

-40V, 35mΩ typ., -8A P-Channel MOSFET**General Description**

The CME12P04 uses advanced process technology and design to achieve excellent RDS(on). It can be used in a wide variety of applications.

Features

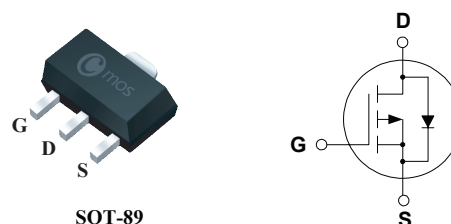
- P-Channel
- Low ON-resistance.
- RoHS Compliant

Product Summary

BVDSS	RDS(on) max.	ID
-40V	42mΩ	-8A

Applications

- Load Switch
- Power Management
- PWM Applications

SOT-89 Pin Configuration

Type	Package	Marking
CME12P04	SOT-89	12P04

Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V _{DS}	Drain-Source Voltage	-40	V
V _{GS}	Gate-Source Voltage	±20	V
I _D @T _A =25°C	Continuous Drain Current	-8	A
I _D @T _A =70°C	Continuous Drain Current	-5.2	A
I _{DM}	Pulsed Drain Current	-32	A
P _D @T _A =25°C	Total Power Dissipation	2	W
T _{STG}	Storage Temperature Range	-55 to 150	°C
T _J	Operating Junction Temperature Range	150	°C

Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
R _{θJA}	Thermal Resistance Junction-ambient	---	62.5	°C/W
R _{θJC}	Thermal Resistance Junction-case	---	38	°C/W

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

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
BV_{DSS}	Drain-Source Breakdown Voltage	$V_{GS}=0V$, $I_D=-250\mu A$	-40	---	---	V
$R_{DS(ON)}$	Static Drain-Source On-Resistance	$V_{GS}=-10V$, $I_D=-6A$	---	35	42	mΩ
		$V_{GS}=-4.5V$, $I_D=-4A$	---	46	65	
$V_{GS(th)}$	Gate Threshold Voltage	$V_{GS}=V_{DS}$, $I_D=-250\mu A$	-1	---	-3	V
I_{DSS}	Drain-Source Leakage Current	$V_{DS}=-40V$, $V_{GS}=0V$	---	---	-1	uA
I_{GSS}	Gate-Source Leakage Current	$V_{GS}=\pm 20V$, $V_{DS}=0V$	---	---	± 100	nA
g_{fs}	Forward Transconductance	$V_{DS}=-10V$, $I_D=-6A$	---	7	---	S
R_g	Gate Resistance	$V_{DS}=0V$, $V_{GS}=0V$, $f=1MHz$	---	70	---	Ω
Q_g	Total Gate Charge	$V_{DS}=-20V$, $V_{GS}=-4.5V$, $I_D=-12A$ (Note 1)	---	9.3	---	nC
Q_{gs}	Gate-Source Charge		---	3	---	
Q_{gd}	Gate-Drain Charge		---	3.5	---	
$T_{d(on)}$	Turn-On Delay Time	$V_{DD}=-15V$, $V_{GS}=-10V$, $I_D=-1A$ $R_{GEN}=3.3\Omega$ (Note 1)	---	20	---	ns
T_r	Rise Time		---	13	---	
$T_{d(off)}$	Turn-Off Delay Time		---	47	---	
T_f	Fall Time		---	4.5	---	
C_{iss}	Input Capacitance	$V_{DS}=-25V$, $V_{GS}=0V$, $f=1MHz$	---	1050	---	pF
C_{oss}	Output Capacitance		---	95	---	
C_{rss}	Reverse Transfer Capacitance		---	40	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I_S	Continuous Source Current	$V_G=V_D=0V$, Force Current	---	---	-8	A
I_{SM}	Pulsed Source Current		---	---	-32	A
V_{SD}	Diode Forward Voltage	$V_{GS}=0V$, $I_F=-6A$, $T_J=25^{\circ}\text{C}$	---	-0.84	-1.2	V

Note :

