

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

- Low On-Resistance
- Simple Drive Requirements
- Dual MOSFET in surface mount package
- RoHS Compliant

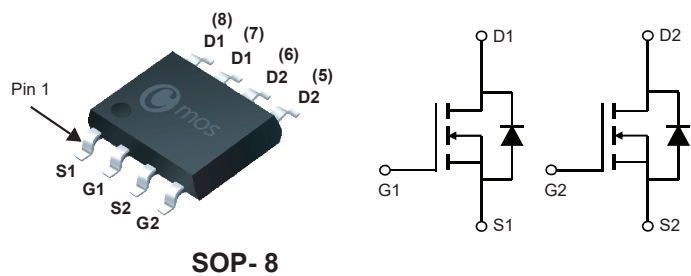
Product Summary

BVDSS	R _{DS(on)} max.	ID
60V	18mΩ	12A

Applications

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

SOP-8 Pin Configuration



Type	Package	Marking
CMS4828T	SOP- 8	CMS4828T

Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V _{DS}	Drain-Source Voltage	60	V
V _{GS}	Gate-Source Voltage	±20	V
I _D @T _A =25°C	Continuous Drain Current	12	A
I _D @T _A =70°C	Continuous Drain Current	8	A
I _{DM}	Pulsed Drain Current	48	A
EAS	Single Pulse Avalanche Energy ¹	136	mJ
P _D @T _C =25°C	Total Power Dissipation	3.7	W
T _{STG}	Storage Temperature Range	-55 to 150	°C
T _J	Operating Junction Temperature Range	-55 to 150	°C

Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
R _{θJA}	Thermal Resistance, Junction-to-Ambient (PCB mounted)	---	50	°C/W

Electrical Characteristics (T_J=25°C , unless otherwise noted)

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV _{DSS}	Drain-Source Breakdown Voltage	V _{GS} =0V , I _D =250μA	60	---	---	V
R _{DS(ON)}	Static Drain-Source On-Resistance	V _{GS} =10V , I _D =5A	---	---	18	mΩ
		V _{GS} =4.5V , I _D =3A	---	---	20	
V _{GS(th)}	Gate Threshold Voltage	V _{GS} =V _{DS} , I _D =250μA	1	---	3	V
I _{DSS}	Drain-Source Leakage Current	V _{DS} =60V , V _{GS} =0V	---	---	1	uA
I _{GSS}	Gate-Source Leakage Current	V _{GS} =±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} =48V , V _{GS} =4.5V , I _D =6A	---	18.9	---	nC
Q _{gs}	Gate-Source Charge		---	7.8	---	
Q _{gd}	Gate-Drain Charge		---	6.3	---	
T _{d(on)}	Turn-On Delay Time	V _{DS} =30V , V _{GS} =10V R _G =3.3Ω , I _D =6A	---	7.7	---	ns
T _r	Rise Time		---	52	---	
T _{d(off)}	Turn-Off Delay Time		---	37	---	
T _f	Fall Time		---	10	---	
C _{iss}	Input Capacitance	V _{DS} =25V , V _{GS} =0V , f=1MHz	---	2500	---	pF
C _{oss}	Output Capacitance		---	130	---	
C _{rss}	Reverse Transfer Capacitance		---	100	---	

Diode Characteristics

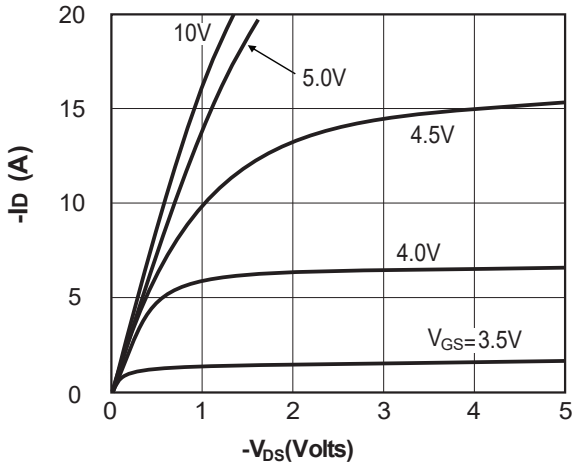
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V _{SD}	Diode Forward Voltage	V _{GS} =0V , I _S =6A	---	---	1.2	V

Note :

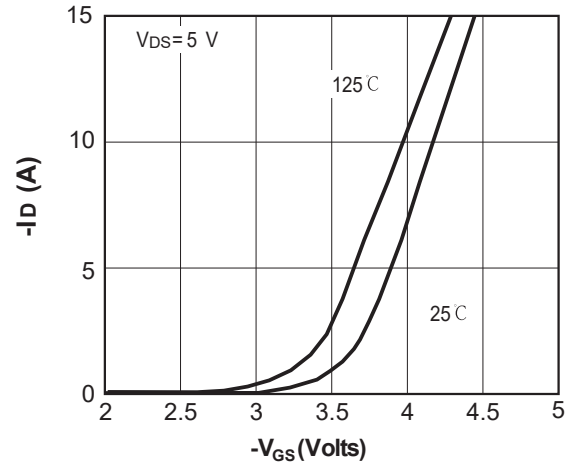
1.The EAS data shows Max. rating . The test condition is V_{DD}=30V , V_{GS}=10V , L=1mH , I_{AS} =16.5A.

