

General Description

The CMN3J332M uses advanced trench technology to provide excellent RDS(ON). This device is suitable for use as a load switch or in PWM applications.

Features

- RDS(ON)<45mΩ @ VGS=-10V
- RDS(ON)<75mΩ @ VGS=-4.5V
- Simple drive requirement
- Surface mount package

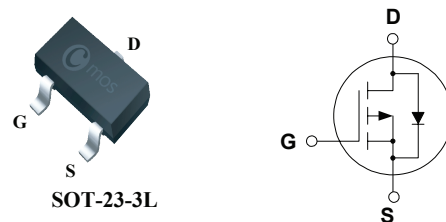
Product Summary

BVDSS	RDSON	ID
-30V	45mΩ	-6A

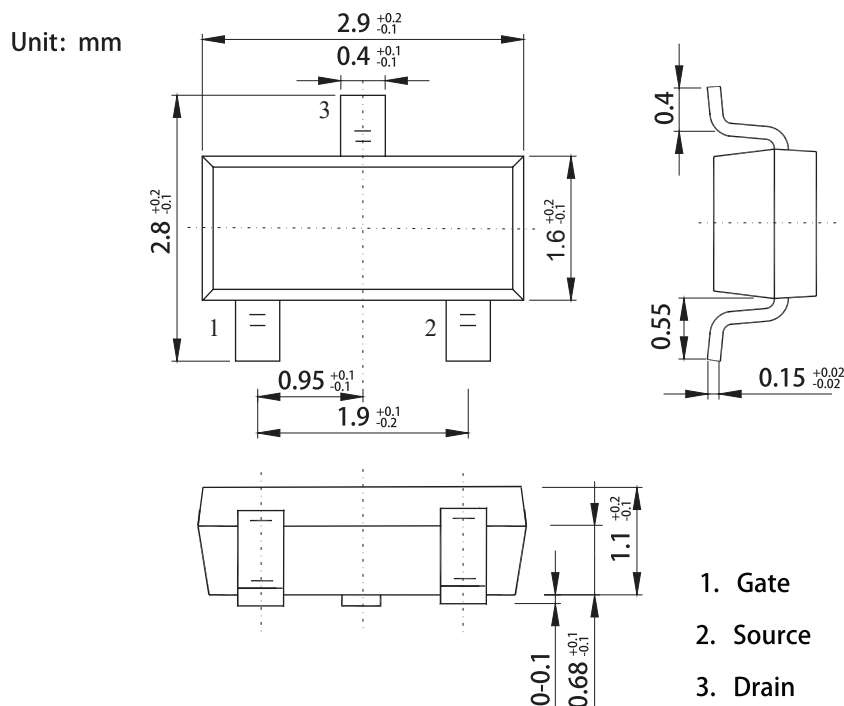
Applications

- PWM applications
- Load switch
- Power management
- PA Switch

SOT-23-3L Pin Configuration



Type	Package	Marking
CMN3J332M	SOT-23-3L	KFJ



P-Channel Enhancement Mode Field Effect Transistor

Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	-30	V
V_{GS}	Gate-Source Voltage	± 20	V
$I_D@T_C=25^\circ C$	Continuous Drain Current	-6	A
I_{DM}	Pulsed Drain Current	-18	A
$P_D@T_C=25^\circ C$	Total Power Dissipation	1	W
T_{STG}	Storage Temperature Range	-55 to 150	$^\circ C$
T_J	Operating Junction Temperature Range	150	$^\circ C$

Thermal Data

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

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

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=-250\mu A$	-30	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	$V_{GS}=-10V, I_D=-7A$	---	40	45	m Ω
		$V_{GS}=-4.5V, I_D=-5A$	---	64	75	
$V_{GS(th)}$	Gate Threshold Voltage	$V_{GS}=V_{DS}, I_D=-250\mu A$	-1	---	-3	V
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=-24V, V_{GS}=0V$	---	---	-1	μA
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 20V, V_{DS}=0V$	---	---	± 100	nA
g_{fs}	Forward Transconductance	$V_{DS}=-5V, I_D=-3A$	---	7	---	S
Q_g	Total Gate Charge	$I_D=-6A$	---	15	---	nC
Q_{gs}	Gate-Source Charge	$V_{DS}=-15V$	---	2	---	
Q_{gd}	Gate-Drain Charge	$V_{GS}=-10V$	---	3.8	---	
$T_{d(on)}$	Turn-On Delay Time	$V_{DS}=-15V$	---	9	---	ns
T_r	Rise Time	$R_G=3\Omega$	---	5	---	
$T_{d(off)}$	Turn-Off Delay Time	$V_{GS}=-10V$	---	30	---	
T_f	Fall Time	$R_L=2.5\Omega$	---	14	---	
C_{iss}	Input Capacitance	$V_{DS}=-15V, V_{GS}=0V, f=1MHz$	---	900	---	pF
C_{oss}	Output Capacitance		---	500	---	
C_{rss}	Reverse Transfer Capacitance		---	300	---	

Diode Characteristics

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

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