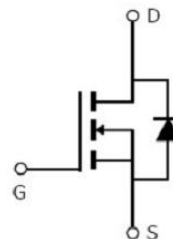


V_{DS}	30V
$R_{DS(on)}$	5.9m (typ.)
I_D	51A



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.

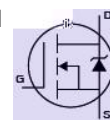
$I_D @ T_C = 25^\circ\text{C}$	Continuous Drain Current, $V_{GS} @ 10\text{V}$	51	A
$I_D @ T_C = 100^\circ\text{C}$	Continuous Drain Current, $V_{GS} @ 10\text{V}$	31	
I_{DM}	Pulsed Drain Current	204	
$P_D @ T_C = 25^\circ\text{C}$	Power Dissipation	45	W
V_{DS}	Drain-Source Voltage	30	V
V_{GS}	Gate-to-Source Voltage	± 20	V
$T_J \quad T_{STG}$	Operating Junction and Storage Temperature Range	-55 to +150	$^\circ\text{C}$

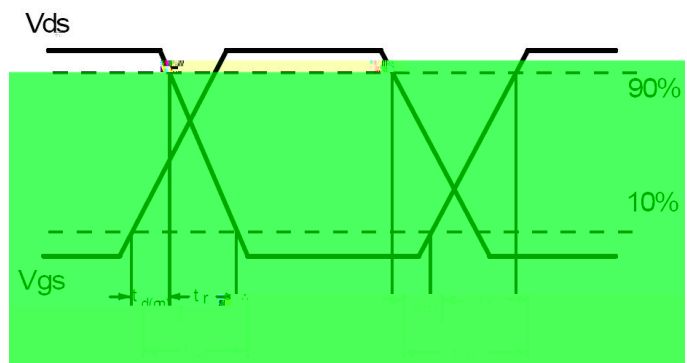
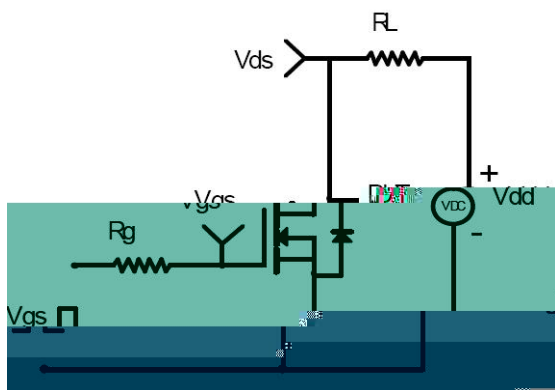
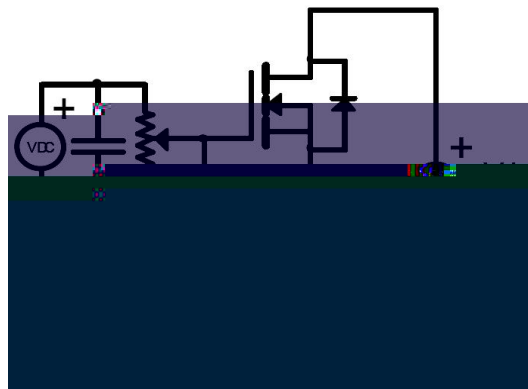
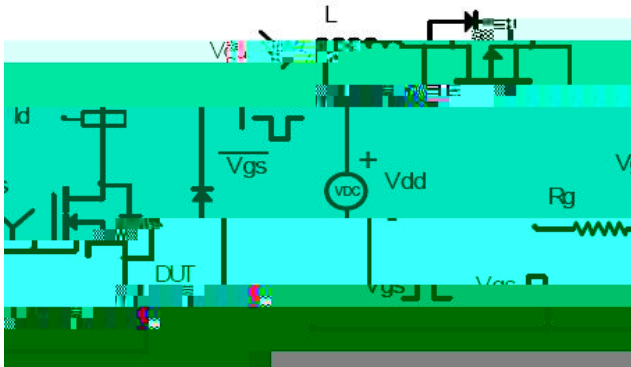
R_{JC}	Junction-to-case	—	2.8	/W
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@ $T_A=25$ unless otherwise specified

