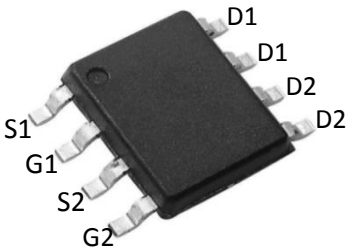
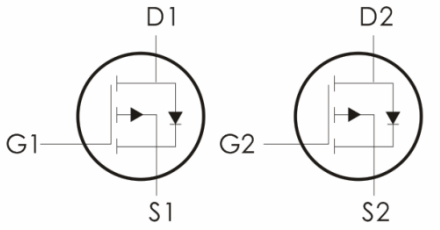
Description：

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=-6A,$R_{DS(ON)}$<75m Ω @V_{GS}=-4.5V
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_A=25℃ unless otherwise noted)

Symbol	Parameter	Ratings	Units
V_{DS}	Drain-Source Voltage	-30	V
V_{GS}	Gate-Source Voltage	±12	V
I_D	Continuous Drain Current	-6	A
	Pulsed Drain Current[1]	-30	
P_D	Power Dissipation	2	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[2]	62.5	℃/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	-30	---	---	V
I_{DSS}	Zero Gate Voltage Drain Current	V_{GS}=0V, V_{DS}=-24	---	---	-1	μA
I_{GSS}	Gate-Source Leakage Current	V_{GS}=±10V, V_{DS}=0A	---	---	±100	nA
On Characteristics						
$V_{GS(th)}$	GATE-Source Threshold Voltage	V_{GS}=V_{DS}, I_D=-250μA	-0.7	-1	-1.3	V
$R_{DS(ON)}$	Drain-Source On Resistance	V_{GS}=-10V,I_D=-4.2A	---	47	55	mΩ
		V_{GS}=-4.5V,I_D=-4A	---	56	75	
		V_{GS}=-2.5V,I_D=-1A	---	72	130	
G_{FS}	Forward Transconductance[1]	$V_{DS=}$-5V, I_D=-4.2A	---	10	---	S
Dynamic Characteristics						
C_{iss}	Input Capacitance	V_{DS}=-15V, V_{GS}=0V, f=1MHz	---	880	---	pF
C_{oss}	Output Capacitance		---	105	---	
C_{rss}	Reverse Transfer Capacitance		---	65	---	
Switching Characteristics						
$t_{d(on)}$	Turn-On Delay Time	V_{DD}=-15V, R_L=6Ω V_{GS}=-10V, I_D=-4.2A	---	7	---	ns
t_r	Rise Time		---	3	---	ns
$t_{d(off)}$	Turn-Off Delay Time		---	30	---	ns
t_f	Fall Time		---	12	---	ns
Q_g	Total Gate Charge	V_{GS}=-4.5V, V_{DS}=-15V, I_D=-4.2A	---	8.5	---	nC
Q_{gs}	Gate-Source Charge		---	1.8	---	nC
Q_{gd}	Gate-Drain Charge			2.7	---	
Drain-Source Diode Characteristics						
V_{SD}	Source-Drain Diode Forward Voltage[3]	V_{GS}=0V,I_S=-4.2A	---	---	-1.2	V

Notes:

1. Repetitive Rating: Pulse width limited by maximum junction temperature.
2. Surface Mounted on FR4 Board, t ≤ 10 sec.
3. Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%.
4. Guaranteed by design, not subject to production

