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Symbol	Parameter	Max.	Units
I_D @ T_C = 25°C	Continuous Drain Current, V_{GS} @ 10V	172	
I_D @ T_C = 100°C	Continuous Drain Current, V_{GS} @ 10V	122	A

H F

Symbol	Characteristics	Typ.	Max.	Units
	Junction-to-case			

Symbol	Parameter	Min.	Typ.	Max.	Units	Conditions
$V_{(BR)DSS}$	Drain-to-Source breakdown voltage	40			V	V_{GS} = 0V, I_D
$R_{DS(on)}$	Static Drain-to-Source on-resistance		2.1	2.4	m	V_{GS}=10V, I_D=40A
$V_{GS(th)}$	Gate threshold voltage	2		4	V	V_{DS}=V_{GS},I_D=250uA
I_{DSS}	Drain-to-Source leakage current T_j=25°C			1		V_{DS}=40V,V_{GS}=0V,
I_{GSS}	Gate-to-Source forward leakage			100	nA	V_{GS}=20V,V_{DS}=0V
				-100		V_{GS}=-20V,V_{DS}=0V
Q_g	Total gate charge		140		nC	T_j=25°C, V_{GS}=10V, V_{DS}=20V,I_D=20A
Q_{gs}	Gate-to-Source charge		26			
Q_{gd}	Gate-to-Drain("Miller") charge		35			
$t_{d(on)}$	Turn-on delay time		30		ns	V_{GS}=10V V_{DS}=20V R_G=3.6 $R_{L=}$
t_r	Rise time		32			
$t_{d(off)}$	Turn-Off delay time		70			
t_f	Fall time		25			
C_{iss}	Input capacitance		10587		pF	V_{GS}=0V V_{DS}=40V f=1MHz
C_{oss}	Output capacitance		647			
C_{rss}	Reverse transfer capacitance		603			

G -8 F

Symbol	Parameter	Min.	Typ.	Max.	Units	Conditions
I_S	Continuous Source Current (Body Diode)			172	A	MOSFET symbol showing the integral reverse p-n junction diode. 
I_{SM}	Pulsed Source Current (Body Diode)			688	A	
V_{SD}	Diode Forward Voltage			1.2	V	I_S=40A, V_{GS}=0V
trr	Reverse Recovery Time		50		ns	T_J = 25°C, I_F =20A, di/dt = 10
Qrr	Reverse Recovery Charge		75		nC	

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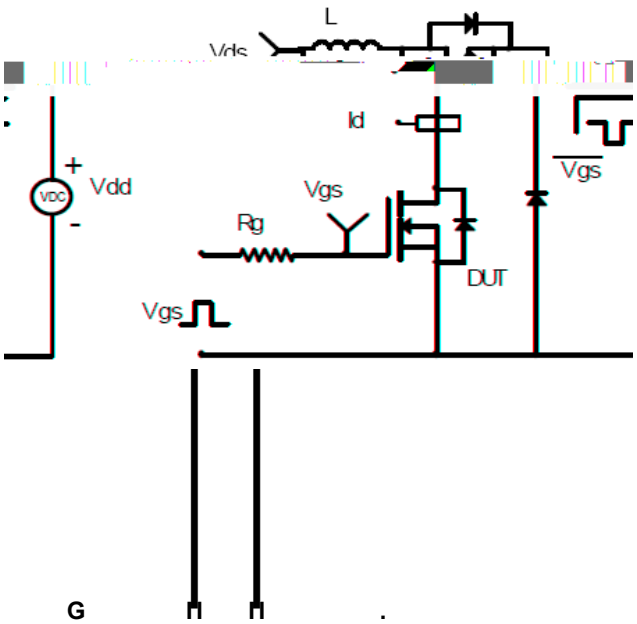

