

General Description

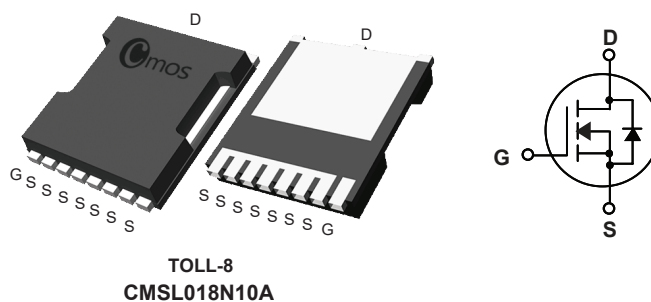
Product Summary

BVDSS	R _{DS(on)} max.	ID
100V	2mΩ	292A

Applications

- ## Features

- ## TOLL-8 Pin Configuration



Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V _{DS}	Drain-Source Voltage	100	V
V _{GS}	Gate-Source Voltage	±20	V
I _D @T _C =25°C	Continuous Drain Current	292	A
I _D @T _C =100°C	Continuous Drain Current	200	A
I _{DM}	Pulsed Drain Current	1168	A
EAS	Single Pulse Avalanche Energy ¹	5062	mJ
P _D @T _C =25°C	Total Power Dissipation	312	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-ambient	---	45	°C/W
R _{θJC}	Thermal Resistance Junction-case	---	0.40	°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 =250uA	100	---	---	V
R _{DS(ON)}	Static Drain-Source On-Resistance	V _{GS} =10V , I _D =90A	---	1.8	2.0	mΩ
V _{GS(th)}	Gate Threshold Voltage	V _{GS} =V _{DS} , I _D =250uA	2.0	---	4.0	V
I _{DSS}	Drain-Source Leakage Current	V _{DS} =100V , 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} =10V , I _D =40A	---	124	---	S
R _g	Gate Resistance	V _{DS} =0V , V _{GS} =0V , f=1MHz	---	2	---	Ω
Q _g	Total Gate Charge	I _D =90A	---	169	---	nC
Q _{gs}	Gate-Source Charge	V _{DS} =50V	---	67	---	
Q _{gd}	Gate-Drain Charge	V _{GS} = 10V	---	30	---	
T _{d(on)}	Turn-On Delay Time	V _{DD} =50V V _{GS} = 10V R _{G_ext} = 3Ω	---	35	---	ns
T _r	Rise Time		---	111	---	
T _{d(off)}	Turn-Off Delay Time		---	84	---	
T _f	Fall Time		---	112	---	
C _{iss}	Input Capacitance	V _{DS} =25V , V _{GS} =0V , f=1MHz	---	13000	---	pF
C _{oss}	Output Capacitance		---	4300	---	
C _{rss}	Reverse Transfer Capacitance		---	650	---	

Diode Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
I _S	Continuous Source Current	V _G =V _D =0V , Force Current	---	---	292	A
I _{SM}	Pulsed Source Current		---	---	1168	A
V _{SD}	Diode Forward Voltage	V _{GS} =0V , I _S =90A , T _J =25°C	---	0.84	1.4	V

Note :

