC converters
- Load Switch
- System Switch

SOT-23-3L Pin Configuration



Type	Package	Marking
CMN2308M	SOT-23-3L	E2M



N-Channel Enhancement Mode Field Effect Transistor

Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	60	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Continuous Drain Current	6.5	A
I_{DM}	Pulsed Drain Current	19	A
P_D	Total Power Dissipation	1.25	W
T_{STG}	Storage Temperature Range	-55 to 150	$^{\circ}\text{C}$
T_J	Operating Junction Temperature Range	150	$^{\circ}\text{C}$

Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
$R_{\theta JA}$	Thermal Resistance Junction-ambient	---	62.5	$^{\circ}\text{C}/\text{W}$

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

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0\text{V}$, $I_D=250\mu\text{A}$	60	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	$V_{GS}=10\text{V}$, $I_D=5.3\text{A}$	---	---	65	$\text{m}\Omega$
		$V_{GS}=4.5\text{V}$, $I_D=4.7\text{A}$	---	---	80	
$V_{GS(th)}$	Gate Threshold Voltage	$V_{GS}=V_{DS}$, $I_D=250\mu\text{A}$	0.95	---	2.5	V
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=48\text{V}$, $V_{GS}=0\text{V}$	---	---	1	μA
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 20\text{V}$, $V_{DS}=0\text{V}$	---	---	± 100	nA
g_{fs}	Forward Transconductance	$V_{DS}=5\text{V}$, $I_D=0.5\text{A}$	---	6.5	---	S
Q_g	Total Gate Charge	$V_{DS}=30\text{V}$, $I_D=3\text{A}$ $V_{GS}=4.5\text{V}$	---	7	---	nC
Q_{gs}	Gate-Source Charge		---	2	---	
Q_{gd}	Gate-Drain Charge		---	2.8	---	
$T_{d(on)}$	Turn-On Delay Time	$V_{DS}=30\text{V}$, $R_{GEN}=25\Omega$ $I_D=0.2\text{A}$	---	18	---	ns
T_r	Rise Time		---	15	---	
$T_{d(off)}$	Turn-Off Delay Time		---	50	---	
T_f	Fall Time		---	10	---	
C_{iss}	Input Capacitance	$V_{DS}=25\text{V}$, $V_{GS}=0\text{V}$, $f=1\text{MHz}$	---	1000	---	pF
C_{oss}	Output Capacitance		---	90	---	
C_{rss}	Reverse Transfer Capacitance		---	80	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_{SD}	Diode Forward Voltage	$V_{GS}=0\text{V}$, $I_S=2\text{A}$	---	---	1.3	V

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 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

