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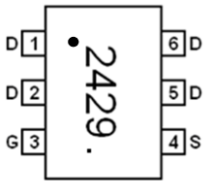

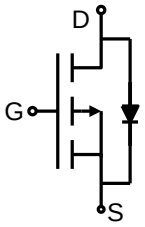

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Symbol	Parameter	Max.	Units
I_D @ TC = 25°C	Continuous Drain Current, V_{GS} @ 10V	-5	A
I_{DM}	Pulsed Drain Current	-20	
P_D @TC = 25°C	Power Dissipation	1.4	W
V_{DS}	Drain-Source Voltage	-20	V
V_{GS}	Gate-to-Source Voltage	± 12	V
T_J T_{STG}	Operating Junction and Storage Temperature Range	-55 to +150	°C

Symbol	Characterizes	Typ.	Max.	Units
	Junction-to-ambient (t ≤ 10s)			

Symbol	Parameter	Min.	Typ.	Max.	Units	Conditions
$V_{(BR)DSS}$	Drain-to-Source breakdown voltage	-20			V	V_{GS} = 0V, ID = -
$R_{DS(on)}$	Static Drain-to-Source on-resistance		29	35		V_{GS}=-4.5V,I_D = -5A
			36	48		V_{GS}=-2.5V,I_D = -3A
$V_{GS(th)}$	Gate threshold voltage	-0.5		-1	V	V_{DS} = V_{GS}, I_D = -
I_{DSS}	Drain-to-Source leakage current			-1		V_{DS} = -20V,V_{GS} = 0V
I_{GSS}	Gate-to-Source forward leakage			100	nA	V_{GS} =12V
				-100		V_{GS} = -12V
Q_g	Total gate charge		12		nC	V_{DS}=-10V, I_D=-4.5A, V_{GS}=-5V
Q_{gs}	Gate-to-Source charge		1.3			
Q_{gd}	Gate-to-Drain("Miller") charge		3.5			
$t_{d(on)}$	Turn-on delay time		11		ns	V_{DD}=-10V,R_L=2.5 V_{GS}=-4.5V,R_{GEN}=3
t_r	Rise time		10			
$t_{d(off)}$	Turn-Off delay time		17			
t_f	Fall time		22			
C_{iss}	Input capacitance		874		pF	V_{GS} = 0V V_{DS} = -20V 1.0MHz
C_{oss}	Output capacitance		99			
C_{rss}	Reverse transfer capacitance		86			

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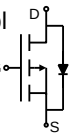
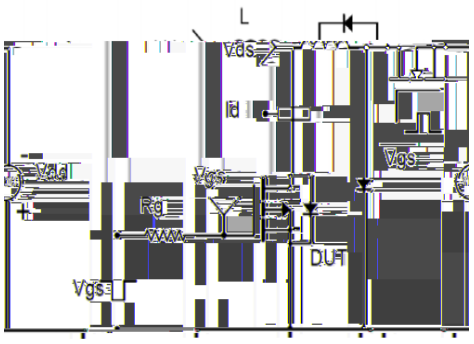
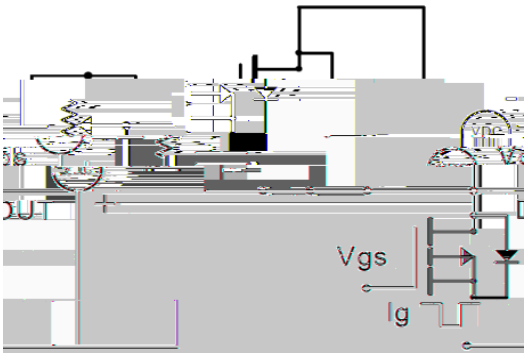
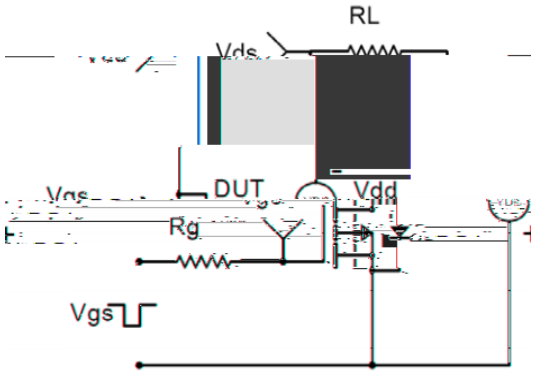
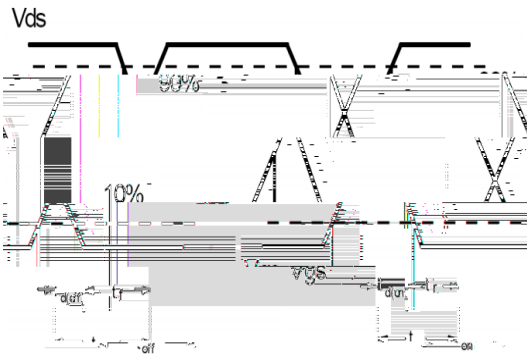
Symbol	Parameter	Min.	Typ.	Max.	Units	Conditions
I_S	Continuous Source Current (Body Diode)			-5	A	MOSFET symbol showing the integral reverse p-n junction diode. 
I_{SM}	Pulsed Source Current (Body Diode)			-20	A	
V_{sd}	Diode Forward Voltage		-0.8	-1.3	V	I_S=-1.3A, V_{GS}=0V