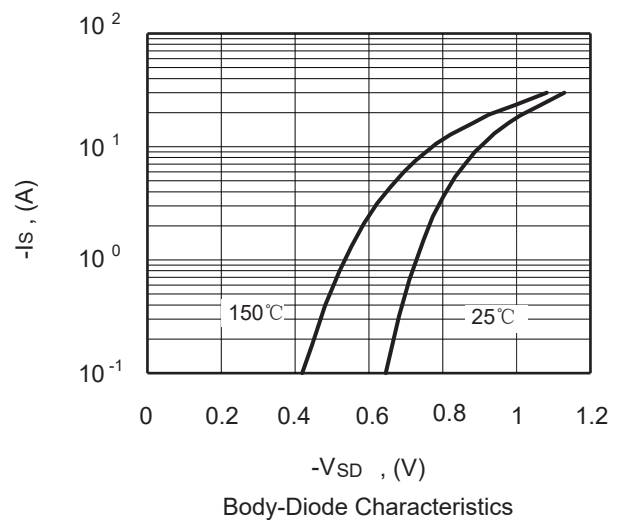
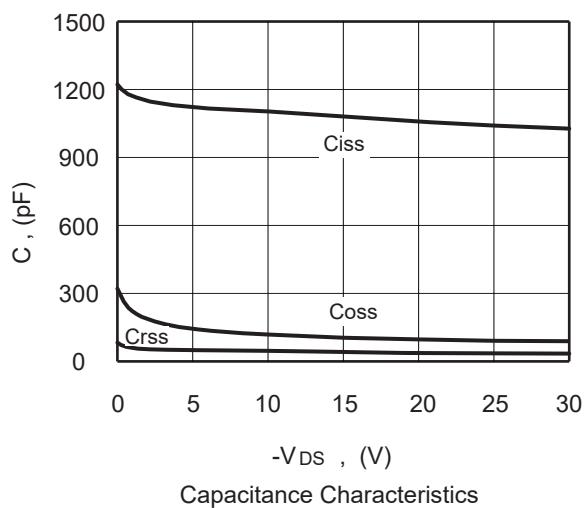
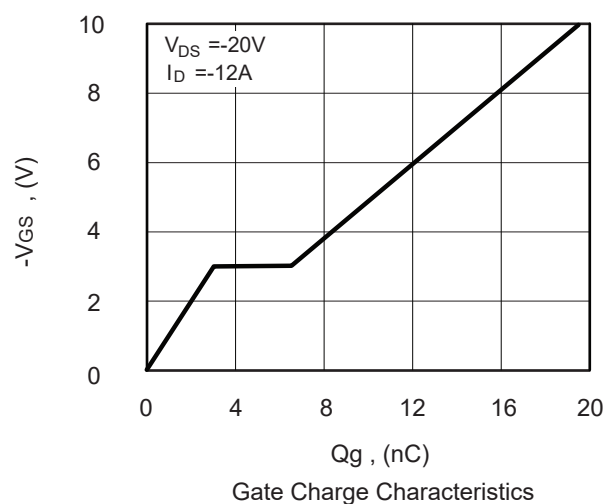
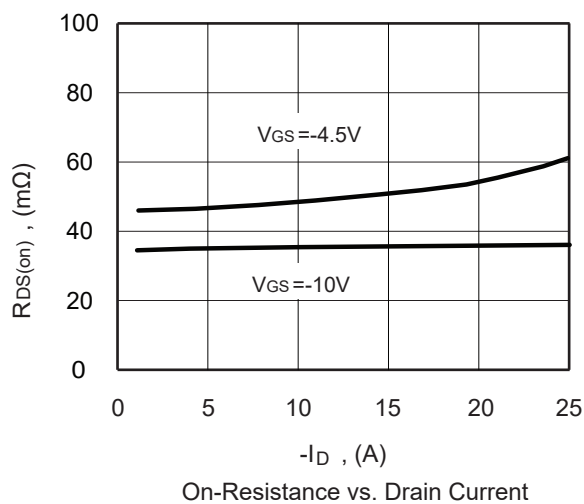
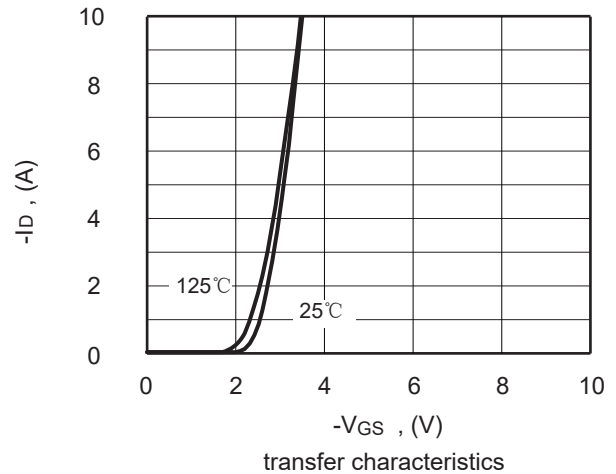
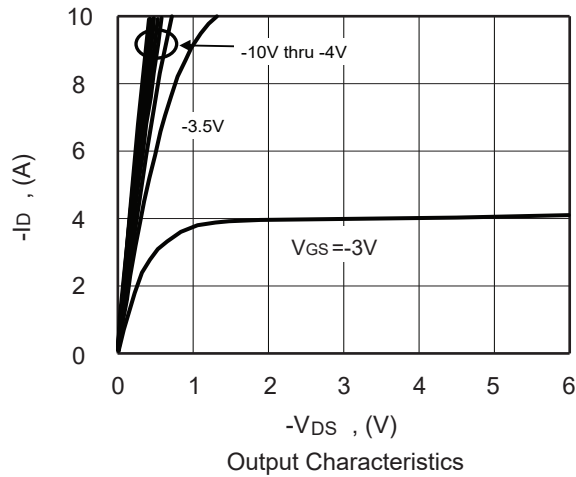
1. Defined by design, not subject to production.