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.Please refer to the latest version of specification.

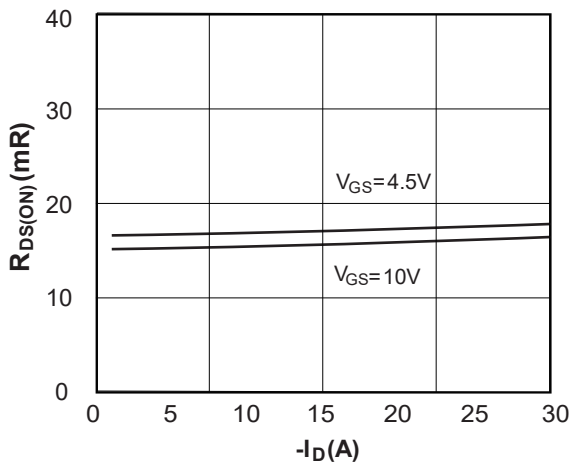
Typical Characteristics



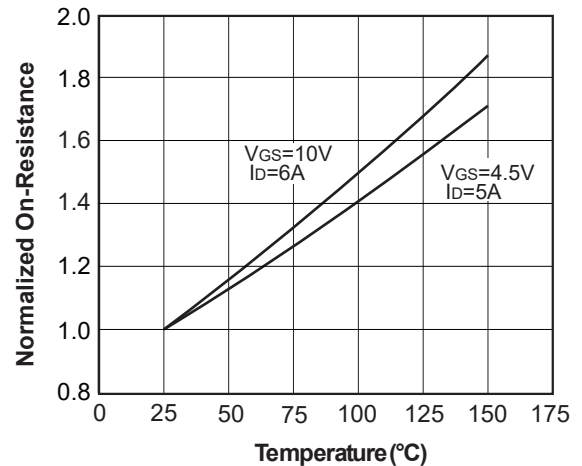
On-Region Characteristics



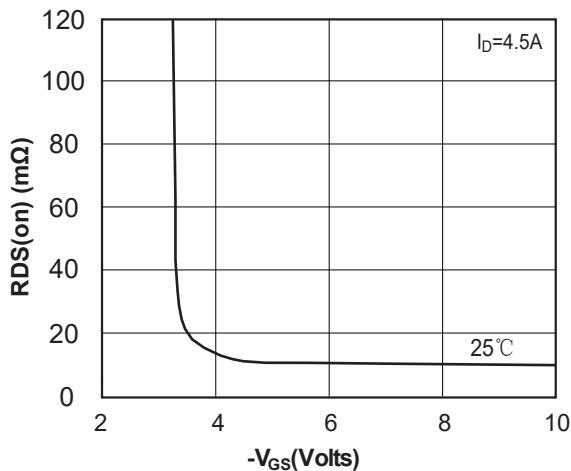
Transfer Characteristics



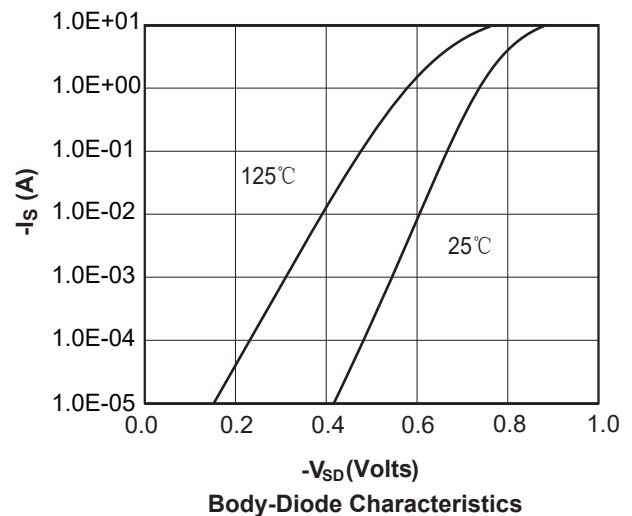
On-Resistance vs. Drain Current and Gate Voltage