Typical Electrical and Thermal Characteristics

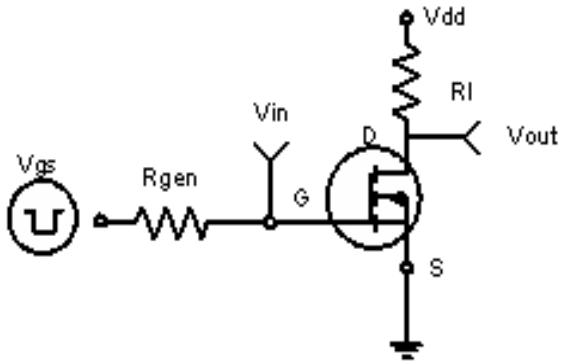


Figure 1:Switching Test Circuit

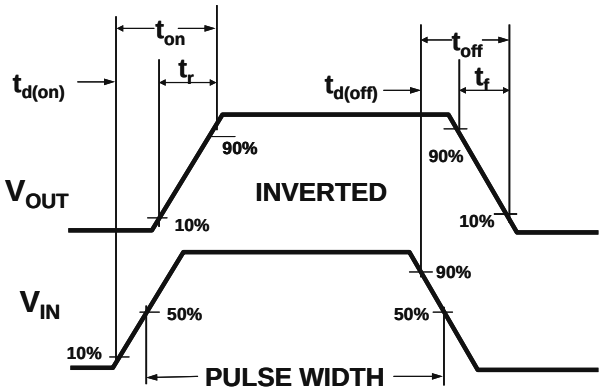
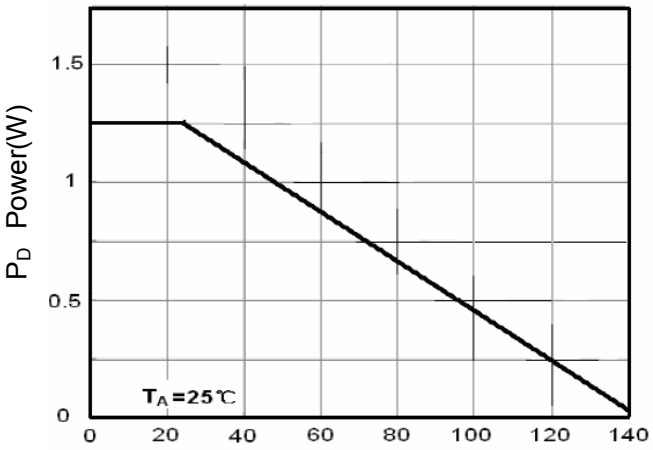
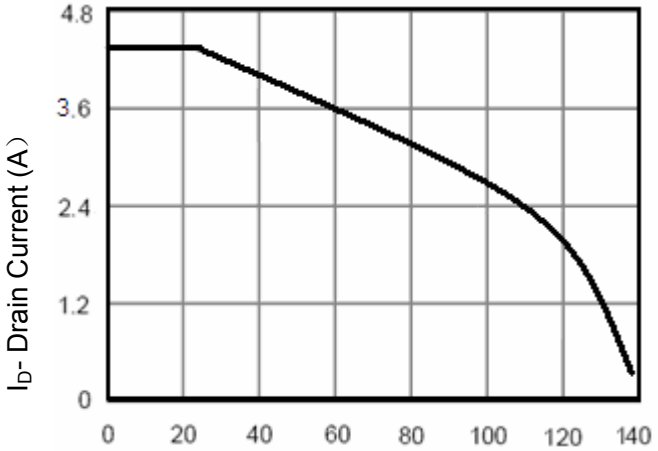


Figure 2:Switching Waveforms



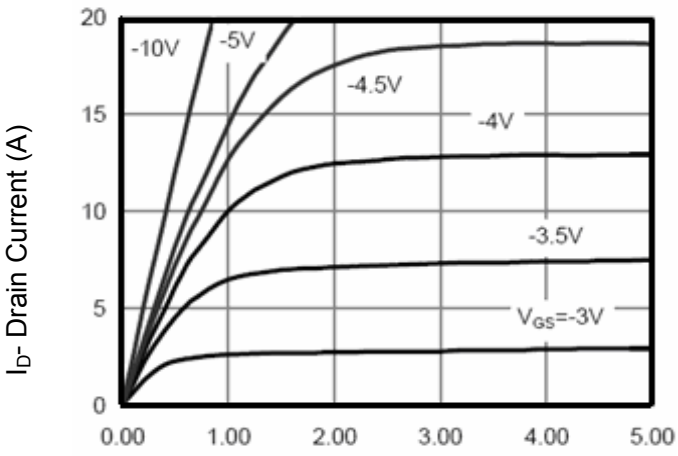
T_J-Junction Temperature(℃)

Figure 3 Power Dissipation



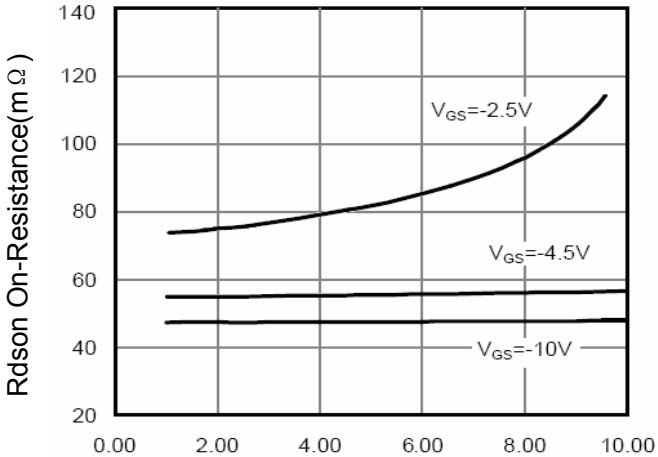
T_J-Junction Temperature(℃)

Figure 4 Drain Current



Vds Drain-Source Voltage (V)

Figure 5 Output Characteristics



I_D- Drain Current (A)