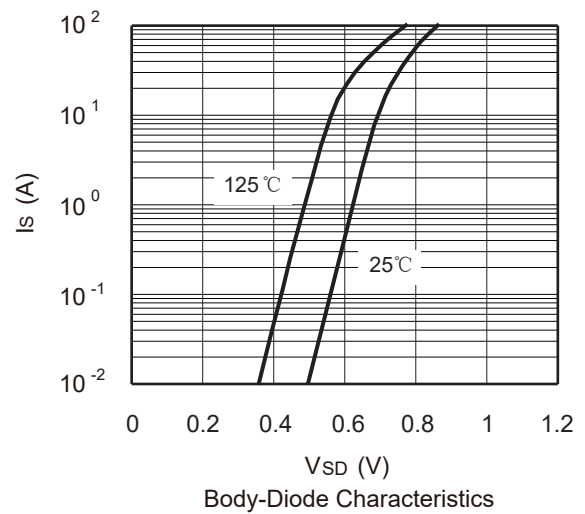
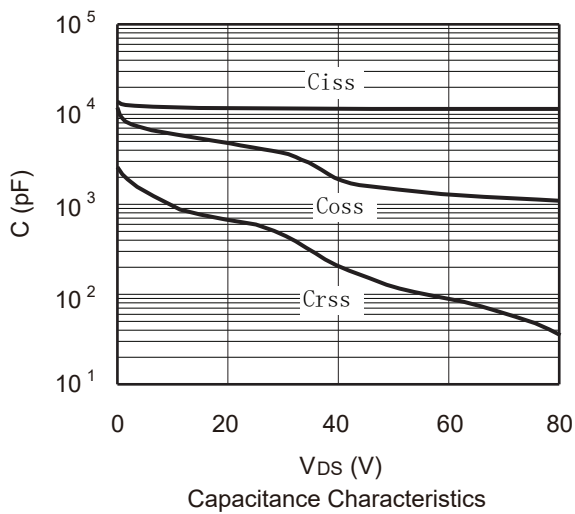
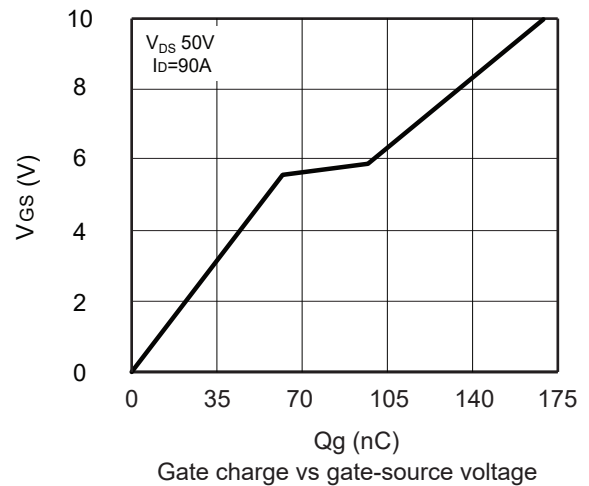
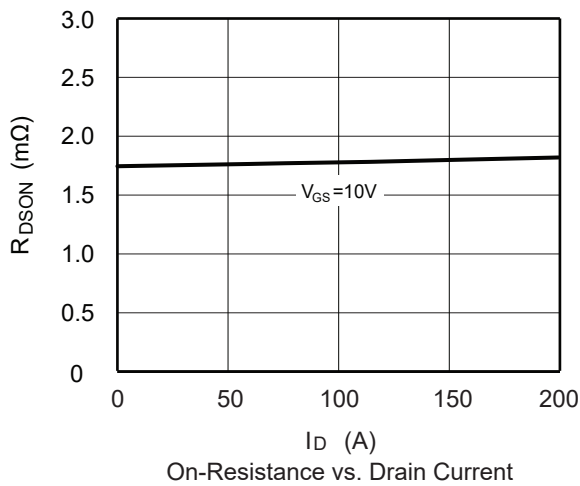
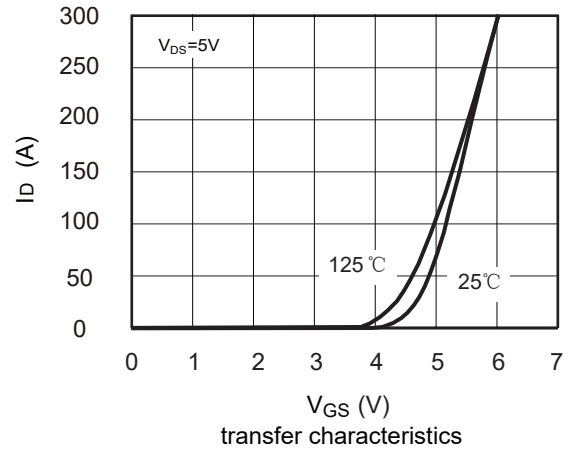
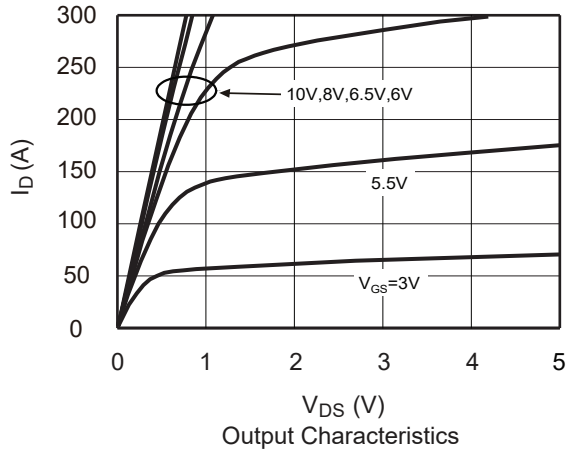
1.The EAS data shows Max. rating . The test condition is V_{DD}=80V , V_{GS}=10V , L=5mH , I_{AS}=45A.