This product has been designed and qualified for the consumer market.

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Cmos reserves the right to improve product design, functions and reliability without notice. Please refer to the latest version of specification.

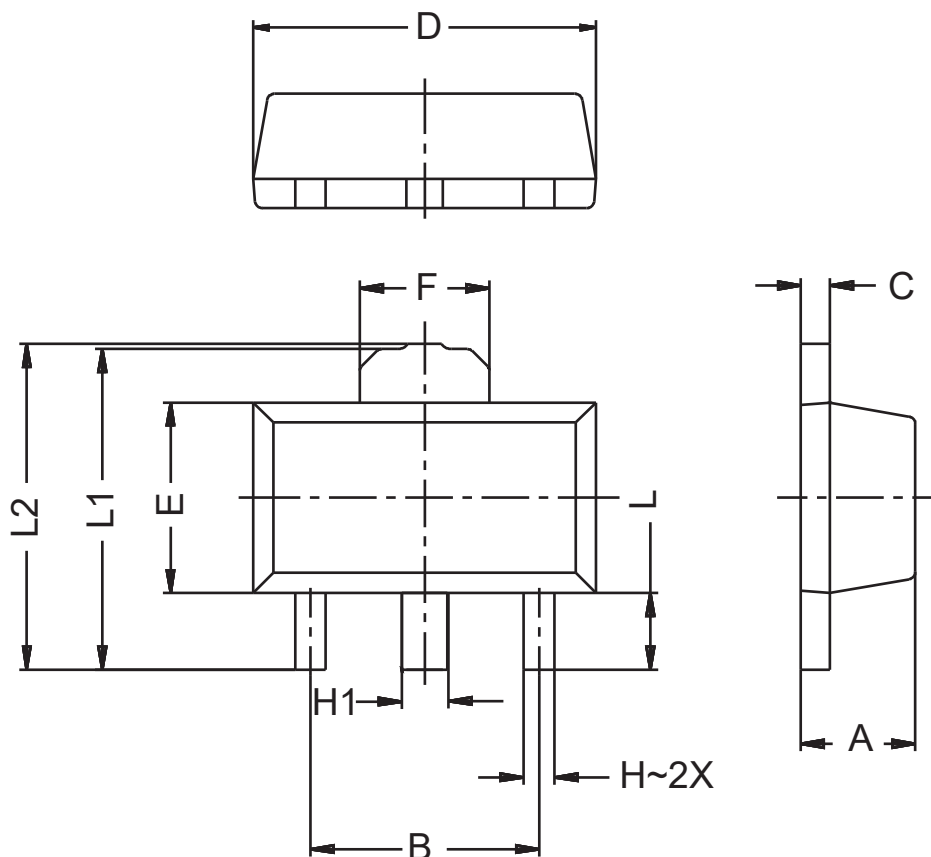
Typical Characteristics



Package Dimension

SOT-89

Unit :mm



Symbol	Dim in mm		
	Min	Nor	Max
A	1.45	1.50	1.55
B	2.95	3.00	3.05
C	0.37	0.38	0.40
D	4.45	4.50	4.55
E	2.45	2.50	2.55
F	1.65	1.70	1.75
H	0.37	0.40	0.48
H1	0.45	0.48	0.58
L	0.95	1.00	1.05
L1	4.15	4.20	4.25
L2	4.17	4.27	4.37