

General Description

The CMS9435SC uses advanced trench technology to provide excellent RDS(ON). This device is suitable for use as a load switch or in PWM applications.

Features

- P-Channel MOSFET
- Low ON-resistance
- Surface Mount Package
- RoHS Compliant

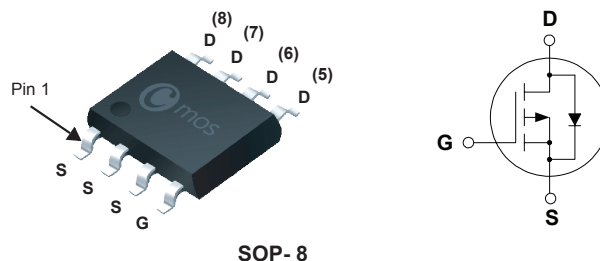
Product Summary

BVDSS	RDSON	ID
-30V	60mΩ	-5.3A

Applications

- Load switch
- Power management
- Battery protection

SOP-8 Pin Configuration



SOP-8

Type	Package	Marking
CMS9435SC	SOP- 8	CMS9435SC

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ Unless Otherwise Noted)

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	-30	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Continuous Drain Current	-5.3	A
I_{DM}	Pulsed Drain Current	-20	A
$P_D@T_A=25^\circ\text{C}$	Total Power Dissipation	2.5	W
T_{STG}	Storage Temperature Range	-55 to 150	$^\circ\text{C}$
T_J	Operating Junction Temperature Range	-55 to 150	$^\circ\text{C}$

Thermal Data

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

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

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{DS}	Drain-Source Breakdown Voltage	$V_{GS}=0V$, $I_D=-250\mu A$	-30	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	$V_{GS}=-10V$, $I_D=-5.3A$	---	50	60	$m\Omega$
		$V_{GS}=-4.5V$, $I_D=-4.2A$	---	70	90	
$V_{GS(th)}$	Gate Threshold Voltage	$V_{GS}=V_{DS}$, $I_D = -250\mu A$	-1	---	-3	V
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=-24V$, $V_{GS}=0V$	---	---	-1	μA
I_{GSS}	Gate-Source Leakage Current	$V_{GS} = \pm 20V$, $V_{DS}=0V$	---	---	± 100	nA
g_{fs}	Forward Transconductance	$V_{DS}=-10V$, $I_D=-5.3A$	---	10	---	S
Q_g	Total Gate Charge	$V_{DS}=-15V$, $V_{GS}=-10V$, $I_D=-5.3A$	---	28	---	nC
Q_{gs}	Gate-Source Charge		---	3	---	
Q_{gd}	Gate-Drain Charge		---	7	---	
$T_{d(on)}$	Turn-On Delay Time	$V_{DS}=-15V$, $V_{GEN}=-10V$, $R_L=15\Omega$ $R_G=6\Omega$, $I_D=-1A$	---	10	---	ns
T_r	Rise Time		---	15	---	
$T_{d(off)}$	Turn-Off Delay Time		---	75	---	
T_f	Fall Time		---	40	---	
C_{iss}	Input Capacitance	$V_{DS}=-15V$, $V_{GS}=0V$, $f=1MHz$	---	750	---	pF
C_{oss}	Output Capacitance		---	440	---	
C_{rss}	Reverse Transfer Capacitance		---	120	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_{SD}	Diode Forward Voltage	$V_{GS}=0V$, $I_{SD}=-2.6A$	---	---	-1.3	V

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