Figure 6 Drain-Source On-Resistance

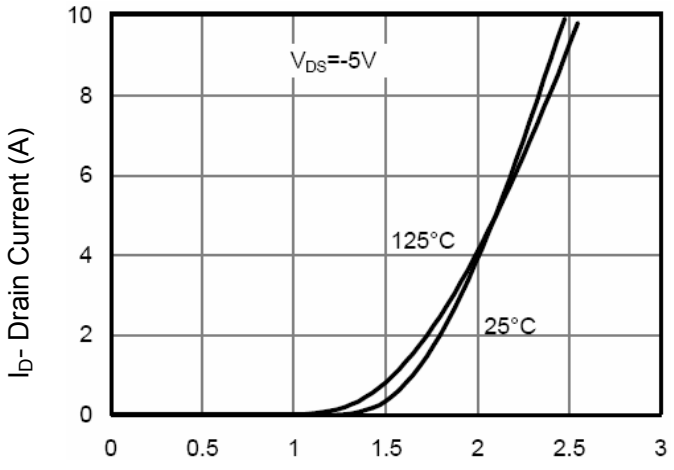


Figure 7 Transfer Characteristics

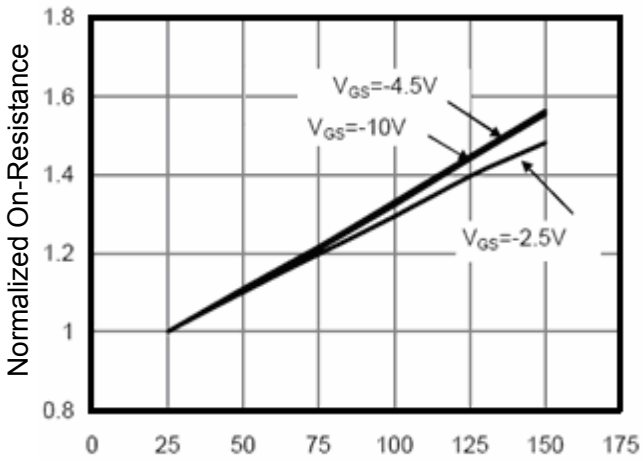


Figure 8 Drain-Source On-Resistance

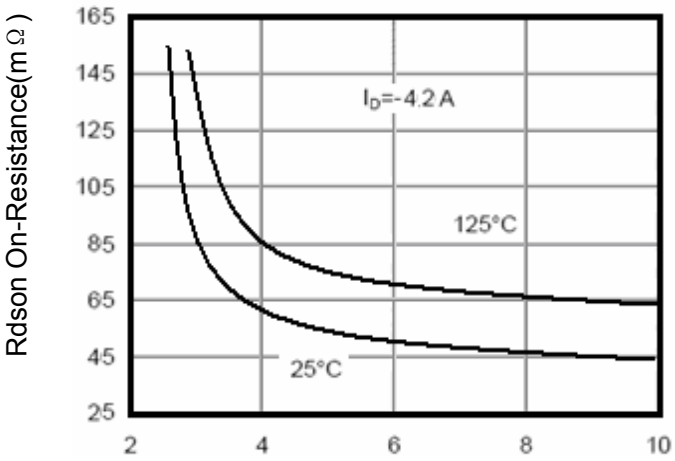


Figure 9 Rdson vs Vgs

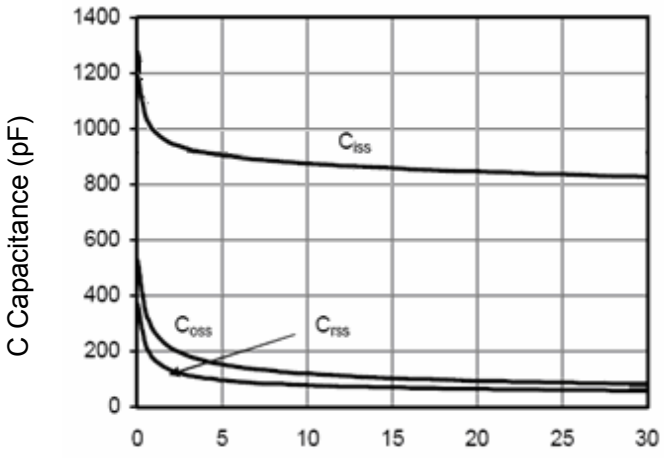


Figure 10 Capacitance vs Vds

