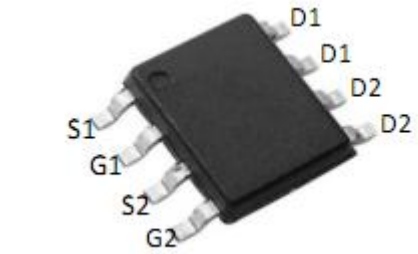
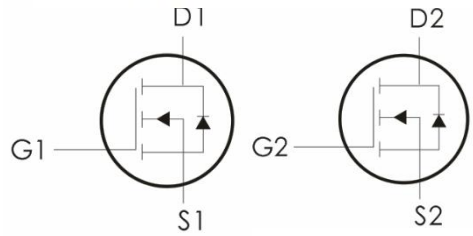
Description：

This Dual N-Channel MOSFET uses advanced trench technology and design to provide excellent $R_{DS(on)}$ with low gate charge.

It can be used in a wide variety of applications.





Features：

1) V_{DS}=60V,I_D=8A,$R_{DS(ON)}$<18mΩ @V_{GS}=10V
2) Low gate charge.
3) Green device available.
4) Advanced high cell denity trench technology for ultra low $R_{DS(ON)}$.
5) Excellent package for good heat dissipation.

Absolute Maximum Ratings：(T_A=25℃ unless otherwise noted)

Symbol	Parameter	Ratings	Units
V_{DS}	Drain-Source Voltage	60	V
V_{GS}	Gate-Source Voltage	±20	V
I_D	Continuous Drain Current -T_A=25℃	8	A
	Continuous Drain Current- T_A=100℃	6	
I_{DM}	Drain Current-Pulsed	36.8	A
P_D	Power Dissipation -T_A=25℃	3.6	W
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-55 to +150	℃

Thermal Characteristics：

Symbol	Parameter	Max	Units
$R_{\theta JA}$	Thermal Resistance,Junction to Ambient	34.7	℃/W

Electrical Characteristics: (T_C=25℃ unless otherwise noted)

Symbol	Parameter	Conditions	Min	Typ	Max	Units
Off Characteristics						
BV_{DSS}	Drain-Sourtce Breakdown Voltage	V_{GS}=0V,I_D=250μA	60	---	---	V
I_{DSS}	Zero Gate Voltage Drain Current	V_{GS}=0V, V_{DS}=20V	---	---	1	μA
I_{GSS}	Gate-Source Leakage Current	V_{GS}=±20V, V_{DS}=0A	---	---	±100	nA
On Characteristics						
$V_{GS(th)}$	GATE-Source Threshold Voltage	V_{GS}=V_{DS}, I_D=250μA	1.0	1.6	2.5	V
$R_{DS(ON)}$	Drain-Source On Resistance②	V_{GS}=10V,I_D=9A	---	16	18	mΩ
		V_{GS}=4.5V,I_D=5A	---	20	25	
Dynamic Characteristics						
C_{iss}	Input Capacitance	V_{DS}=25V, V_{GS}=0V, f=1MHz	---	2899	---	pF
C_{oss}	Output Capacitance		---	139	---	
C_{rss}	Reverse Transfer Capacitance		---	123	---	
Switching Characteristics						
$t_{d(on)}$	Turn-On Delay Time	V_{DD}=30V, I_D=5A R_G=1.8Ω . V_{GS}=10V,	---	7.3	---	ns
t_r	Rise Time		---	5	---	ns
$t_{d(off)}$	Turn-Off Delay Time		---	28.1	---	ns
t_f	Fall Time		---	5.4	---	ns
Q_g	Total Gate Charge	V_{GS}=10V, V_{DS}=10V, I_D=5A	---	49	---	nC
Q_{gs}	Gate-Source Charge		---	5	---	nC
Q_{gd}	Gate-Drain “Miller” Charge		---	14	---	nC
Drain-Source Diode Characteristics						
V_{SD}	Forward Voltage②	V_{GS}=0V,I_{SD}=9.2A	---	---	1.2	V
I_S	Source drain current(Body Diode)	T_A=25℃	---	---	9.2	A

Notes:

1. Repetitive Rating: Pulse Width Limited by Maximum Junction Temperature
2. EAS condition : T_J=25℃, V_{DD}=30V, V_G=10V, L=0.5mH, Rg=25Ω, I_{AS}=16A
3. Pulse Test: Pulse Width≤300μs, Duty Cycle≤0.5%

Typical Characteristics: (T_C=25℃ unless otherwise noted)

