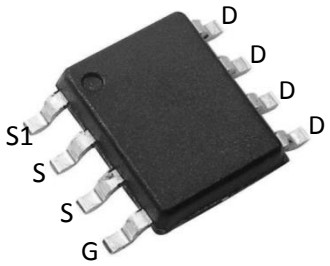
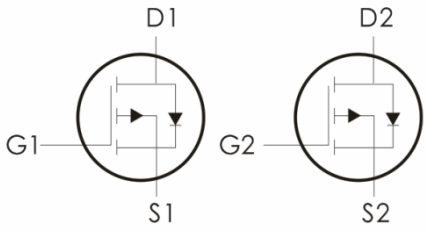
Description：

This Dual P-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}=-30V,I_D=-7A,$R_{DS(ON)}$<20mΩ @V_{GS}=-10V
2) Low gate charge.
3) Green device available.
4) Advanced high cell denity trench technology for ultra $R_{DS(ON)}$.
5) Excellent package for good heat dissipation.

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

Symbol	Parameter	Ratings	Units
V_{DS}	Drain-Source Voltage	-30	V
V_{GS}	Gate-Source Voltage	±20	V
I_D	Continuous Drain Current-TC=25℃	-7	A
	Continuous Drain Current-TC=100℃	-5.1	
	Pulsed Drain Current[1]	-32	
E_{AS}	Single Pulse Avalanche Energy	---	mJ
P_D	Power Dissipation(T_C=25℃)	2.1	W
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-55 to +150	℃

Thermal Characteristics：

Symbol	Parameter	Max	Units
$R_{\theta JC}$	Thermal Resistance,Junction to Case	---	℃/W
$R_{\theta JA}$	Thermal Resistance,Junction to Ambient	60	

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	-30	---	---	V
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS}=-30V , V_{GS}=0V , T_J=25℃	---	---	-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 Resistance[2]	V_{GS}=-10V,I_D=-8A	---	16.5	20	mΩ
		V_{GS}=-4.5V,I_D=-5A	---	25.6	32	
G_{FS}	Forward Transconductance	V_{DS}=-10V, I_D=-3A	---	6.8	---	S
Dynamic Characteristics						
C_{iss}	Input Capacitance	V_{DS}=-15V, V_{GS}=0V, f=1MHz	---	1250	1820	pF
C_{oss}	Output Capacitance		---	160	235	
C_{rss}	Reverse Transfer Capacitance		---	90	130	
Switching Characteristics						
$t_{d(on)}$	Turn-On Delay Time[2,3]	V_{DD}=-15V , V_{GS}=-10V , R_G=6,I_D=-1A	---	5.8	11	ns
t_r	Rise Time[2,3]		---	18.8	36	ns
$t_{d(off)}$	Turn-Off Delay Time[2,3]		---	46.9	89	ns
t_f	Fall Time[2,3]		---	12.3	23	ns
Q_g	Total Gate Charge[2,3]	V_{DS}=-15V , VG_S=-4.5V , I_D=-5A	---	11	17	nC
Q_{gs}	Gate-Source Charge[2,3]		---	3.4	6	nC
Q_{gd}	Gate-Drain “Miller” Charge[2,3]		---	4.2	8	nC
Drain-Source Diode Characteristics						
V_{SD}	Source-Drain Diode Forward Voltage[2]	V_{GS}=0V,I_S=-1A	---	---	-1	V

Notes:

1. Repetitive Rating : Pulsed width limited by maximum junction temperature.

2. The data tested by pulsed , pulse width ≦ 300us , duty cycle ≦ 2%.

3. Essentially independent of operating temperature.

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

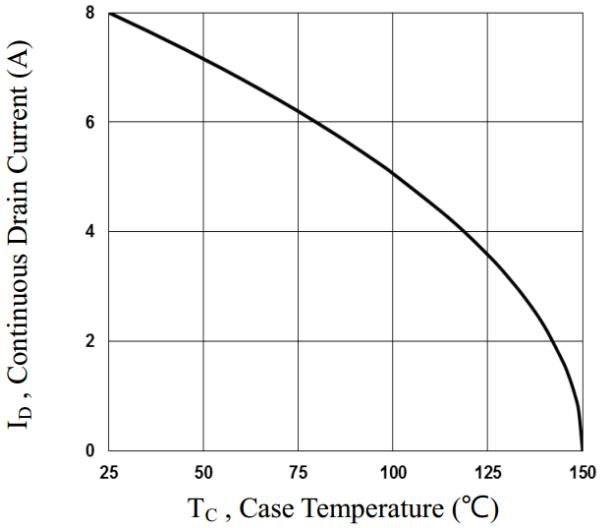


Fig.1 Continuous Drain Current vs. T_C

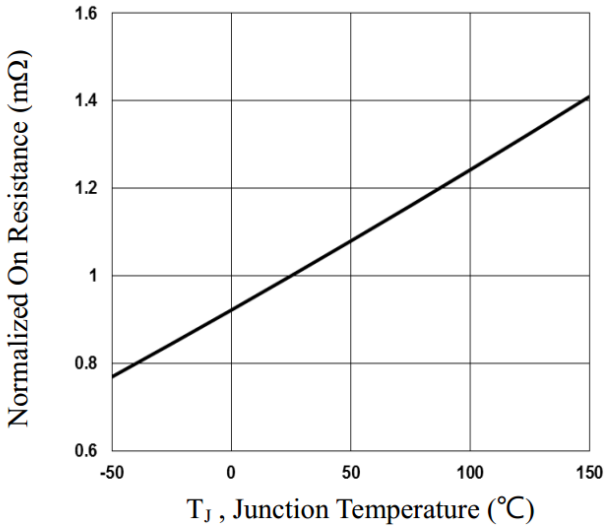


Fig.2 Normalized R_{DSON} vs. T_J

