

General Description

The CMN3621M uses advanced trench technology to provide excellent $R_{DS(ON)}$. This device is suitable for use as a load switch or in PWM applications.

Features

- $R_{DS(ON)} < 29m\Omega$ @ $V_{GS} = -10V$
- $R_{DS(ON)} < 45m\Omega$ @ $V_{GS} = -4.5V$
- Simple drive requirement
- Surface mount package

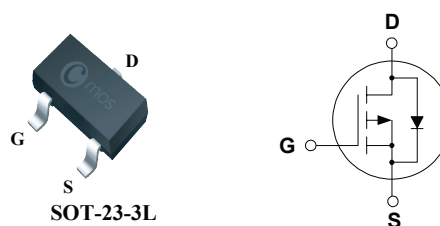
Product Summary

BVDSS	$R_{DS(ON)}$	ID
-30V	29m Ω	-7A

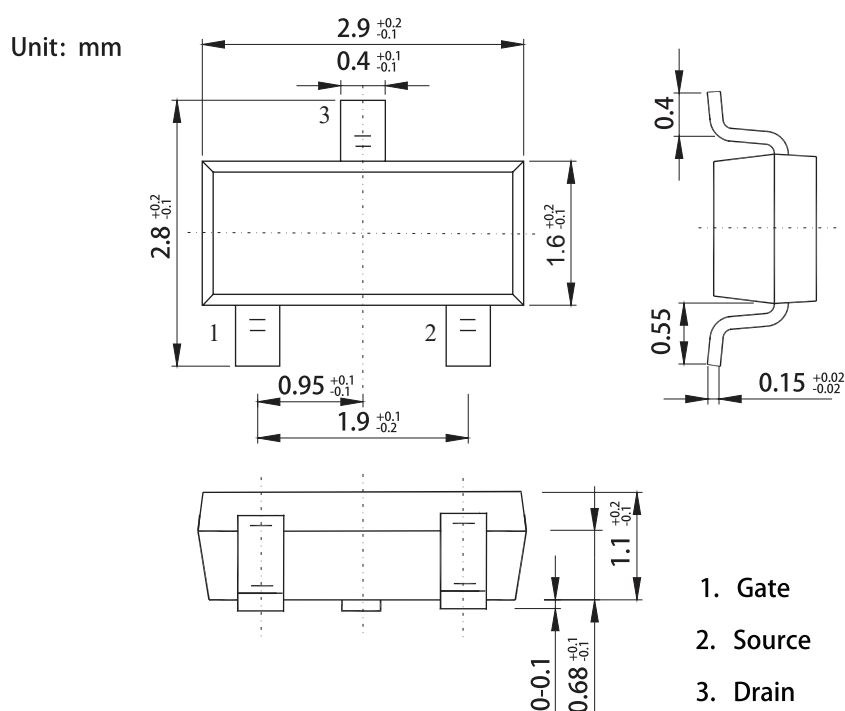
Applications

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

SOT-23-3L Pin Configuration



Type	Package	Marking
CMN3621M	SOT-23-3L	3621M



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
$I_{D@T_A=25^\circ C}$	Continuous Drain Current	-7	A
I_{DM}	Pulsed Drain Current	-21	A
$P_{D@T_A=25^\circ C}$	Total Power Dissipation	1.5	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	---	83	$^\circ C/W$

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

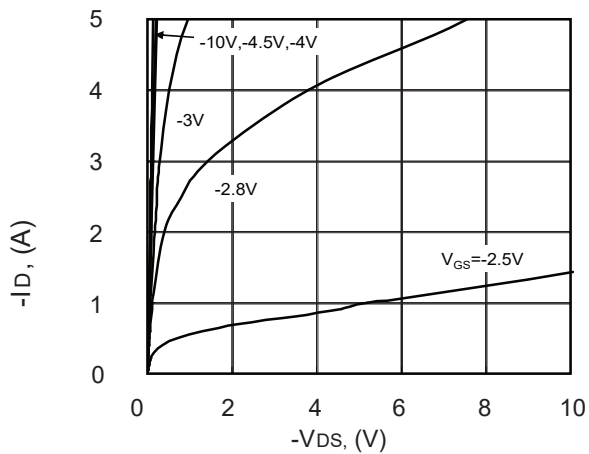
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V, I_D=-250\mu A$	-30	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	$V_{GS}=-10V, I_D=-5A$	---	26	29	$m\Omega$
		$V_{GS}=-4.5V, I_D=-4A$	---	37	45	
$V_{GS(th)}$	Gate Threshold Voltage	$V_{GS}=V_{DS}, I_D=-250\mu A$	-1	---	-2.5	V
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=-30V, V_{GS}=0V$	---	---	-1	μA
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 20V, V_{DS}=0V$	---	---	± 100	nA
g_{fs}	Forward Transconductance	$V_{DS}=-5V, I_D=-4A$	---	9	---	S
Q_g	Total Gate Charge	$I_D=-5A$	---	13	---	nC
Q_{gs}	Gate-Source Charge	$V_{DD}=-15V$	---	3.5	---	
Q_{gd}	Gate-Drain Charge	$V_{GS}=-5V$	---	4.5	---	
$T_{d(on)}$	Turn-On Delay Time	$V_{DD}=-15V, I_D=-2.5A$	---	10	---	ns
T_r	Rise Time	$R_G=10\Omega$	---	15	---	
$T_{d(off)}$	Turn-Off Delay Time	$V_{GS}=-10V$	---	90	---	
T_f	Fall Time	$R_L=6\Omega$	---	50	---	
C_{iss}	Input Capacitance	$V_{DS}=-25V, V_{GS}=0V, f=1MHz$	---	950	---	pF
C_{oss}	Output Capacitance		---	100	---	
C_{rss}	Reverse Transfer Capacitance		---	95	---	

