

General Description

The CME6P03 uses advanced process technology and design to provide excellent RDS(ON). This device is suitable for most of the synchronous buck converter applications.

Features

- P-Channel
- Low ON-resistance.
- 100% avalanche tested
- RoHS Compliant

Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V_{DS}	Drain-Source Voltage	-30	V
V_{GS}	Gate-Source Voltage	± 12	V
$I_D@T_A=25^\circ\text{C}$	Continuous Drain Current	-5.5	A
$I_D@T_A=70^\circ\text{C}$	Continuous Drain Current	-3.8	A
I_{DM}	Pulsed Drain Current	-22	A
$P_D@T_C=25^\circ\text{C}$	Total Power Dissipation	1.5	W
T_{STG}	Storage Temperature Range	-55 to 150	$^\circ\text{C}$
T_J	Operating Junction Temperature Range	150	$^\circ\text{C}$

Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
$R_{\theta JA}$	Thermal Resistance Junction-ambient	---	83	$^\circ\text{C}/\text{W}$
$R_{\theta JC}$	Thermal Resistance Junction-case	---	30	$^\circ\text{C}/\text{W}$

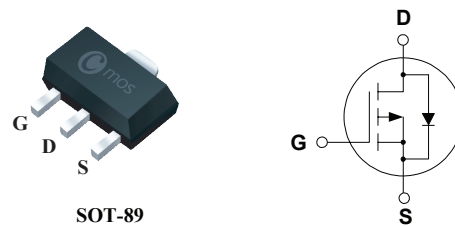
Product Summary

BVDSS	RDSON	ID
-30V	57m Ω	-5.5A

Applications

- Load Switch
- Networking DC-DC Power System
- High Frequency Point-of-Load Synchronous Buck Converter

SOT-89 Pin Configuration



Type	Package	Marking
CME6P03	SOT-89	6P03

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 =-250uA	-30	---	---	V
R _{DS(ON)}	Static Drain-Source On-Resistance	V _{GS} =-10V , I _D =-4A	---	50	57	mΩ
		V _{GS} =-4.5V , I _D =-4A	---	58	65	
		V _{GS} =-2.5V , I _D =-2A	---	74	88	
V _{GS(th)}	Gate Threshold Voltage	V _{GS} =V _{DS} , I _D =-250 uA	-0.5	---	-1.5	V
I _{DSS}	Drain-Source Leakage Current	V _{DS} =-24V , V _{GS} =0V	---	---	-1	uA
I _{GSS}	Gate-Source Leakage Current	V _{GS} = ±12V , V _{DS} =0V	---	---	±100	nA
g _{fs}	Forward Transconductance	V _{DS} =-5V , I _D =-3A	---	6	---	S
Q _g	Total Gate Charge	I _D =-5.5A	---	15	---	nC
Q _{gs}	Gate-Source Charge	V _{DS} =-15V	---	2	---	
Q _{gd}	Gate-Drain Charge	V _{GS} =-10V	---	3	---	
T _{d(on)}	Turn-On Delay Time	V _{DD} =-15V	---	10	---	ns
T _r	Rise Time	I _D =-1A	---	15	---	
T _{d(off)}	Turn-Off Delay Time	R _G =6Ω	---	30	---	
T _f	Fall Time	V _{GS} =-10V	---	7	---	
C _{iss}	Input Capacitance	V _{DS} =0V , V _{GS} =0V , f=1MHz	---	1100	---	pF
C _{oss}	Output Capacitance		---	480	---	
C _{rss}	Reverse Transfer Capacitance		---	100	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I _S	Continuous Source Current	V _G =V _D =0V , Force Current	---	---	-5.5	A
I _{SM}	Pulsed Source Current		---	---	-22	A
V _{SD}	Diode Forward Voltage	V _{GS} =0V , I _S =-1A	---	-0.76	-1.2	V

Notes:

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.

Typical Characteristics