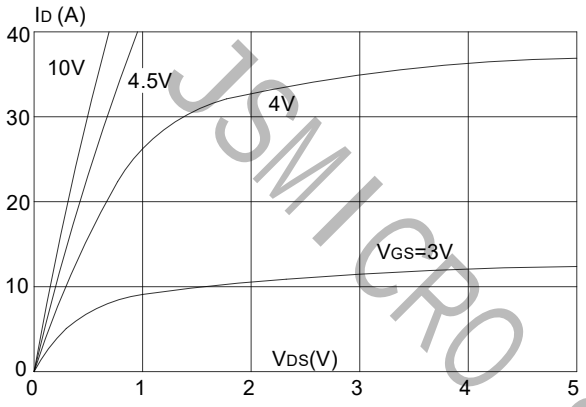


Figure1: Output Characteristics

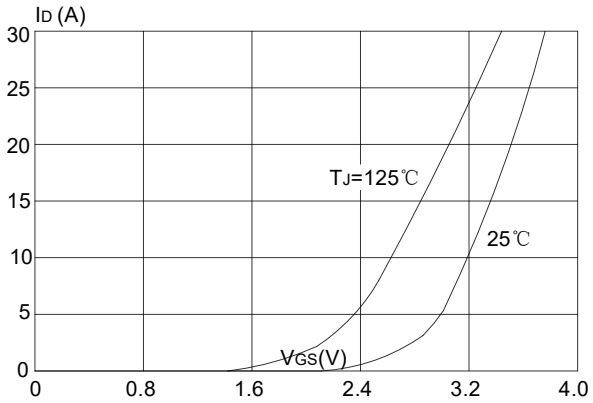


Figure 2: Typical Transfer Characteristics

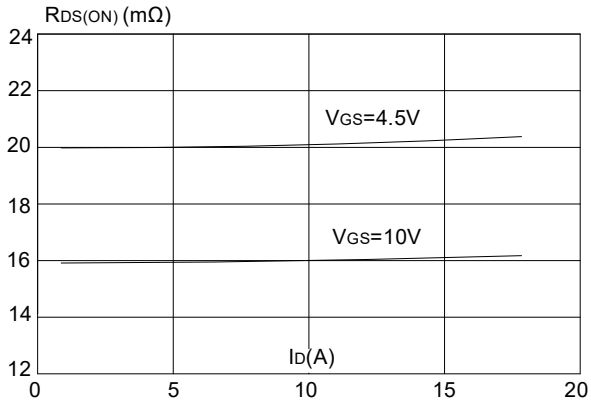


Figure 3: On-resistance vs. Drain Current

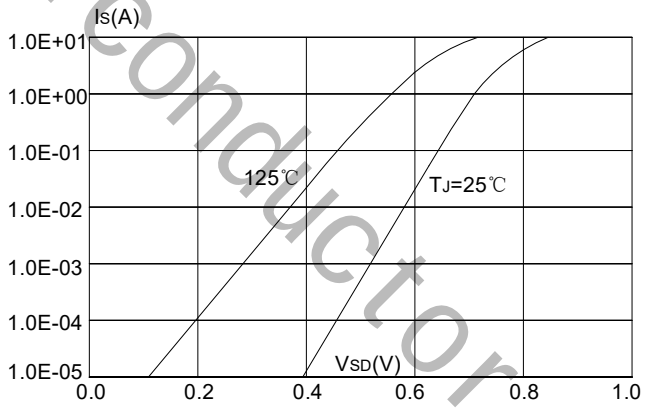


Figure 4: Body Diode Characteristics

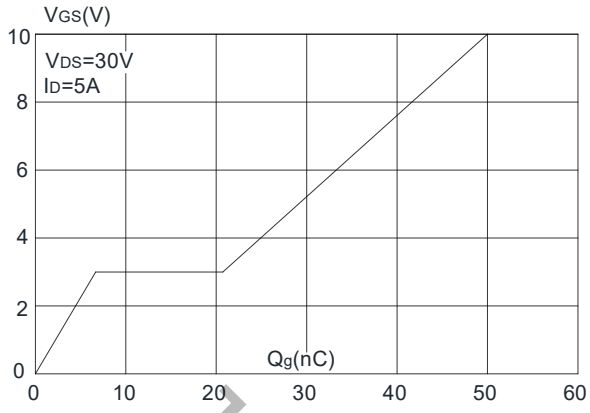


Figure 5: Gate Charge Characteristics

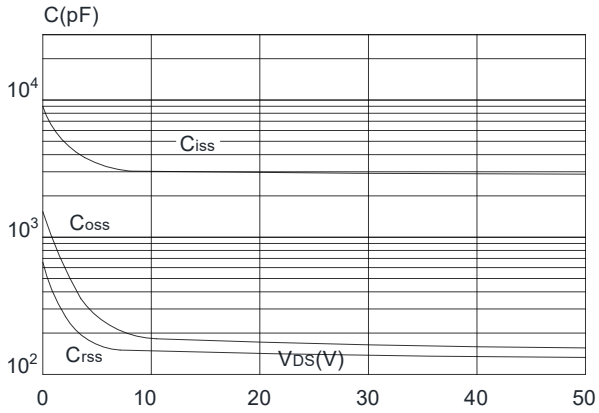


Figure 6: Capacitance Characteristics

