

General Description

The CMN2808MD uses advanced trench technology to provide excellent RDS(ON) and low gate charge. This device is suitable for use as a load switch or in PWM applications. It is ESD protected.

Features

- RDS(ON)<20mΩ @ VGS=4.5V
- RDS(ON)<27mΩ @ VGS=2.5V
- SOT-23-3L Package
- ESD Protected: 2000V

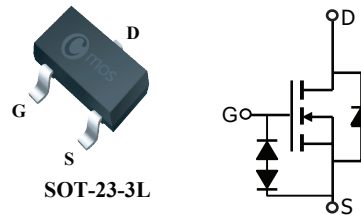
Product Summary

BVDSS	RDSON	ID
20V	20mΩ	8A

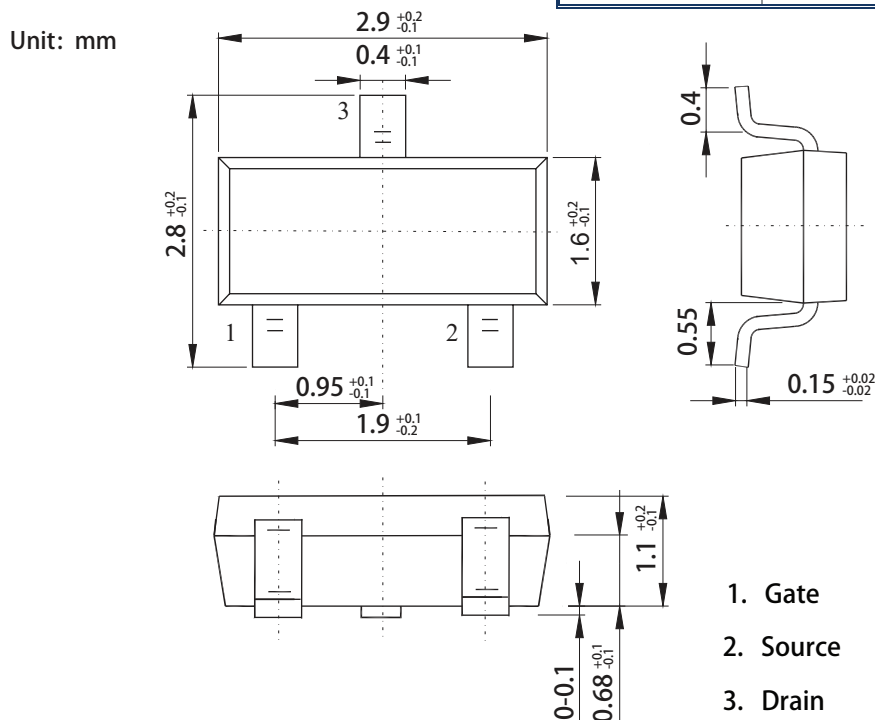
Applications

- PWM applications
- Load Switch
- Power Management
- PA Switch

SOT-23-3L Pin Configuration



Type	Package	Marking
CMN2808MD	SOT-23-3L	AO8M



N-Channel Enhancement Mode Field Effect Transistor

Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	20	V
V_{GS}	Gate-Source Voltage	± 10	V
I_D	Continuous Drain Current	8	A
I_{DM}	Pulsed Drain Current	32	A
$P_D @ T_A=25^\circ C$	Total Power Dissipation	1.4	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	Rating	Unit
$R_{\theta JA}$	Thermal Resistance Junction-ambient (PCB mounted)	125	$^\circ C/W$

Electrical Characteristics ($T_a=25^\circ C$, unless otherwise noted)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=250\mu A$	20	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	$V_{GS}=4.5V, I_D=6A$	---	---	20	m Ω
		$V_{GS}=2.5V, I_D=4.5A$	---	---	27	
$V_{GS(th)}$	Gate Threshold Voltage	$V_{GS}=V_{DS}, I_D=250\mu A$	0.5	---	1.5	V
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=20V, V_{GS}=0V$	---	---	1	μA
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 10V, V_{DS}=0V$	---	---	± 4	μA
Q_g	Total Gate Charge	$I_D=6.5A$	---	8	---	nC
Q_{gs}	Gate-Source Charge	$V_{DS}=10V$	---	1.2	---	
Q_{gd}	Gate-Drain Charge	$V_{GS}=4.5V$	---	2.2	---	
$T_{d(on)}$	Turn-On Delay Time	$V_{DS}=10V, I_D=1A$ $R_L=1.54\Omega$ $R_G=3\Omega$ $V_{GS}=4.5V$	---	6	---	ns
T_r	Rise Time		---	11	---	
$T_{d(off)}$	Turn-Off Delay Time		---	33	---	
T_f	Fall Time		---	12	---	
C_{iss}	Input Capacitance	$V_{DS}=10V, V_{GS}=0V, f=1MHz$	---	500	---	pF
C_{oss}	Output Capacitance		---	100	---	
C_{rss}	Reverse Transfer Capacitance		---	80	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_{SD}	Diode Forward Voltage	$V_{GS}=0V, I_S=1A$	---	---	1.2	V

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