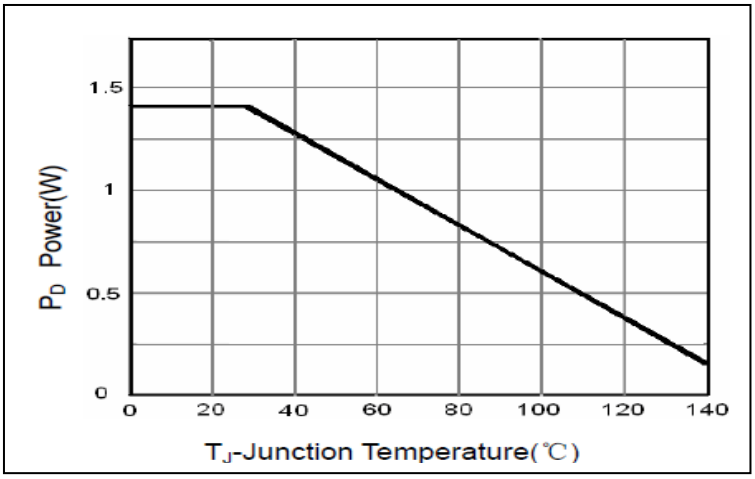


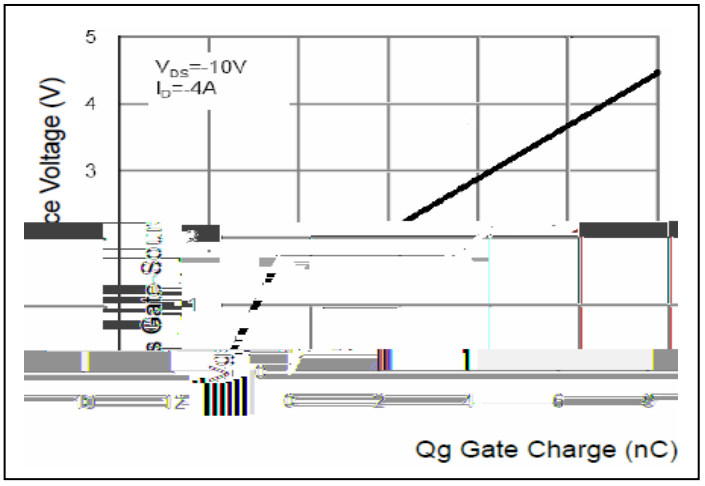
The maximum current rating is limited by bond-wires.

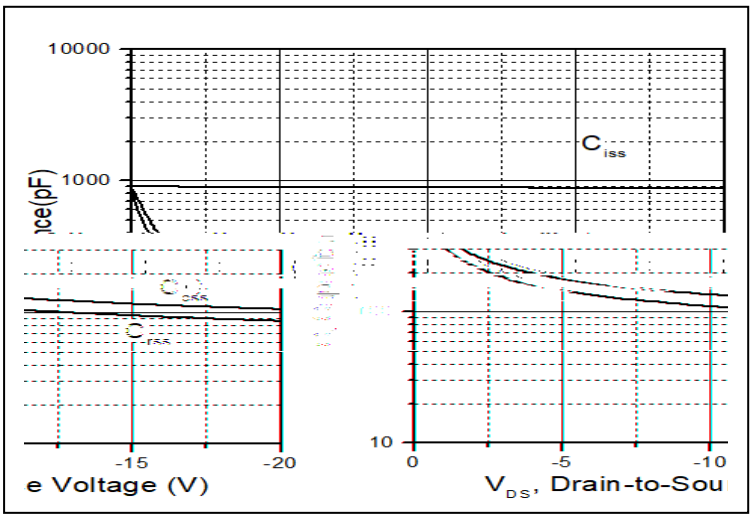
Repetitive rating; pulse width limited by max. junction temperature.

