

General Description

The CMS9475 uses advanced trench technology to provide excellent RDS(ON) and low gate charge. This device is suitable for use as a load switch or in PWM applications.

Features

- RDS(ON)≤41mΩ @ VGS=10V
- RDS(ON)≤52mΩ @ VGS=4.5V
- Surface mount package.
- High Density Cell Design For Ultra Low On Resistance

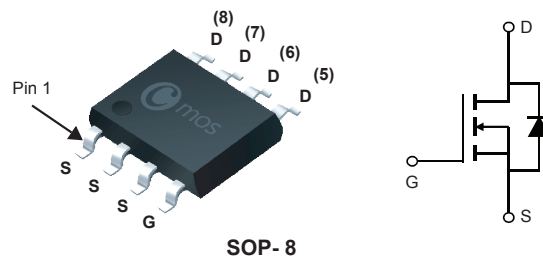
Product Summary

BVDSS	RDSON	ID
60V	41mΩ	6.5A

Applications

- Inverter Switch
- Synchronous Rectifier
- Load Switch
- DC/DC Converter

SOP-8 Pin Configuration



Type	Package	Marking
CMS9475	SOP- 8	CMS9475

Absolute Maximum Ratings (TA=25°C Unless Otherwise Noted)

Symbol	Parameter	Rating	Units
V _{DS}	Drain-Source Voltage	60	V
V _{GS}	Gate-Source Voltage	±20	V
I _D	Continuous Drain Current	6.5	A
I _{DM}	Pulsed Drain Current	30	A
P _{D@TA=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)	---	62.5	°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 =5.3A	---	---	41	mΩ
		V _{GS} =4.5V, I _D =4.7A	---	---	52	
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} =15V, I _D =5.3A	---	10	---	S
Q _g	Total Gate Charge	V _{DS} =30V, V _{GS} =10V, I _D =5.3A	---	22	---	nC
Q _{gs}	Gate-Source Charge		---	7.1	---	
Q _{gd}	Gate-Drain Charge		---	7.5	---	
T _{d(on)}	Turn-On Delay Time	V _{DD} =30V, V _{GEN} =10V, R _L =6.8Ω R _G =1Ω, I _D =4.4A	---	13	---	ns
T _r	Rise Time		---	25	---	
T _{d(off)}	Turn-Off Delay Time		---	40	---	
T _f	Fall Time		---	3.5	---	
C _{iss}	Input Capacitance	V _{DS} =15V, V _{GS} =0V, f=1MHz	---	930	---	pF
C _{oss}	Output Capacitance		---	72	---	
C _{rss}	Reverse Transfer Capacitance		---	80	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V _{SD}	Diode Forward Voltage	V _{GS} =0V, I _S =2A	---	---	1.2	V

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