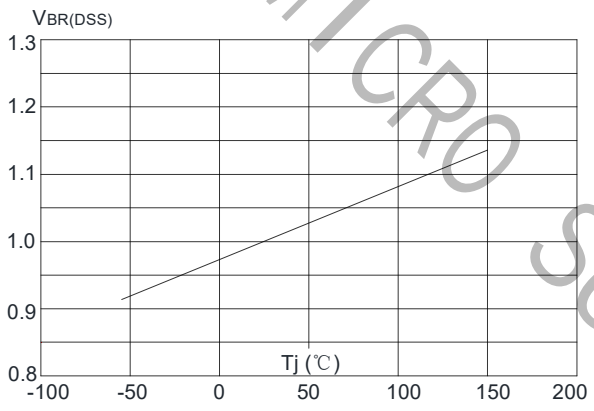


Figure 7: Normalized Breakdown Voltage vs. Junction Temperature

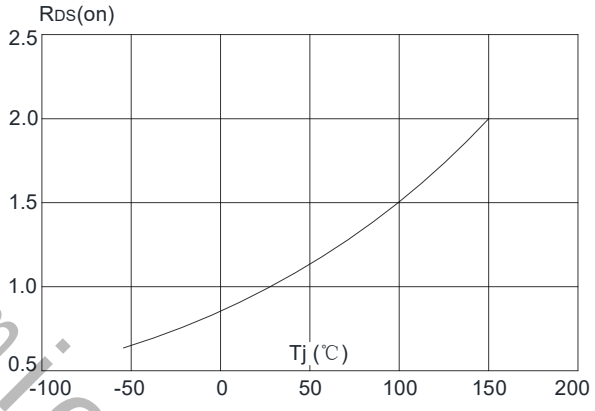


Figure 8: Normalized on Resistance vs. Junction Temperature

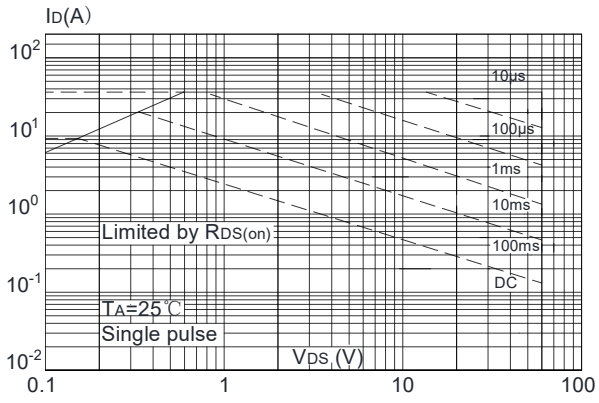


Figure 9: Maximum Safe Operating Area

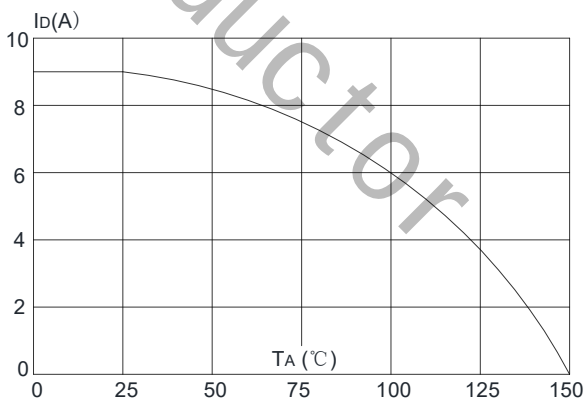


Figure 10: Maximum Continuous Drain Current vs. Ambient Temperature

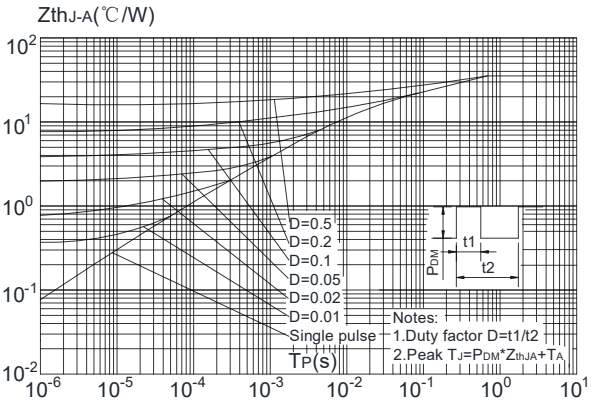


Figure.11: Maximum Effective
Transient Thermal Impedance, Junction-to-Ambient