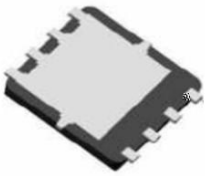
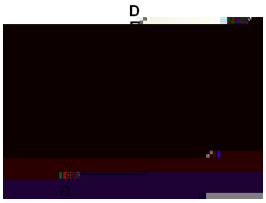
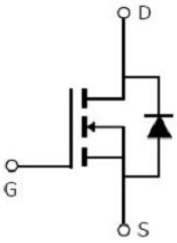
V_{DSS}	60V
R_{DS}(on)	1.7mΩ (typ.)
I_D	177A







Advanced MOSFET process technology
Special designed for PWM, load switching and general purpose applications
Ultra low on-resistance with low gate charge
Fast switching and reverse body recovery
150 operating temperature

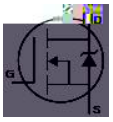
It utilizes the latest processing techniques to achieve the high cell density and reduces the on-resistance with high repetitive avalanche rating. These features combine to make this design an extremely efficient and reliable device for use in power switching application and a wide variety of other applications.

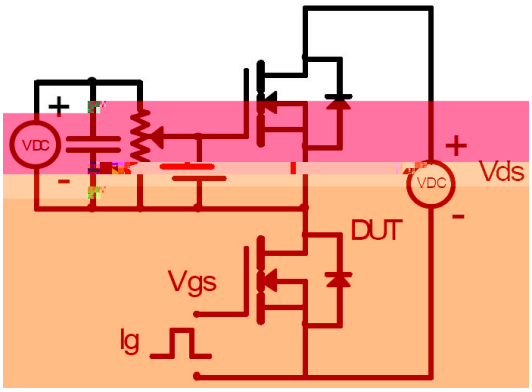
I_D @ T_C = 25°C	Continuous Drain Current, V_{GS} @ 10V	177	A
I_D @ T_C = 100°C	Continuous Drain Current, V_{GS} @ 10V	112	
I_{DM}	Pulsed Drain Current	708	
P_D @T_C = 25°C	Power Dissipation	131	W
V_{DS}	Drain-Source Voltage	60	V
V_{GS}	Gate-to-Source Voltage	± 20	V
T_J T_{STG}	Operating Junction and Storage Temperature Range	-55 to +150	°C

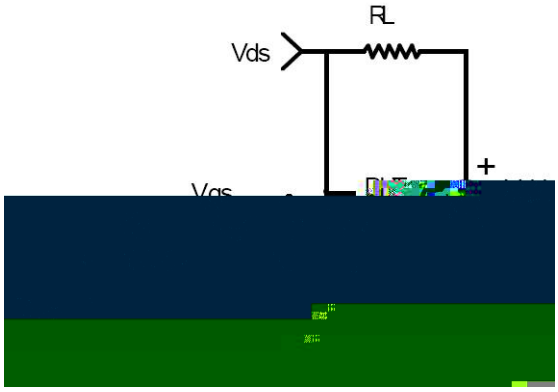
$R_{\theta JC}$	Junction-to-case	—	0.95	°C/W

