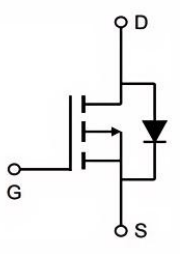
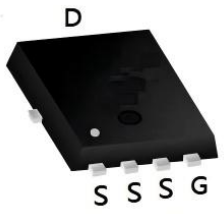
P-Channel Enhancement Mode MOSFET

Parameter	Value	Unit
V_{DS}	-40	V
$R_{DS(on)}$	7.5	mΩ
I_D	-70	A





PDFN5x6

Features

- High density cell design for ultra low Rdson
- Fully characterized avalanche voltage and current
- Excellent package for good heat dissipation

Applications

- Motor/Body Load Control
- Load Switch
- PWM Application
- DC-DC converters

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

Parameter		Symbol	Value	Unit
Drain-Source Voltage		V_{DS}	-40	V
Gate-Source Voltage		V_{GS}	±20	V
Continuous Drain Current	T_C=25℃	I_D	-70	A
Pulsed Drain Current		I_{DM}	-280	A
Total Power Dissipation	T_C=25℃	P_D	78	W
Maximum Junction Temperature		T_J	150	℃
Storage Temperature Range		T_{STG}	-55 to 150	℃

Thermal Characteristics

Parameter	Symbol	Typ.	Max.	Unit
Thermal Resistance Junction-Ambient	$R_{\theta JA}$	--	50	℃/W

Electrical Characteristics(T_J=25℃,unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS}=0V, I_D=-250μA	-40	--	--	V
Gate-body Leakage current	I_{GSS}	V_{DS}=0V, V_{GS}=±20V	--	--	±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-40V,V_{GS}=0V,T_J=25℃	--	--	-1	uA
Gate-Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=-250μA	-1.0	-1.8	-2.5	V
Drain-Source On-Resistance4	$R_{DS(on)}$	V_{GS}=-10V, I_D=-35A	--	7.5	10	mΩ
		V_{GS}=-4.5V, I_D=-15A	--	10.5	15	
Input Capacitance	C_{iss}	V_{DS}=-20V, V_{GS}=0V, f=1MHz	--	4600	--	pF
Output Capacitance	C_{oss}		--	490	--	
Reverse Transfer Capacitance	C_{rss}		--	470	--	
Total Gate Charge	Q_g	V_{DS}=-20V, V_{GS}=-10V I_D=-15A	--	99	--	nC
Gate-Source Charge	Q_{gs}		--	14	--	
Gate-Drain Charge	Q_{gd}		--	22	--	
Turn-On Delay Time	$t_{d(on)}$	V_{DD}=-20V,V_{GS}=-10V R_G=3Ω , I_D=-15A	--	11	--	ns
Rise Time	t_r		--	52	--	
Turn-Off Delay Time	$t_{d(off)}$		--	331	--	
Fall Time	t_f		--	185	--	

Diode Characteristics

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Continuous Source Current	I_S	V_G=V_D=0V , Force Current	--	--	-70	A
Diode Forward Voltage	V_{SD}	V_{GS}=0V , I_S=-15A , T_J=25℃	--	--	-1.2	V