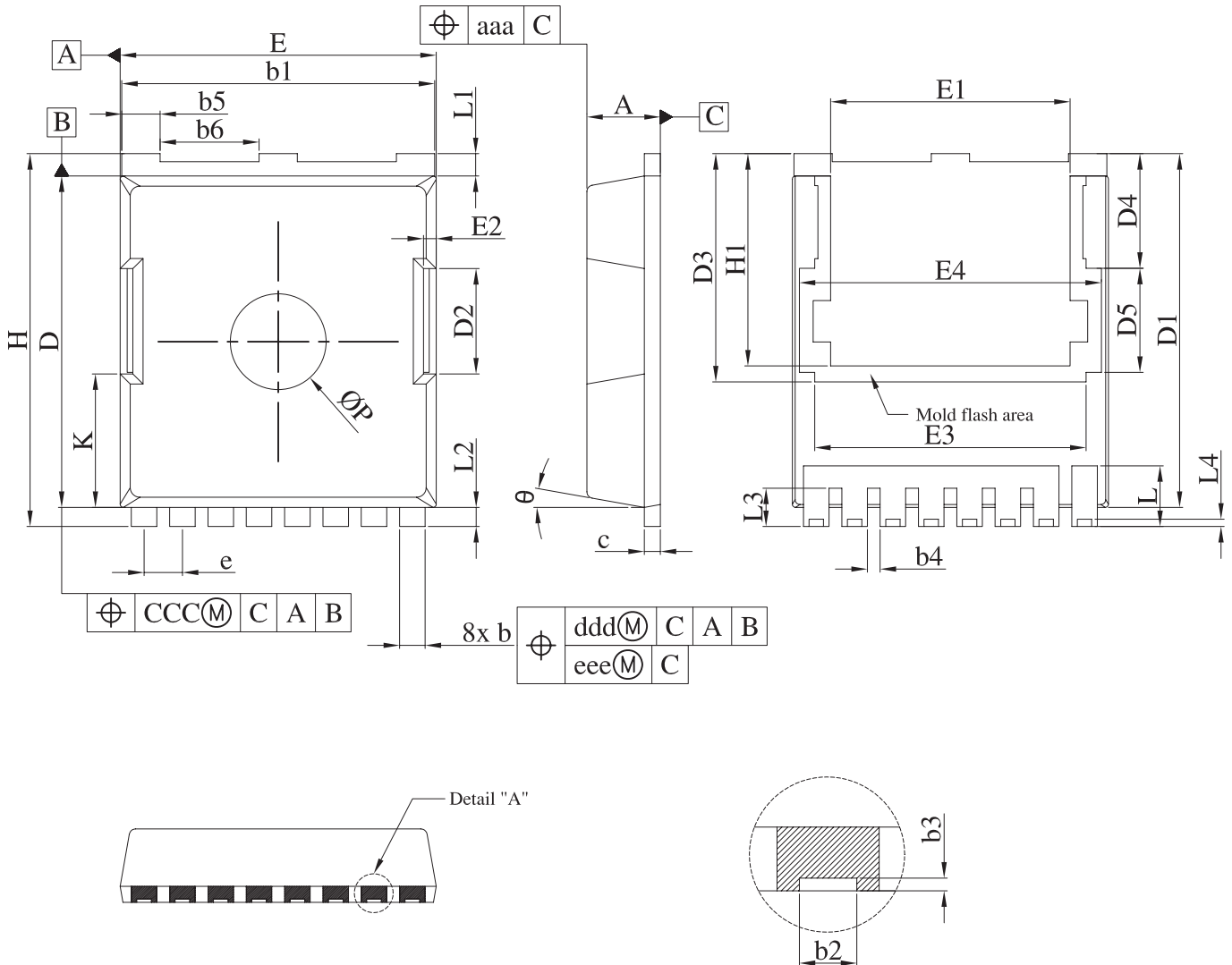
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Typical Characteristics



Package Dimension
TOLL-8
Unit :mm


SYMBOL		A	b	b1	b2	b3	b4	b5	b6	c	D	D1	D2	D3	D4	D5	e	E	E1
MILLIMETER	MIN.	2.2	0.7	9.7	0.36	0.05	0.3	1.1	3	0.4	10.28	10.98	3.2	7.15	3.59	3.26	1.1	9.8	7.4
	TYP.	2.3	0.8	9.8	0.45	0.1	0.4	1.2	3.1	0.5	10.38	11.08	3.3				1.2	9.9	7.5
	MAX.	2.4	0.9	9.9	0.55	/	0.5	1.3	3.2	0.6	10.55	11.18	3.4				1.3	10	7.6
SYMBOL		E2	E3	E4	H	H1	K	L	L1	L2	L3	L4	P	θ	aaa	ccc	ddd	eee	
MILLIMETER	MIN.	0.3	8.5	9.46	11.5	6.55	4.08	1.6	0.5	0.5	1	0.13	2.85	10° REF	0.2	0.2	0.25	0.2	
	TYP.	0.4			11.68	6.65	4.18	1.9	0.7	0.6	1.2	0.23	3						
	MAX.	0.5			11.85	6.75	4.28	2.1	0.9	0.7	1.3	0.33	3.15						