On-Resistance vs. Junction Temperature

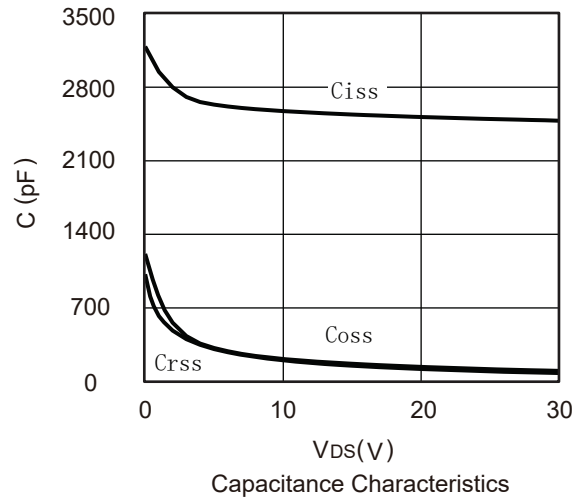
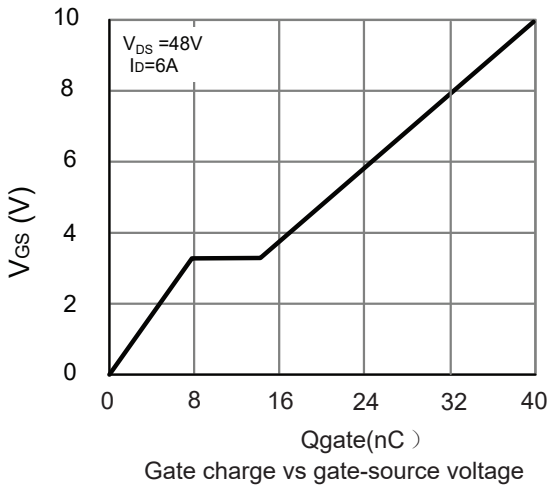


On-Resistance vs. Gate-Source Voltage



Body-Diode Characteristics

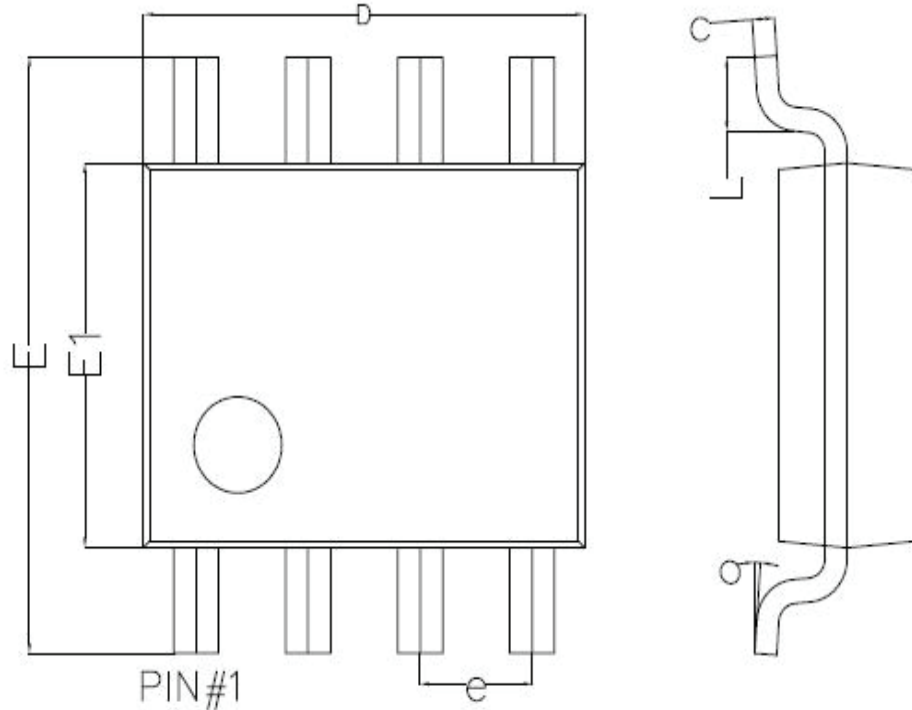
Typical Characteristics



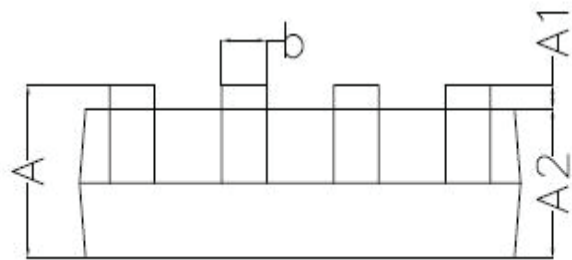
Package Dimension

SOP-8

Unit :mm



GAUGE PLANE



Symbol	Dim in mm		
	Min	Nor	Max
A	1.35	1.55	1.75
A1	0.02	0.065	0.10
A2	1.35	1.45	1.55
b	0.33	0.42	0.51
c	0.17	0.21	0.25
D	4.80	4.90	5.00
e	1.270 (BSC)		
E	5.80	6.00	6.20
E1	3.80	3.90	4.00
L	0.4	0.835	1.27
θ	0°	4°	8°