

Dual N-Channel Enhancement Mode MOSFET

General Description

The CMS4828T uses advanced Technology, which provides low on-state resistance, high switching performance and excellent reliability.

Features

- $R_{DS(ON)} < 18m\Omega$ @ $V_{GS}=10V$
- $R_{DS(ON)} < 24m\Omega$ @ $V_{GS}=4.5V$
- Dual MOSFET in surface mount package.
- Super high density cell design for extremely low $R_{DS(ON)}$.

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	12	A
I_{DM}	Pulsed Drain Current	36	A
$P_D @ T_A = 25^\circ C$	Total Power Dissipation	3.7	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	Typ.	Max.	Unit
$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient (PCB mounted)	---	62.5	$^\circ C/W$

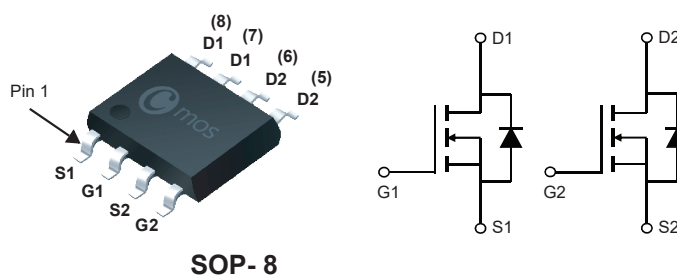
Product Summary

BVDSS	RDSON	ID
60V	18m Ω	12A

Applications

- Inverters
- Power Management
- DC/DC Converter
- LCD TV & Monitor Display inverter

SOP-8 Pin Configuration



Type	Package	Marking
CMS4828T	SOP- 8	CMS4828T

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

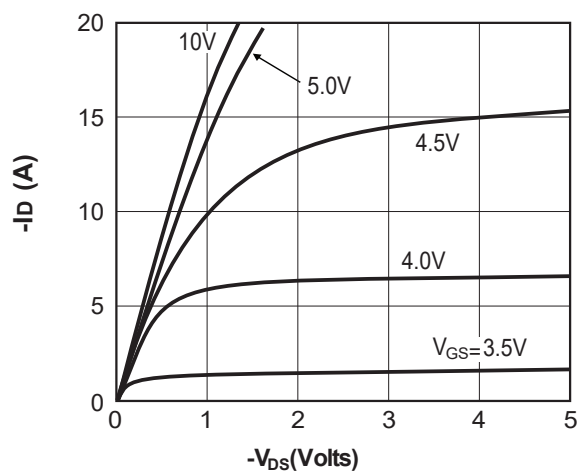
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V$, $I_D=250\mu A$	60	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	$V_{GS}=10V$, $I_D=5A$	---	---	18	m Ω
		$V_{GS}=4.5V$, $I_D=3A$	---	---	24	
$V_{GS(th)}$	Gate Threshold Voltage	$V_{GS}=V_{DS}$, $I_D=250\mu A$	1	---	3	V
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=60V$, $V_{GS}=0V$	---	---	1	μA
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 20V$, $V_{DS}=0V$	---	---	± 100	nA
g_{fs}	Forward Transconductance	$V_{DS}=10V$, $I_D=5A$	---	13	---	S
Q_g	Total Gate Charge	$V_{DS}=30V$, $V_{GS}=10V$, $I_D=8A$	---	8.5	---	nC
Q_{gs}	Gate-Source Charge		---	1.5	---	
Q_{gd}	Gate-Drain Charge		---	2.2	---	
$T_{d(on)}$	Turn-On Delay Time	$V_{DS}=30V$, $V_{GS}=10V$, $R_L=6.7\Omega$ $R_G=3\Omega$	---	4.5	---	ns
T_r	Rise Time		---	2.3	---	
$T_{d(off)}$	Turn-Off Delay Time		---	16	---	
T_f	Fall Time		---	2	---	
C_{iss}	Input Capacitance	$V_{DS}=30V$, $V_{GS}=0V$, $f=1MHz$	---	1500	---	pF
C_{oss}	Output Capacitance		---	60	---	
C_{rss}	Reverse Transfer Capacitance		---	30	---	

Diode Characteristics

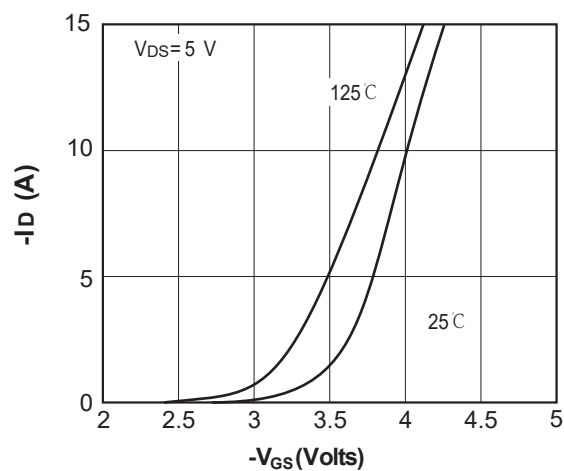
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_{SD}	Diode Forward Voltage	$V_{GS}=0V$, $I_S=6A$	---	---	1.2	V

This product has been designed and qualified for the consumer market.
 Cmos assumes no liability for customers' product design or applications.
 Cmos reserves the right to improve product design ,functions and reliability without notice.