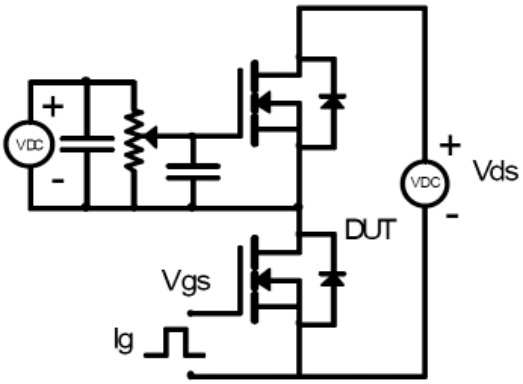

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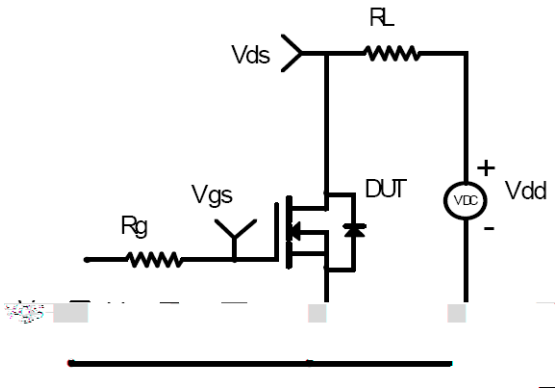
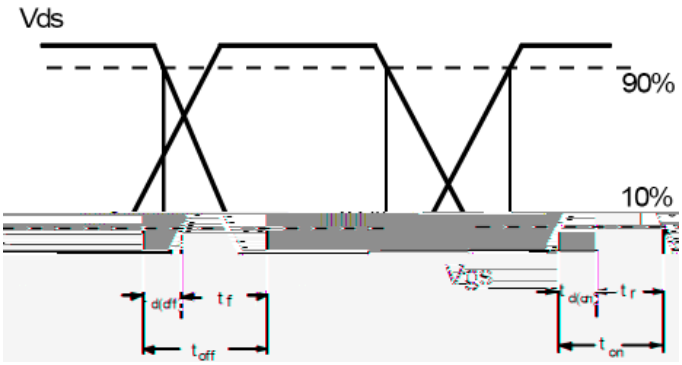
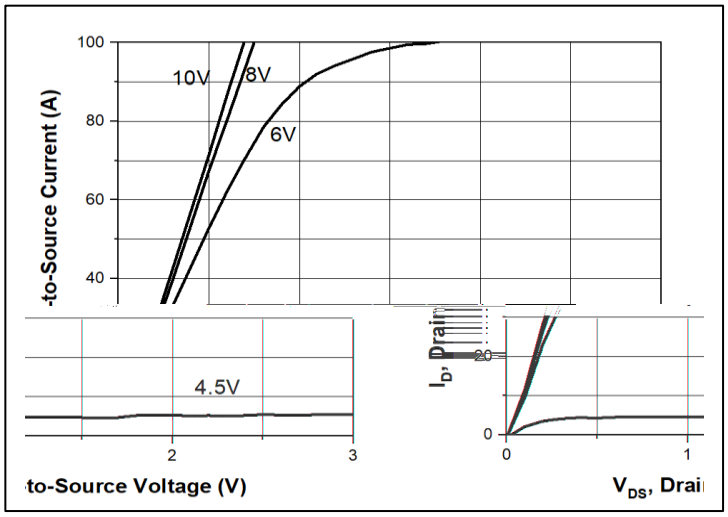