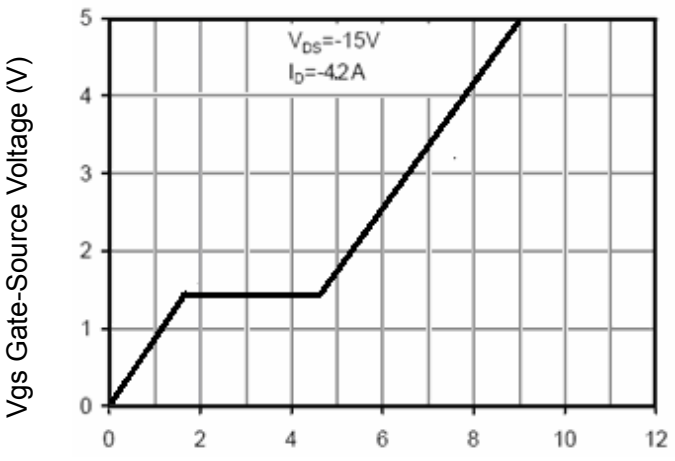


Figure 11 Gate Charge

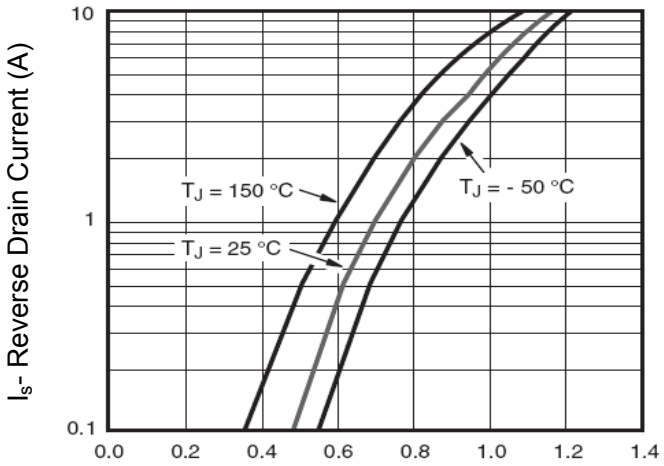


Figure 12 Source- Drain Diode Forward

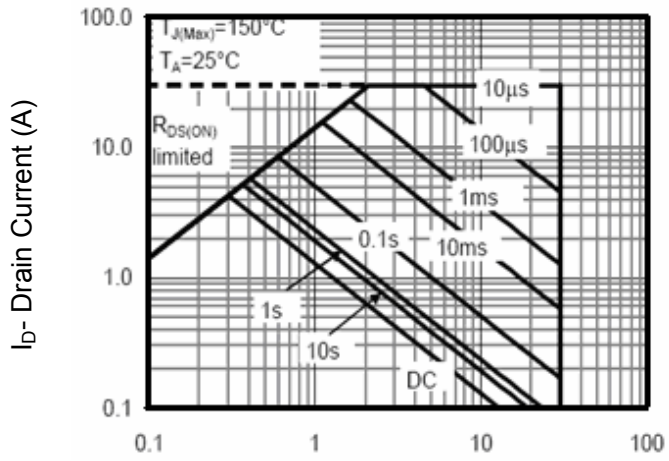


Figure 13 Safe Operation Area

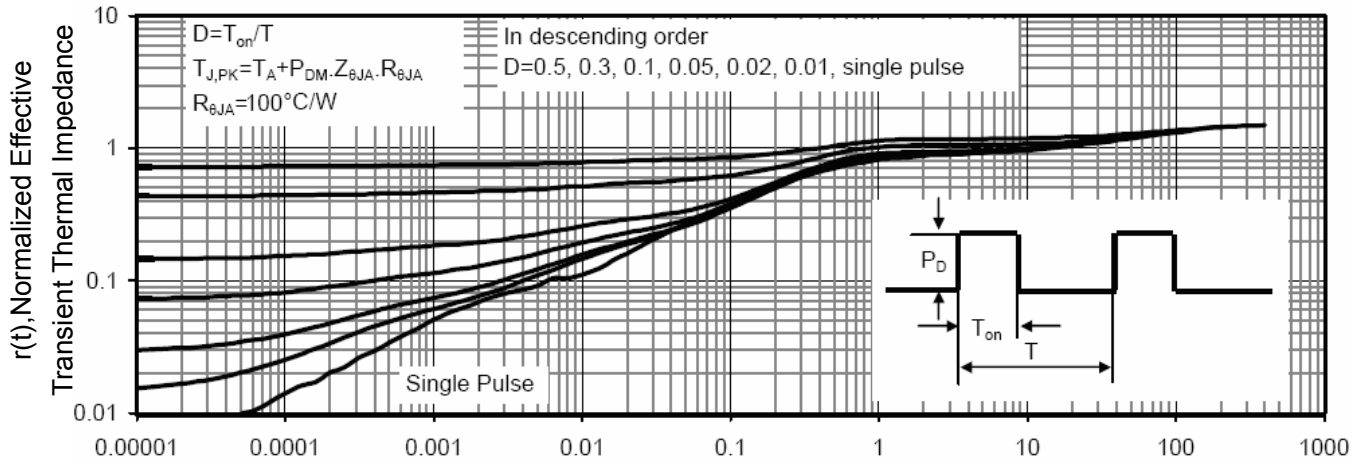


Figure 14 Normalized Maximum Transient Thermal Impedance