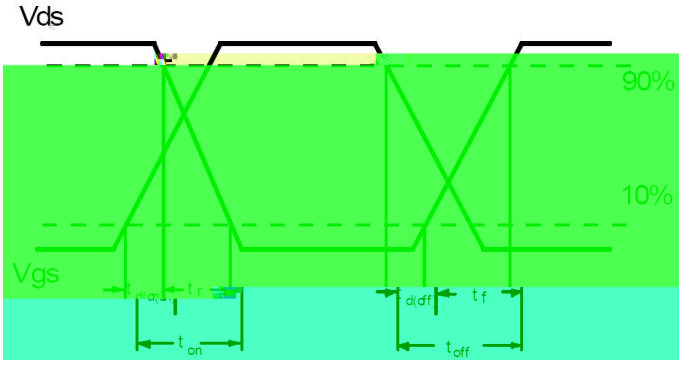
@T_A=25°C unless otherwise specified

$V_{(BR)DSS}$	Drain-to-Source breakdown voltage	60	—	—	V	V_{GS} = 0V, I_D = 250μA
$R_{DS(on)}$	Static Drain-to-Source on-resistance	—	1.7	2.2	mΩ	V_{GS}=10V,I_D = 20A
		—	2.4	3.2		V_{GS}=4.5V,I_D = 20A
$V_{GS(th)}$	Gate threshold voltage	1	—	2.5	V	V_{DS} = V_{GS}, I_D = 250μA
I_{DSS}	Drain-to-Source leakage current	—	—	1	μA	V_{DS} = 40V,V_{GS} = 0V
I_{GSS}	Gate-to-Source forward leakage	—	—	100	nA	V_{GS} =20V
		—	—	-100		V_{GS} = -20V
C_{iss}	Input capacitance	—	6310	—	pF	V_{GS} = 0V
C_{oss}	Output capacitance	—	2100	—		V_{DS} = 20V
C_{rss}	Reverse transfer capacitance	—	690	—		*f* = 1MHz
Q_g	Total gate charge	—	94	—	nC	I_D = 20A,
Q_{gs}	Gate-to-Source charge	—	17	—		V_{DS}=20V,
Q_{gd}	Gate-to-Drain("Miller") charge	—	13	—		V_{GS} = 10V
$t_{d(on)}$	Turn-on delay time	—	20	—	ns	V_{GS}=10V, V_{DS} =20V, R_{GEN}=3Ω,R_L=1Ω
t_r	Rise time	—	15	—		
$t_{d(off)}$	Turn-Off delay time	—	77	—		
t_f	Fall time	—	20	—		

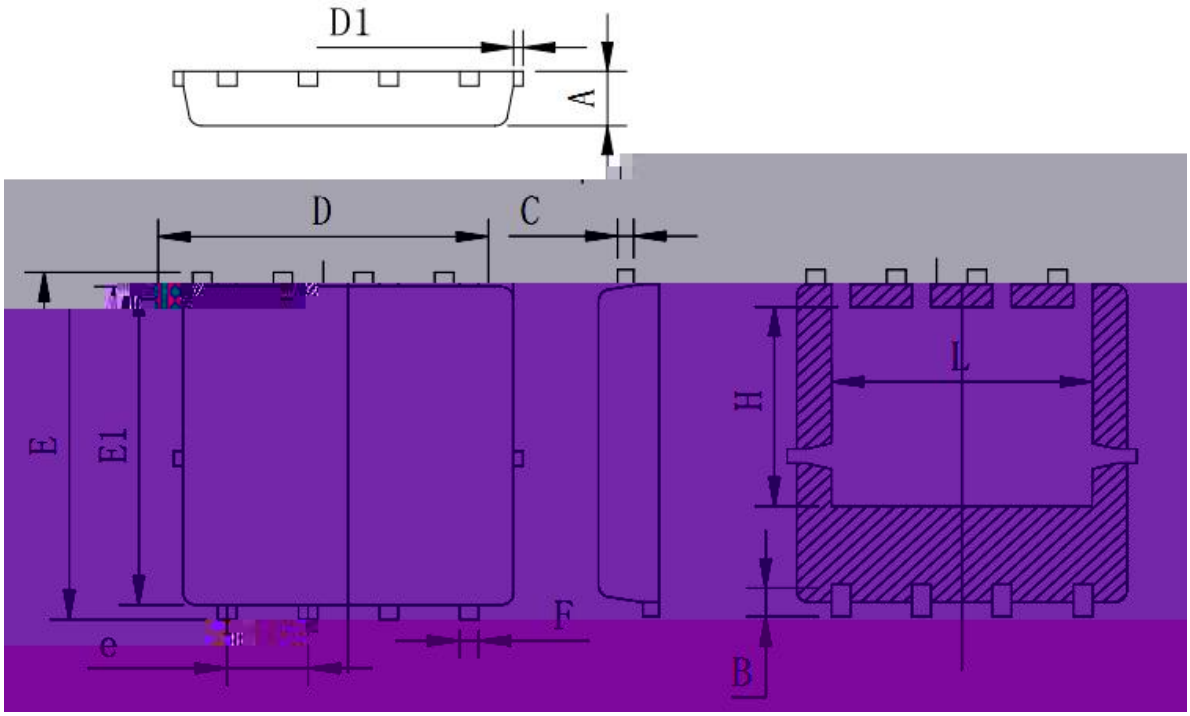
I_S	Continuous Source Current (Body Diode)	—	—	177	A	MOSFET symbol showing the integral reverse p-n junction diode. 
I_{SM}	Pulsed Source Current (Body Diode)	—	—	708	A	
V_{SD}	Diode Forward Voltage	—	—	1.2	V	I_S=20A, V_{GS}=0V
t_{rr}	Reverse Recovery Time	—	66	—	ns	T_J = 25°C, I_F =20A, di/dt = 100A/μs
Q_{rr}	Reverse Recovery Charge	—	82	—	nC	







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.



Symbol	Min	Typ	Max
A	0.90	0.95	1.00
B	0.48	0.58	0.68
C			
D			
D1			
E			
E1	5.40	5.55	5.70
e	1.22	1.27	1.32
F	0.25	0.30	0.35
H	3.27	3.47	3.67
L	3.80	4.00	4.20

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