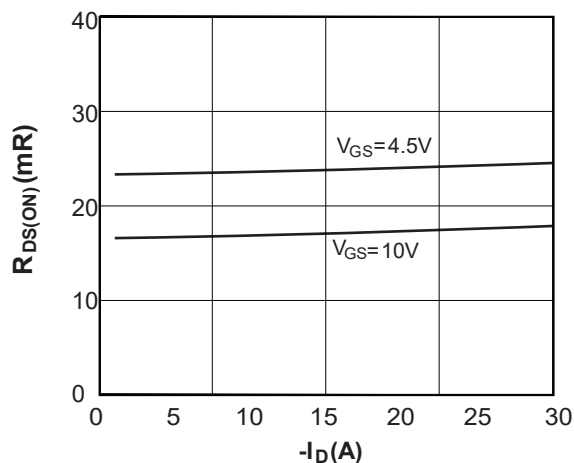
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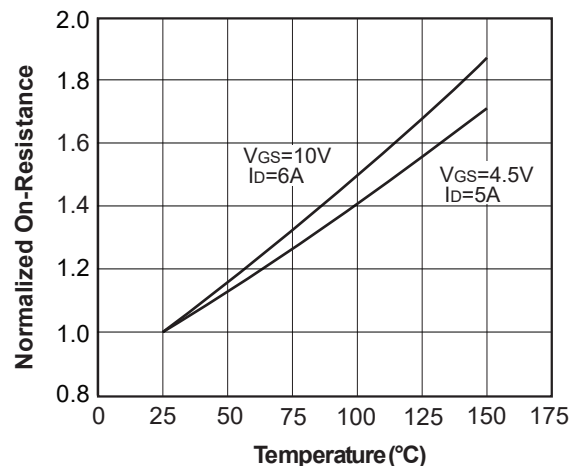
On-Region Characteristics



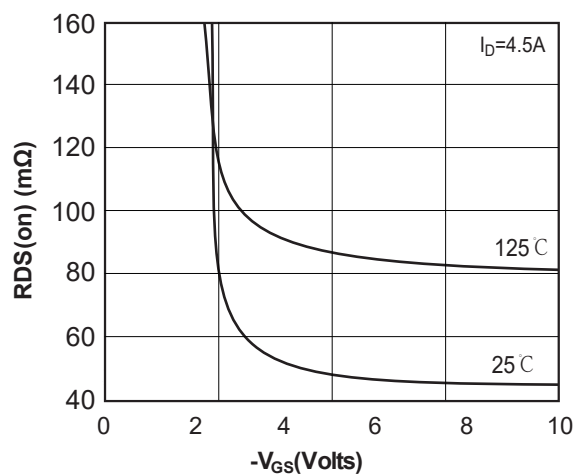
Transfer Characteristics



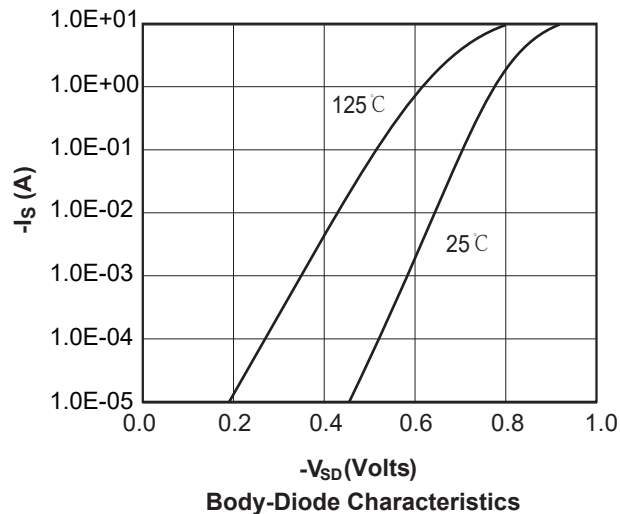
On-Resistance vs. Drain Current and Gate Voltage



On-Resistance vs. Junction Temperature



On-Resistance vs. Gate-Source Voltage



Body-Diode Characteristics

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