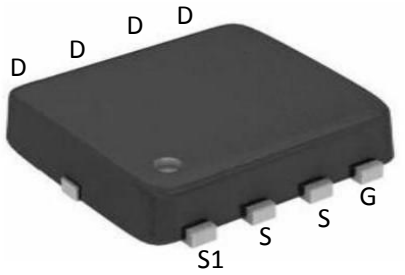
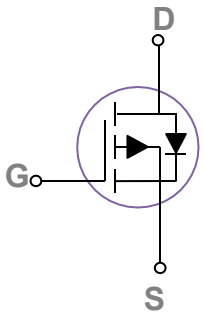
Description：

This 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}=-60V,I_D=-18A,$R_{DS(ON)}$<29mΩ @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	-60	V
V_{GS}	Gate-Source Voltage	±20	V
I_D	Continuous Drain Current	-18	A
	Continuous Drain Current-TC=100℃	-12	
I_{DM}	Pulsed Drain Current [1]	-110	
E_{AS}	Single Pulse Avalanche Energy [2]	150	mJ
P_D	Power Dissipation	65	W
T_J, T_{STG}	Operating and Storage Junction Temperature Range	-55 to +175	℃

Thermal Characteristics：

Symbol	Parameter	Max	Units
$R_{\theta JC}$	Thermal Resistance,Junction to Case	1.92	℃/W

Package Marking and Ordering Information：

Part NO.	Marking	Package
DOZ18P06	18P06	DFN3*3-8

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}=-60V	---	---	-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	-1.8	-2.5	V
$R_{DS(ON)}$	Drain-Source On Resistance②	V_{GS}=-10V,I_D=-15A	---	24	29	mΩ
		V_{GS}=-4.5V,I_D=-10A	---	30.4	39	
G_{FS}	Forward Transconductance	V_{DS} =-5V, I_D=-15A	---	35	---	S
Dynamic Characteristics						
C_{iss}	Input Capacitance	V_{DS}=-25V, V_{GS}=0V, f=1MHz	---	4025	---	pF
C_{oss}	Output Capacitance		---	133	---	
C_{rss}	Reverse Transfer Capacitance		---	97	---	
Switching Characteristics						
$t_{d(on)}$	Turn-On Delay Time	V_{DD}=-30V R_{GEN}=3Ω, V_{GS}=-10V	---	12	---	ns
t_r	Rise Time		---	9	---	ns
$t_{d(off)}$	Turn-Off Delay Time		---	63	---	ns
t_f	Fall Time		---	13	---	ns
Q_g	Total Gate Charge	V_{GS}=-10V, V_{DS}=-30V, I_D=-20A	---	53	---	nC
Q_{gs}	Gate-Source Charge		---	10	---	nC
Q_{gd}	Gate-Drain “Miller” Charge		---	12	---	nC
Drain-Source Diode Characteristics						
V_{SD}	Source-Drain Diode Forward Voltage[3]	V_{GS}=0V,I_S=-15A, T_J=25℃	---	-0.88	-1.2	V
I_S	Continuous Drain Current	VD=VG=0V	---	-18	---	V
I_{SM}	Pulsed Drain Current	VD=VG=0V	---	-110	---	V

t_{rr}	Reverse Recovery Time	I_{Sd}=-20A,V_{GS}=0V	---	26	---	ns
Q_{rr}	Reverse Recovery Charge	.dI/dt=-500A/μs	---	29	---	nc

Notes:

1.Repetitive Rating: Pulse width limited by maximum junction temperature.
2.E_{AS} condition: T_J=25℃,V_{DD}=40V,V_G=-10V, Rg=25Ω, L=0.5mH.
3.Repetitive Rating: Pulse width limited by maximum junction temperature.

