CMS4828T

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.

Product Summary

BVDSS	RDSON	ID
60V	18mΩ	12A

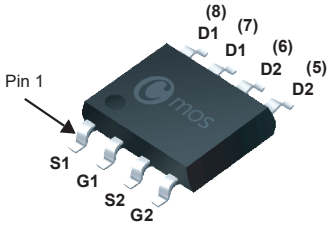
Applications

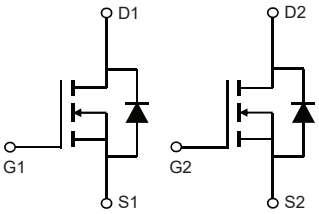
- Inverters
- Power Management
- DC/DC Converter
- LCD TV & Monitor Display inverter

Features

- RDS(ON)<18mΩ @ VGS=10V
- RDS(ON)<24mΩ @ VGS=4.5V
- Dual MOSFET in surface mount package.
- Super high density cell design for extremely low RDS(ON).

SOP-8 Pin Configuration





SOP- 8

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	Continuous Drain Current	12	A
I_{DM}	Pulsed Drain Current	36	A
P_D@T_A=25℃	Total Power Dissipation	3.7	W
T_{STG}	Storage Temperature Range	-55 to 150	℃
T_J	Operating Junction Temperature Range	-55 to 150	℃

Thermal Data

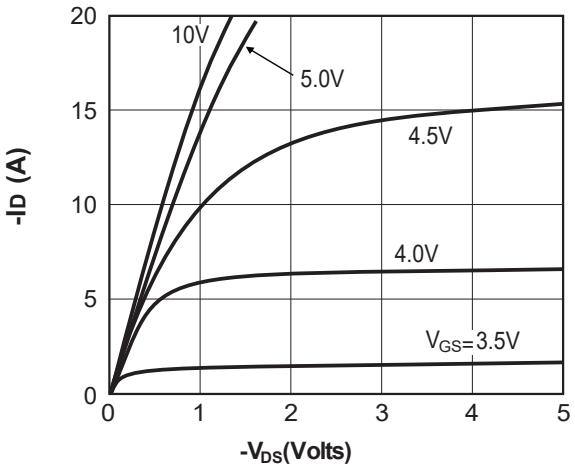
Symbol	Parameter	Typ.	Max.	Unit
$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient (PCB mounted)	---	62.5	℃/W

Electrical Characteristics (T_J=25℃ , unless otherwise noted)

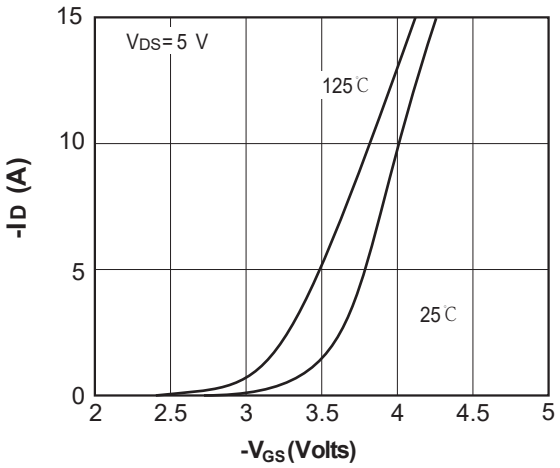
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{DSS}	Drain-Source Breakdown Voltage	V_{GS}=0V , I_D=250μA	60	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	V_{GS}=10V , I_D=5A	---	---	18	mΩ
		V_{GS}=4.5V , I_D=3A	---	---	24	
$V_{GS(th)}$	Gate Threshold Voltage	V_{GS}=V_{DS} , I_D =250μA	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
gfs	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 =6.7Ω R_G=3Ω	---	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

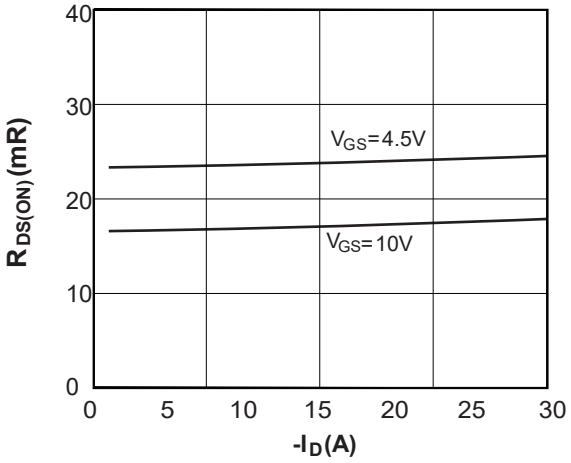
Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_{SD}	Diode Forward Voltage	V_{GS}=0V , I_S=6A	---	---	1.2	V