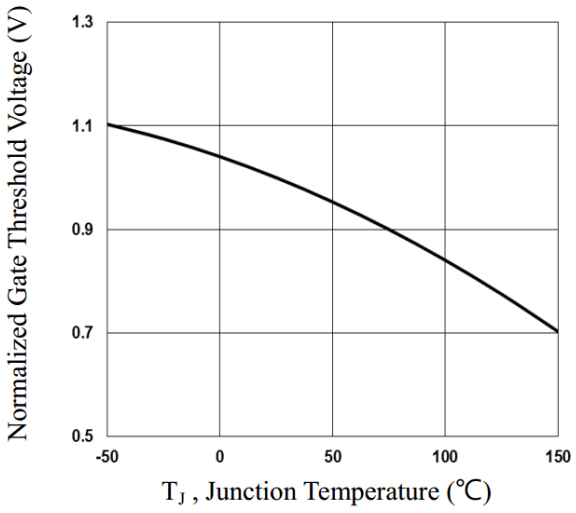


Fig.3 Normalized V_{th} vs. T_J

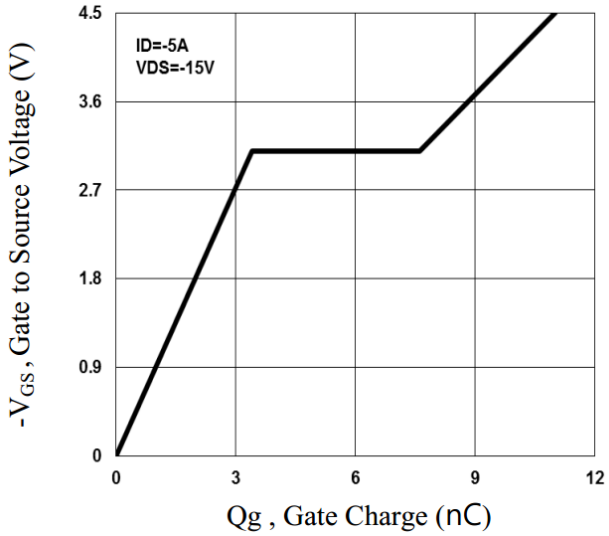


Fig.4 Gate Charge Waveform

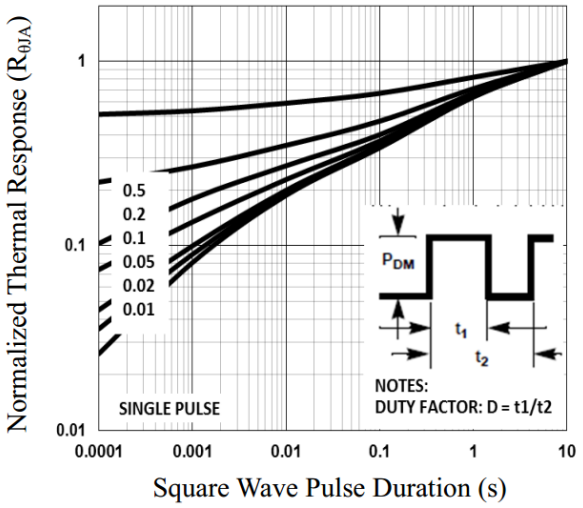


Fig.5 Normalized Transient Impedance

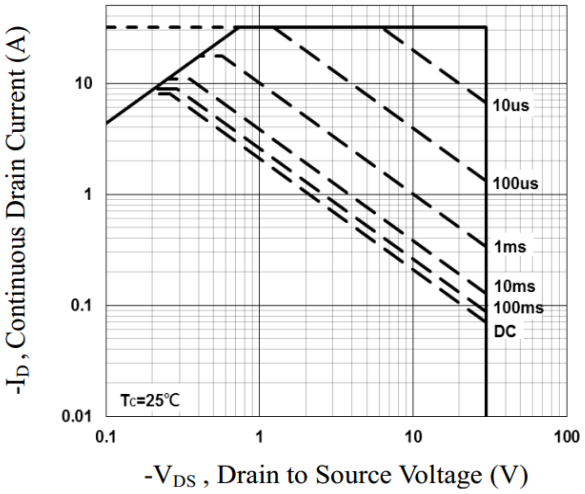


Fig.6 Maximum Safe Operation Area

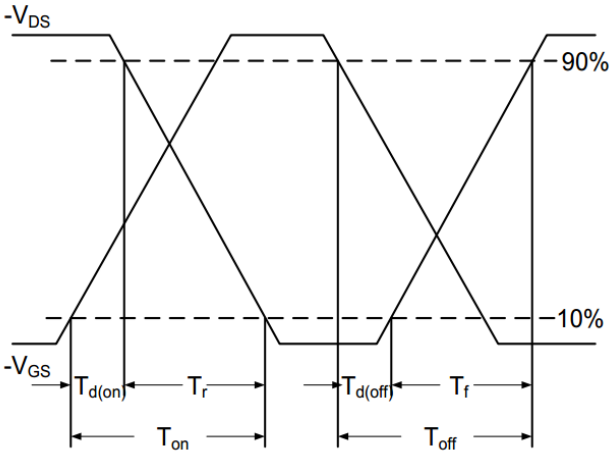


Fig.7 Switching Time Waveform

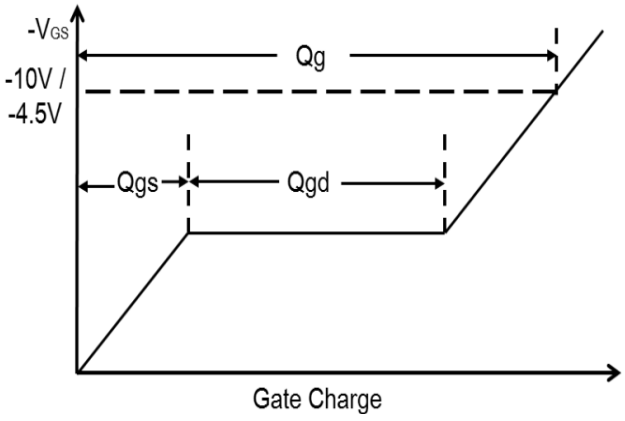


Fig.8 Gate Charge Waveform