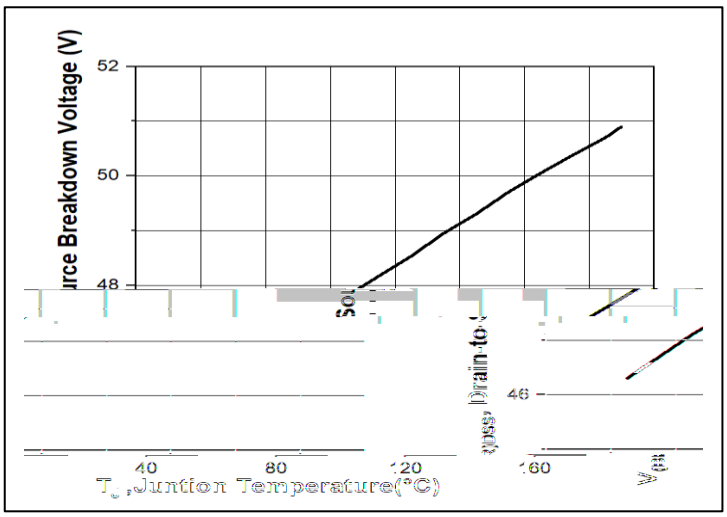


B .

Calculated continuous current based on maximum allowable junction temperature.
Repetitive rating; pulse width limited by max. junction temperature.
The power dissipation P_D is based on max. junction temperature, using junction-to-case thermal resistance.

Typical Electrical and Thermal Characteristics





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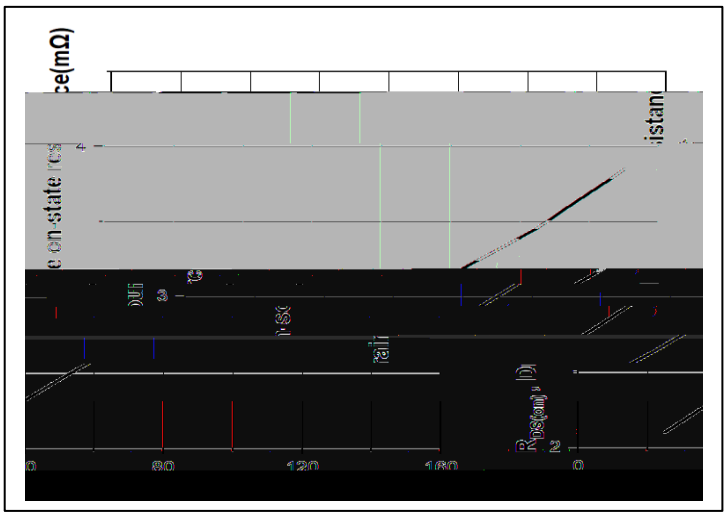