Diode Characteristics

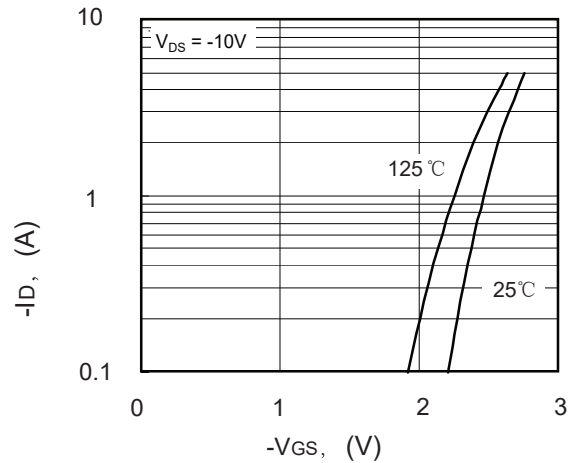
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_{SD}	Diode Forward Voltage	$V_{GS}=0V, I_S=-6A$	---	-0.89	-1.2	V

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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.

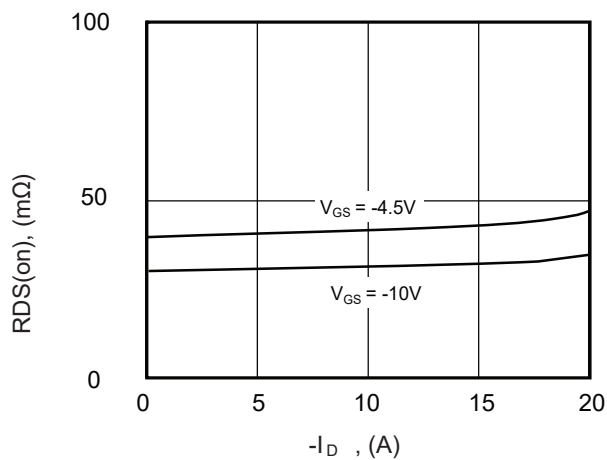
Typical Characteristics



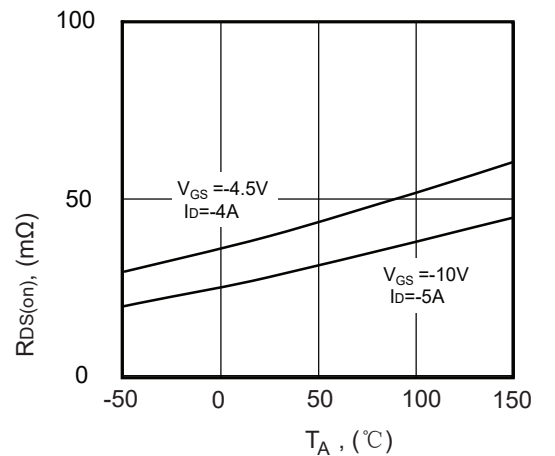
Typical Output Characteristics



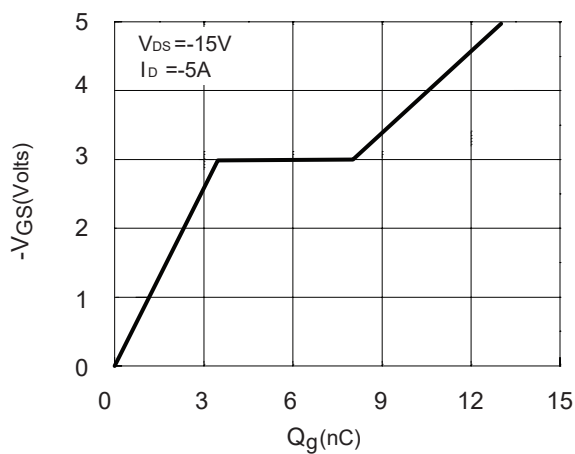
Transfer characteristics



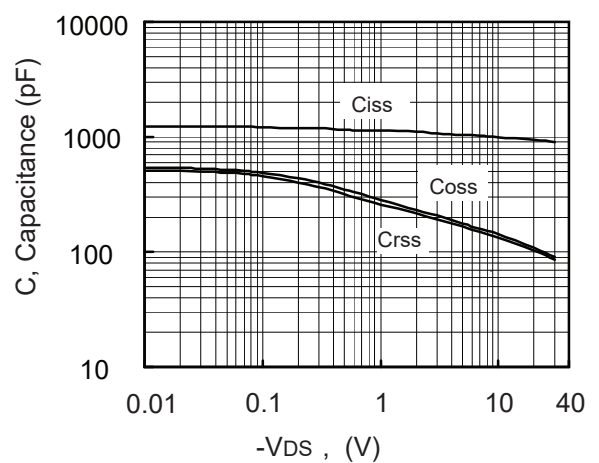
On-Resistance vs. Drain Current



On-Resistance vs. Ambient temperature



Gate Charge Characteristics



Capacitance Characteristics