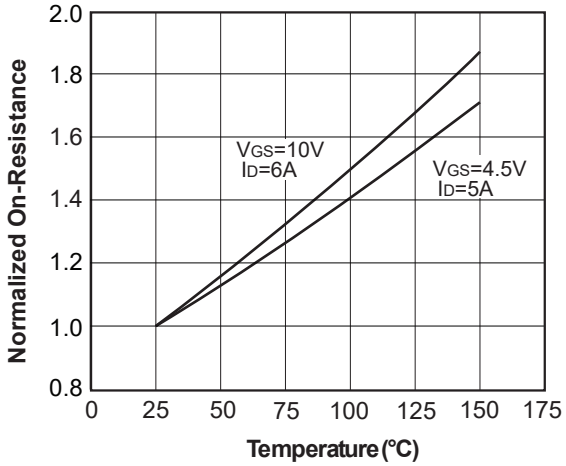
On-Region Characteristics



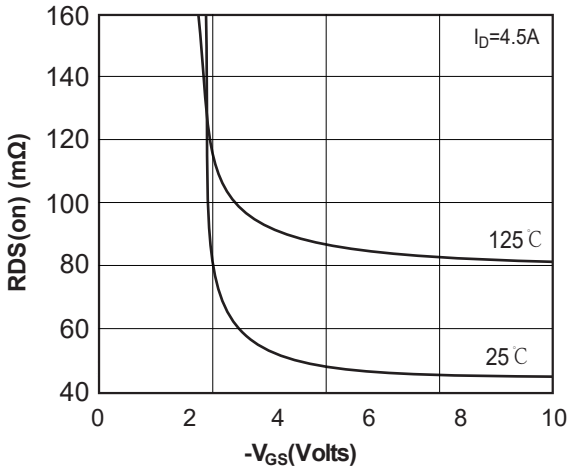
Transfer Characteristics



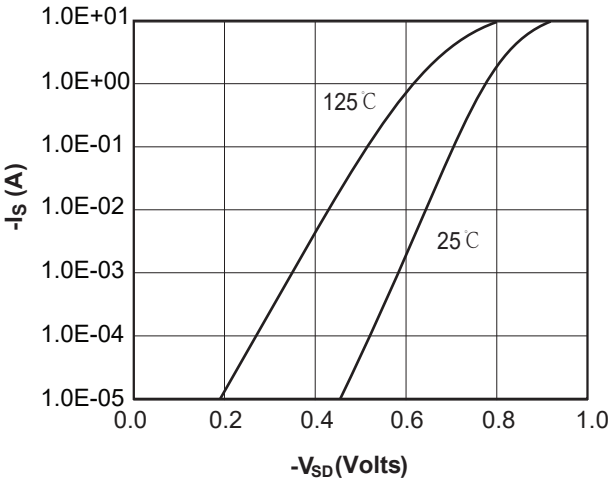
On-Resistance vs. Drain Current and Gate Voltage