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

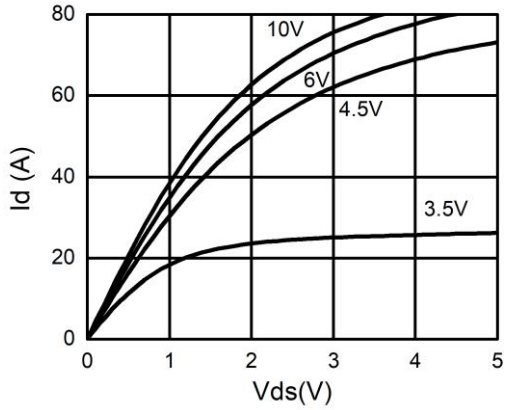


Figure 1. Output Characteristics

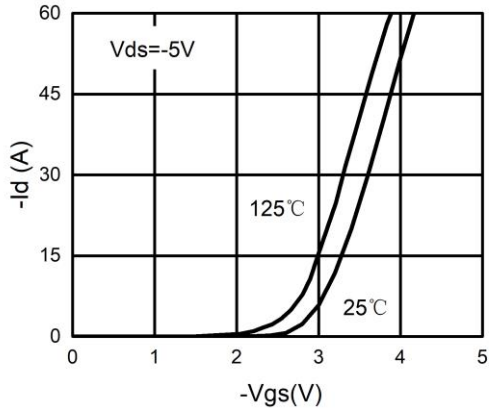


Figure 2. Transfer Characteristics

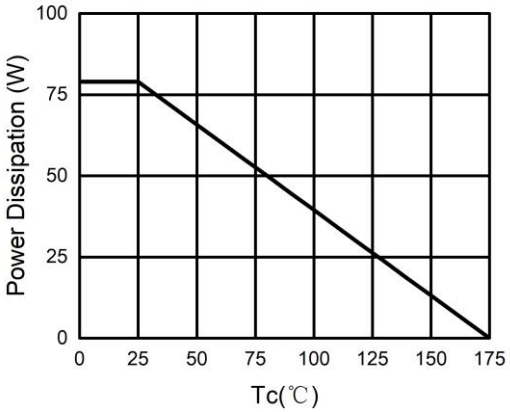


Figure 3. Power Dissipation

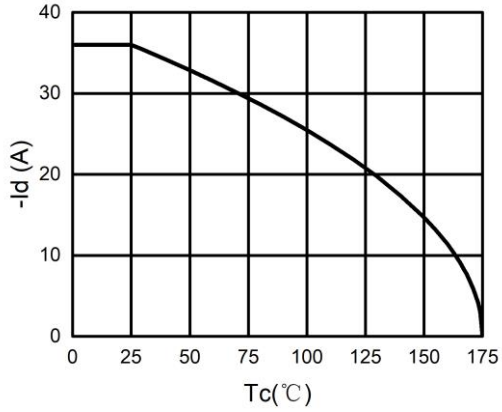


Figure 4. Drain Current

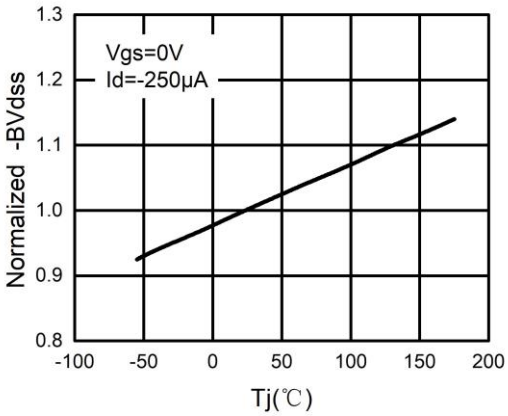


Figure 5. BV_{DSS} vs Junction Temperature

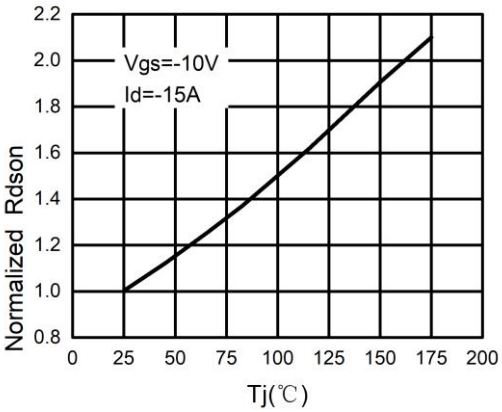


Figure 6. $R_{DS(ON)}$ vs Junction Temperature

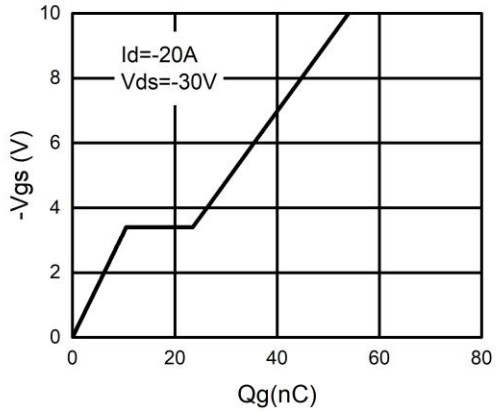


Figure 7. Gate Charge Waveforms

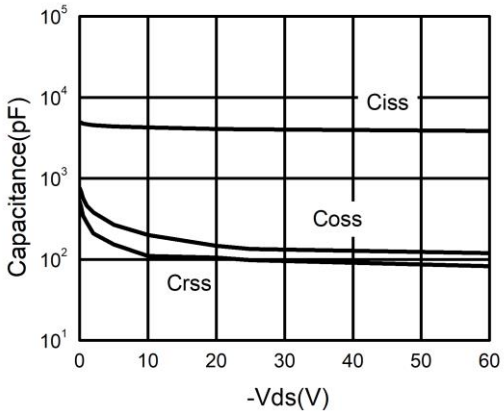


Figure 8. Capacitance

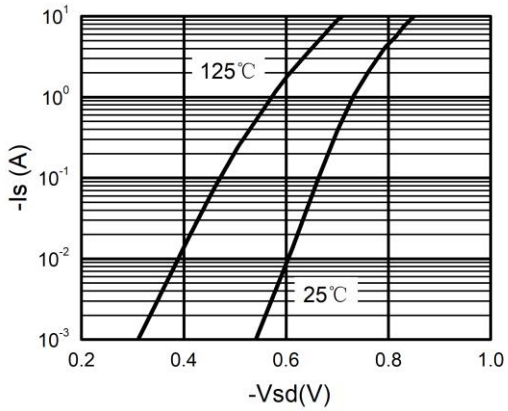


Figure 9. Body-Diode Characteristics

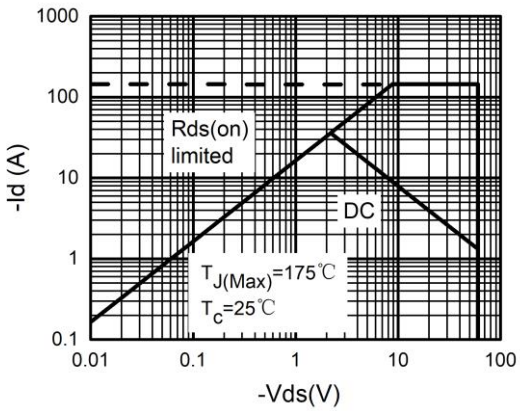


Figure 10. Maximum Safe Operating Area