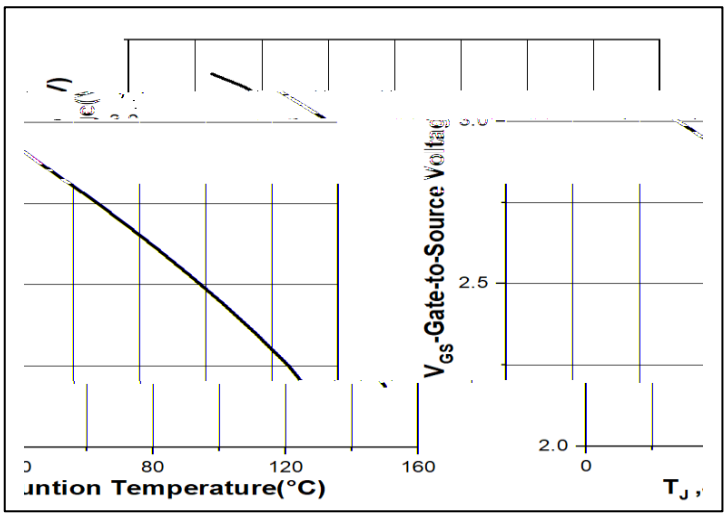

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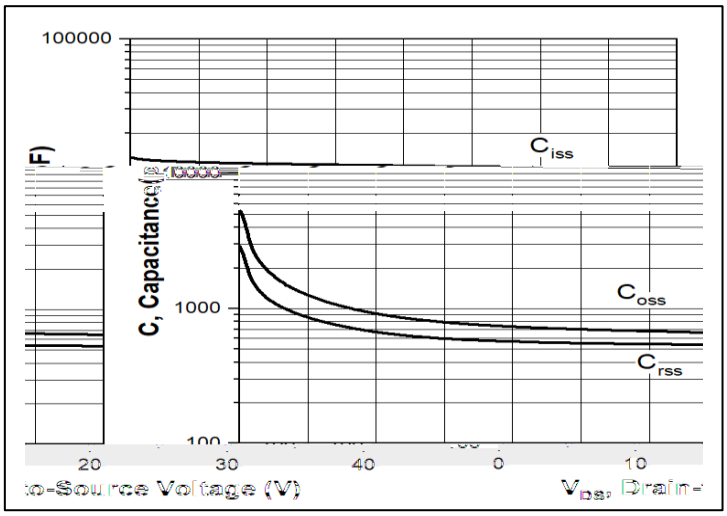


Figure5. Capacitance

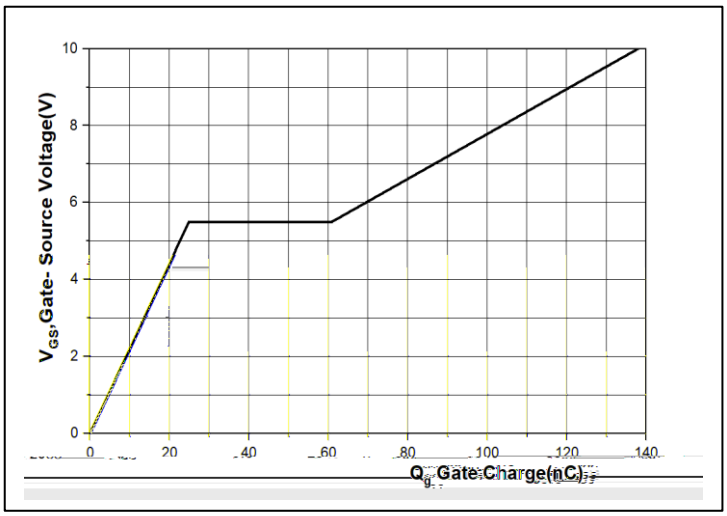
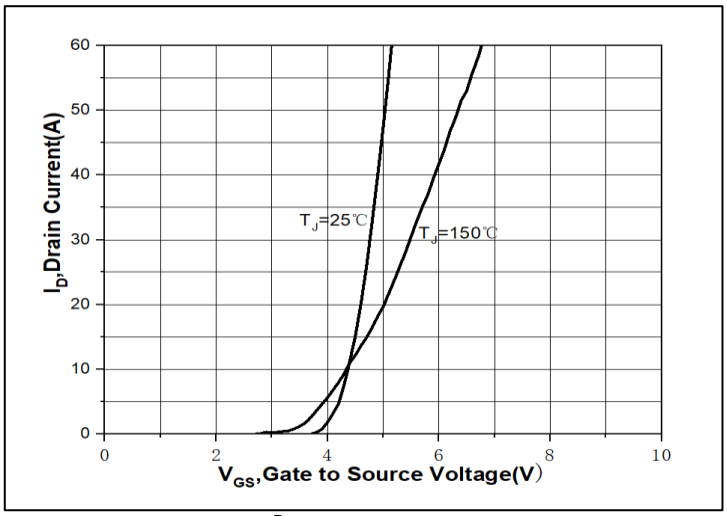