$V_{(BR)DSS}$	Drain-to-Source breakdown voltage	30	—	—	V	$V_{GS} = 0V, I_D = 250\mu A$
$R_{DS(on)}$	Static Drain-to-Source on-resistance	—	5.9	7.6	m	$V_{GS}=10V, I_D = 20A$
		—	8.4	11.1		$V_{GS}=4.5V, I_D = 15A$
$V_{GS(th)}$	Gate threshold voltage	1	—	2.5	V	$V_{DS} = V_{GS}, I_D = 250\mu A$
I_{DSS}	Drain-to-Source leakage current	—	—	1	μA	$V_{DS} = 30V, V_{GS} = 0V$
I_{GSS}	Gate-to-Source forward leakage	—	—	100	nA	$V_{GS} = 20V$
		—	—	-100		$V_{GS} = -20V$
C_{iss}	Input capacitance	—	1265	—	pF	$V_{GS} = 0V$
C_{oss}	Output capacitance	—	255	—		$V_{DS} = 15V$
C_{rss}	Reverse transfer capacitance	—	200	—		$f = 1MHz$
Q_g	Total gate charge	—	21.5	—	nC	$I_D = 20A,$
Q_{gs}	Gate-to-Source charge	—	2.5	—		$V_{DS}=15V,$
Q_{gd}	Gate-to-Drain("Miller") charge	—	4.5	—		$V_{GS} = 10V$
$t_{d(on)}$	Turn-on delay time	—	12	—	ns	$V_{GS}=10V, V_{DS} =15V,$ $R_{GEN}=3, R_L=0.75$
t_r	Rise time	—	2.5	—		
$t_{d(off)}$	Turn-Off delay time	—	30	—		
t_f	Fall time	—	4	—		

I_S	Continuous Source Current (Body Diode)	—	—	51	A	MOSFET symbol showing the integral reverse p-n junction diode.
I_{SM}	Pulsed Source Current (Body Diode)	—	—	204	A	
V_{SD}	Diode Forward Voltage	—	—	1.2	V	$I_S=20A, V_{GS}=0V$
t_{rr}	Reverse Recovery Time	—	19	—	ns	$T_J = 25^\circ C, I_F = 20A, di/dt =$
Q_{rr}	Reverse Recovery Charge	—	12	—	nC	500A/ μs

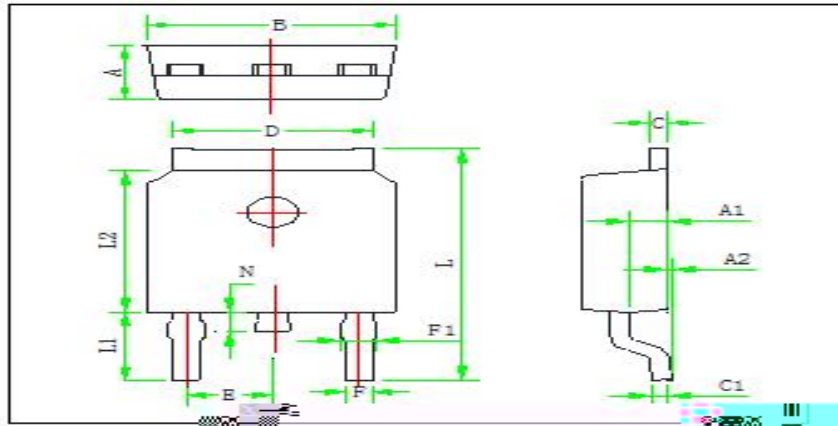




Calculated continuous current based on maximum allowable junction temperature.

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.



C1	0.43	0.30	0.38
D	5.12	5.32	5.52
E	2.286 TYP		
F	0.66	0.76	0.86
F1	0.66	0.86	1.06
L	9.60	9.90	10.20
L1	2.6	2.8	3.0
L2	5.95	6.10	6.25
N	0.60	0.80	1.00

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