Typical Characteristics

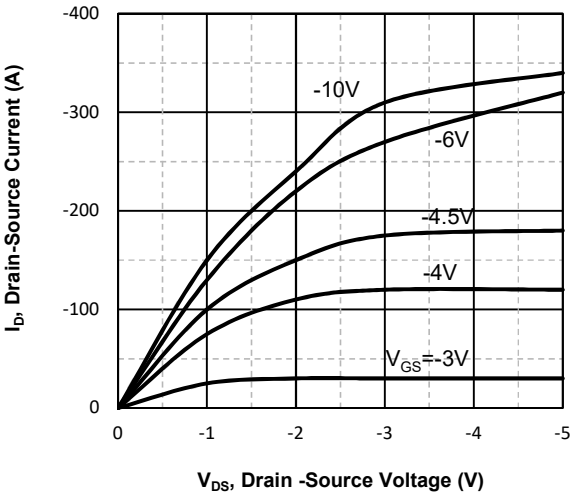


Fig1. Typical Output Characteristics

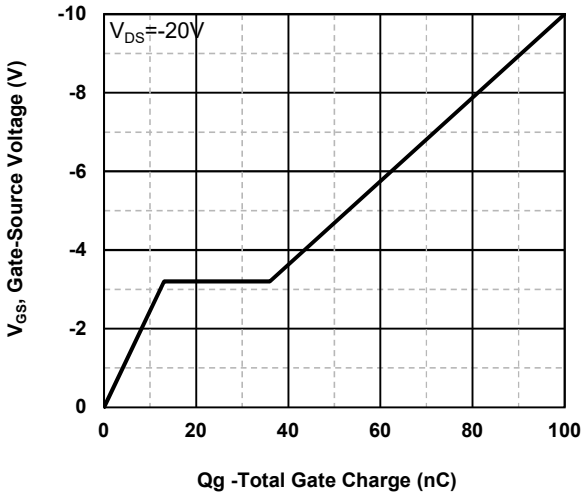


Fig2. Typical Gate Charge Vs.Gate-Source Voltage

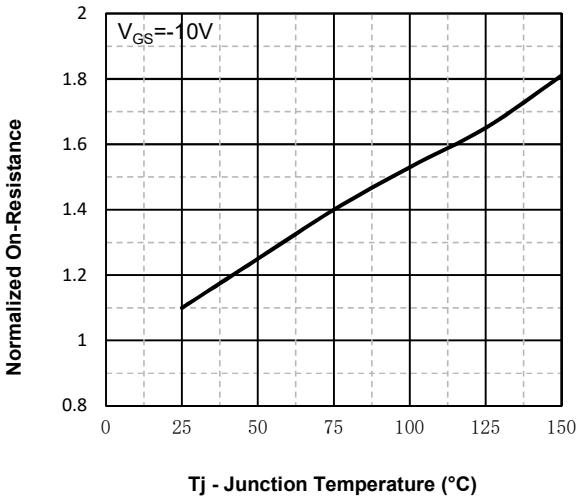


Fig3. Normalized On-Resistance Vs. Temperature

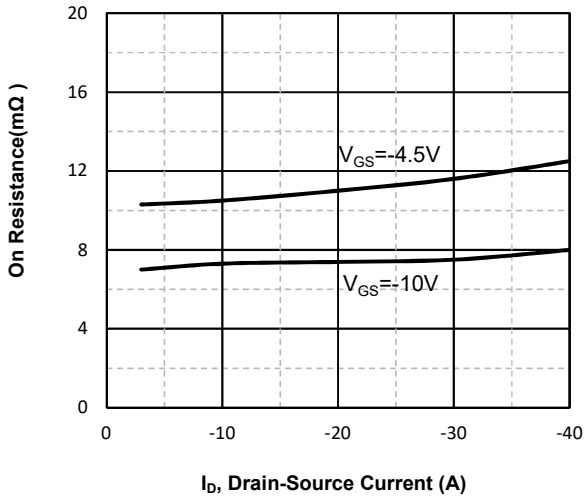


Fig4. On Resistance Vs. Drain-Source Current

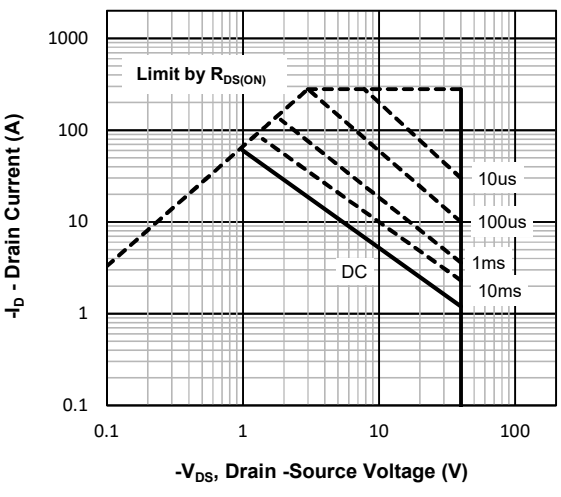


Fig5. Maximum Safe Operating Area

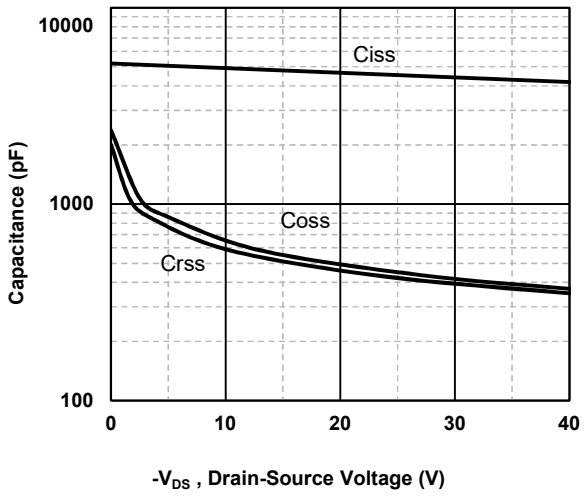
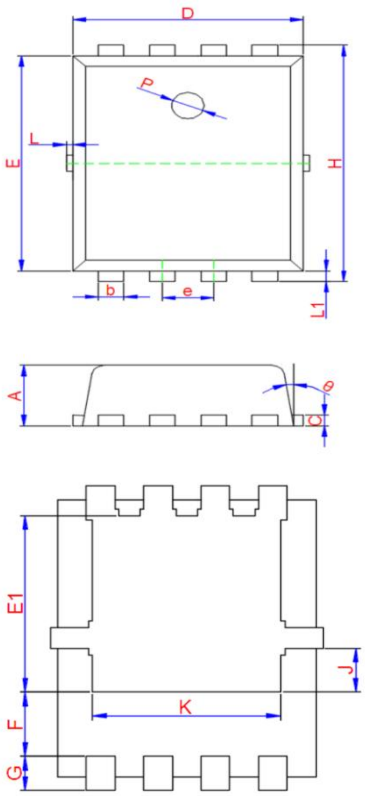


Fig6 Typical Capacitance Vs.Drain-Source Voltage

Package Outline Dimensions (Units: mm)



Symbol	Dimensions in mm		
	Min.	Typ.	Max.
A	0.800	1.050	1.200
b	0.250	0.350	0.490
c		0.254TYP.	
D	4.800	5.000	5.100
e		1.270TYP.	
E	5.650	5.800	5.900
E1		3.400TYP.	
F		1.300TYP.	
G		0.600TYP.	
H	5.950	6.080	6.200
J		0.950TYP.	
K		4.000TYP	
L	-	-	0.150
L1	0.100	0.140	0.180
P		1.180TYP.	
θ	6°	10°	14°

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