Figure6. Gate Charge

Typical Electrical and Thermal Characteristics



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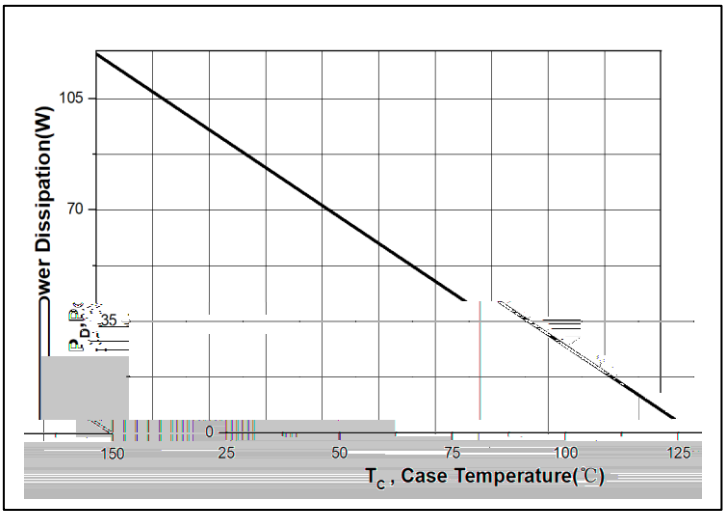
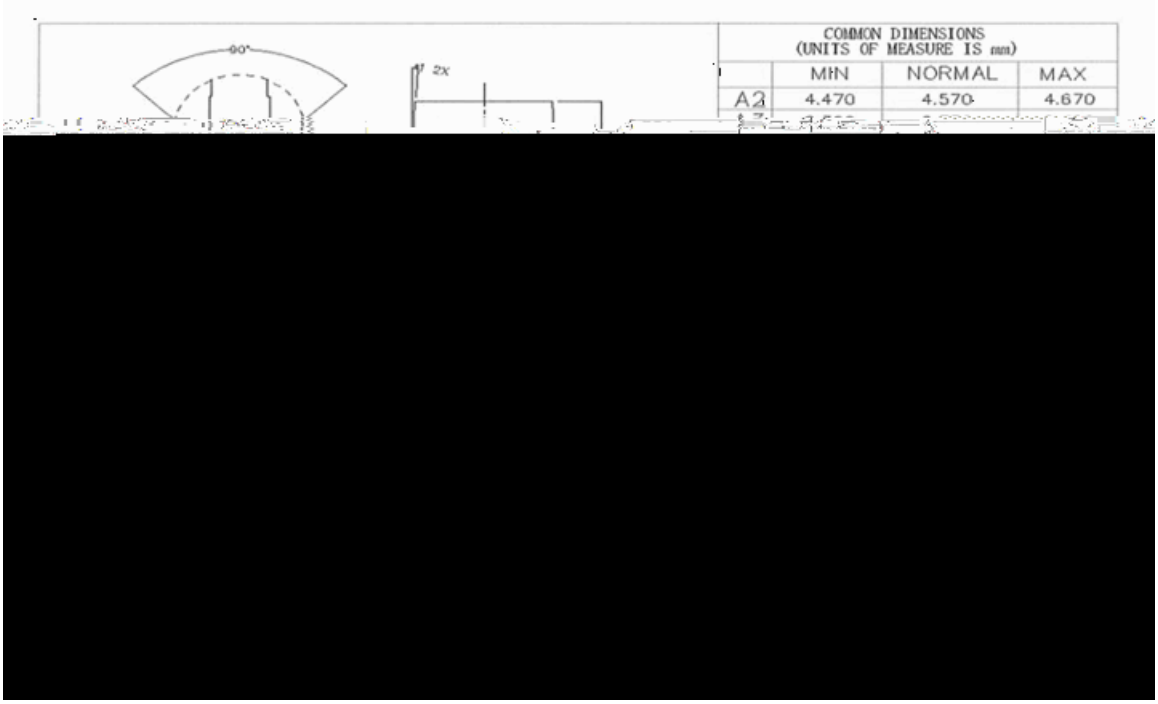


: , D 8

A 8

Unit:mm


90°
2X
COMMON DIMENSIONS
(UNITS OF MEASURE IS mm)
MIN
NORMAL
MAX
A2
4.470
4.570
4.670

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