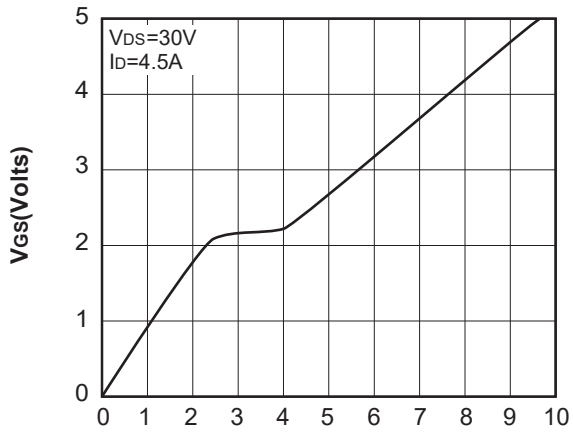
On-Resistancevs. JunctionTemperature



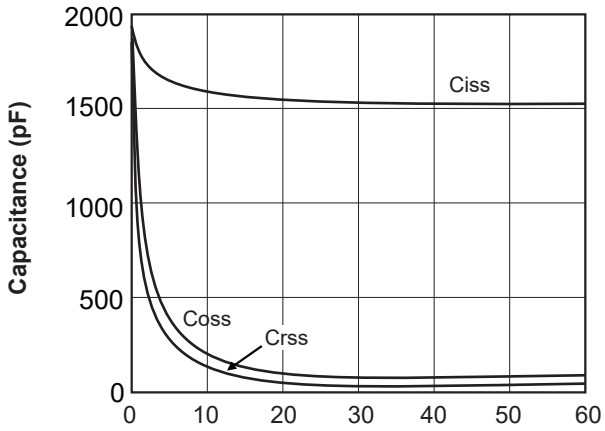
On-Resistance vs. Gate-Source Voltage



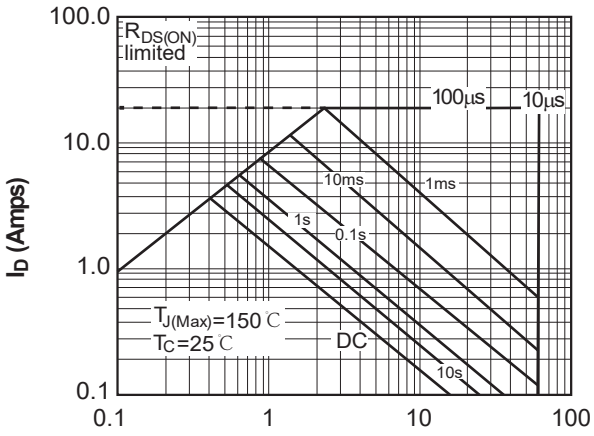
Body-Diode Characteristics



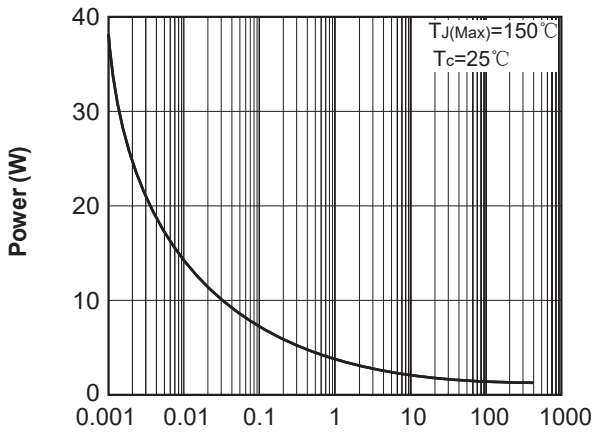
Gate-Charge Characteristics



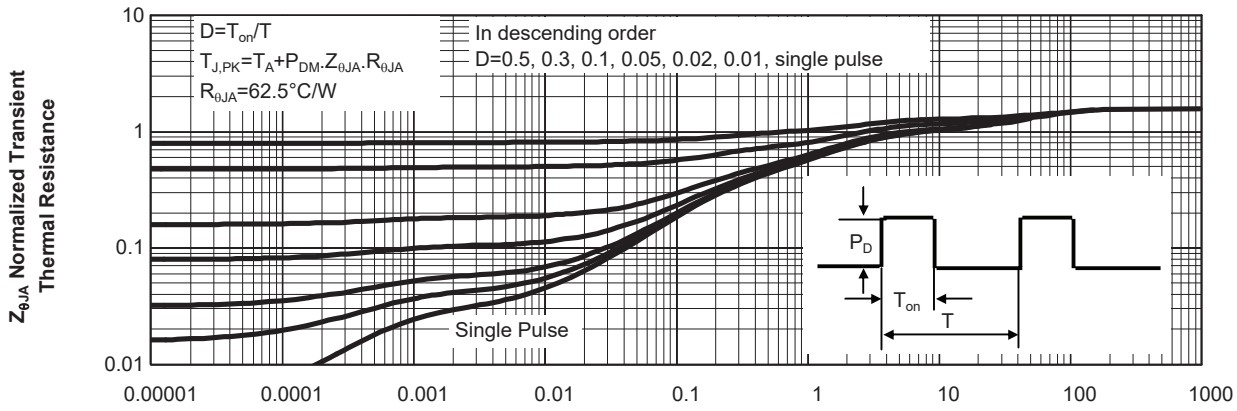
Capacitance Characteristics



Maximum Forward Biased Safe Operating Area



Single Pulse Power Rating Junction-to-Case



Normalized Maximum Transient Thermal Impedance