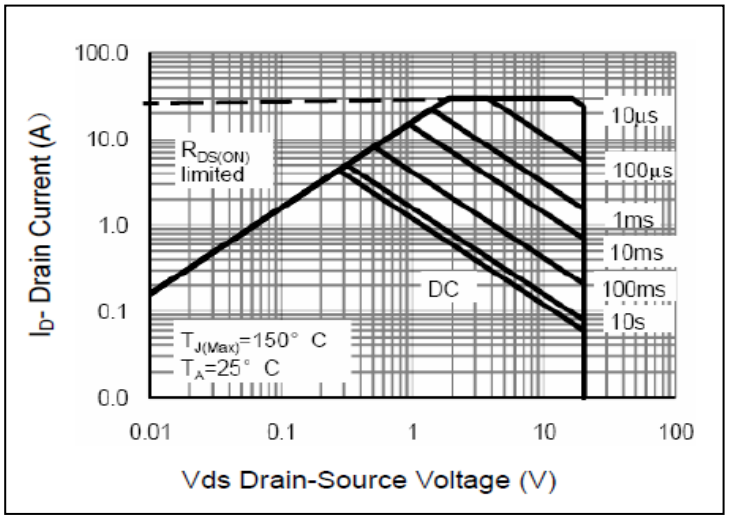
The power dissipation PD is based on max. junction temperature, using junction-to-case thermal resistance.

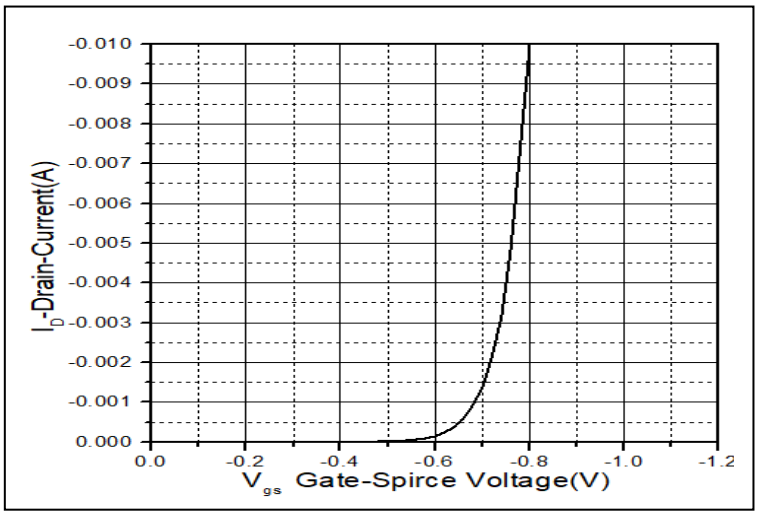
The value of is measured with the device mounted on 1in 2 FR-4 board with 2oz. Copper, in a still air environment with TA =25°C

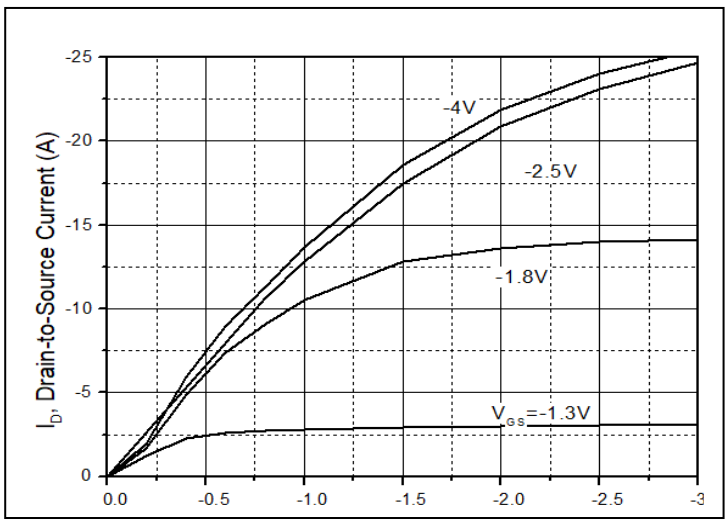

P_D Power(W)
1.5
1
0.5
0
0
20
40
60
80
100
120
140
T_J-Junction Temperature(℃)


V_DS=-10V
I_D=-4A
ce Voltage (V)
5
4
3
Qg Gate Charge (nC)


10000
1000
C_iss
ɔce(pF)
-15
-20
e Voltage (V)
10
0
-5
-10
V_DS, Drain-to-Sou


100.0
10.0
1.0
0.1
0.0
I_D- Drain Current (A)
R_DS(ON) limited
10μs
100μs
1ms
10ms
100ms
10s
DC
T_J(Max)=150° C
T_A=25° C
0.01
0.1
1
10
100
Vds Drain-Source Voltage (V)


-0.010
-0.009
-0.008
-0.007
-0.006
-0.005
-0.004
-0.003
-0.002
-0.001
0.000
I_D-Drain-Current(A)
0.0
-0.2
-0.4
-0.6
-0.8
-1.0
-1.2
V_gs Gate-Spirce Voltage(V)


-25
-20
-15
-10
-5
0
I_D, Drain-to-Source Current (A)
-4V
-2.5V
-1.8V
V_GS=-1.3V
0.0
-0.5
-1.0
-1.5
-2.0
-2.5

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