Product Summary

$V_{(BR)DSS}$	$R_{DS(on)TYP}$	I_D
-100V	70mΩ@-10V	-14A
	85mΩ@-4.5V	

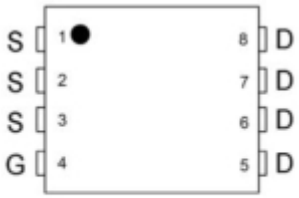
Feature

- Advanced trench process technology
- Super high dense cell design

Application

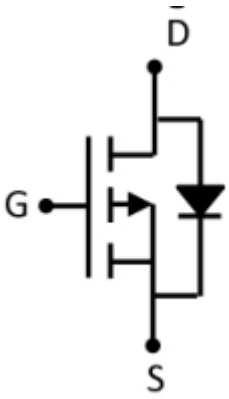
- Motor control
- Power management
- DC/DC convertor

Package



PDFN3×3-8L

Circuit diagram



Marking

010P70G =Device Code

*** =Month Code**

Absolute maximum ratings

(T_a=25℃ unless otherwise noted)

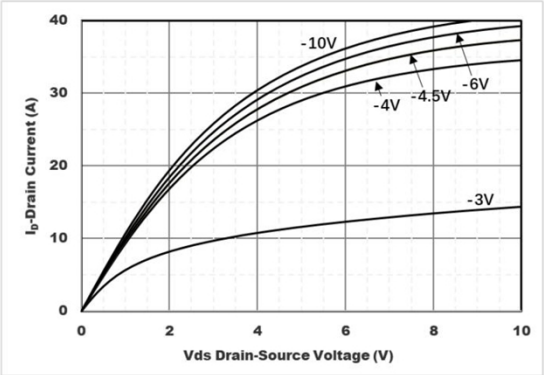
Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-100	V
Gate-Source Voltage	V_{GS}	±20	V
Drain Current-Continuous (T_C=25℃)	I_D	-14	W
Drain Current – Pulsed	I_{DM}	-56	A
Power Dissipation (T_C=25℃)	P_D	50	W
Thermal Resistance Junction to Case	$R_{\theta JC}$	2.5	℃/ W
Storage Temperature Range	T_{STG}	-55~ +150	℃
Operating Junction Temperature Range	$T_{J,}$	-55~ +150	℃

Electrical characteristics

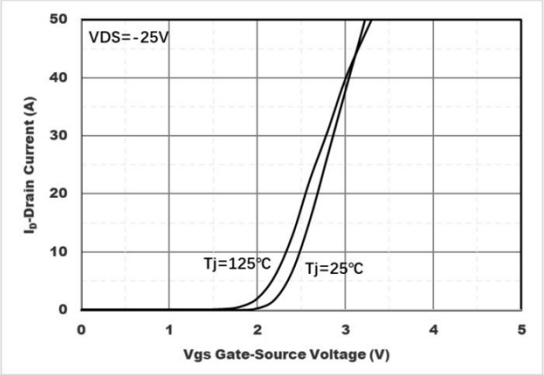
(T_A=25℃, unless otherwise noted)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-source breakdown voltage	BV_{DSS}	V_{GS} = 0V, I_D =-250μA	-100			V
Drain-Source Leakage Current	I_{DSS}	V_{DS} =-100V,V_{GS} = 0V			-1	uA
Gate-Source Leakage Current	I_{GSS}	V_{GS} =±20V , V_{DS}=0V			±100	uA
Gate threshold voltage	$V_{GS(th)}$	V_{DS} =V_{GS}, I_D =-250μA	-1	-1.7	-2.5	V
Static Drain-Source on-Resistance	$R_{DS(on)}$	V_{GS} =-10V, I_D =-10A		70	88	mΩ
		V_{GS} =-4.5V, I_D =-5A		85	115	
Dynamic characteristics[4]						
Input Capacitance	C_{iss}	V_{DS}=-50V,V_{GS}=0V, f=1MHz		1050		pF
Output Capacitance	C_{oss}			120		
Reverse Transfer Capacitance	C_{rss}			23		
Total Gate Charge	Q_g	V_{GS}=-10V, V_{DS}=-50V, I_D=-10A		20		nC
Gate-Source Charge	Q_{gS}			4		
Gate-Drain Charge	Q_{gd}			4.4		
Turn-On Delay Time	$T_{d(on)}$	V_{GS}=-10V, V_{DD}=-50V, I_D=-10A, R_{GEN}=9.1Ω		15		nS
Rise Time	T_r			30		
Turn-Off Delay Time	$T_{d(off)}$			73		
Fall Time	T_f			76		
Drain-Source Diode Characteristics						
Diode forward voltage	V_{SD}	V_{GS}=0V, I_S=-1A			-1.2	V

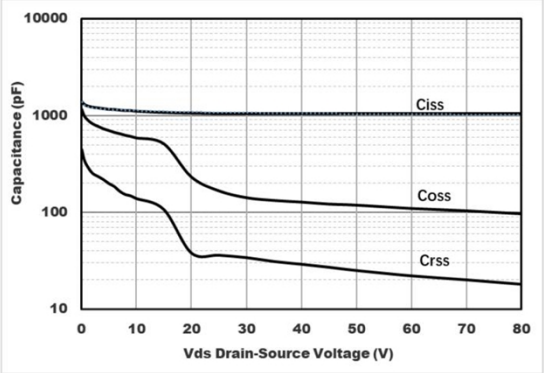
Typical Characteristics



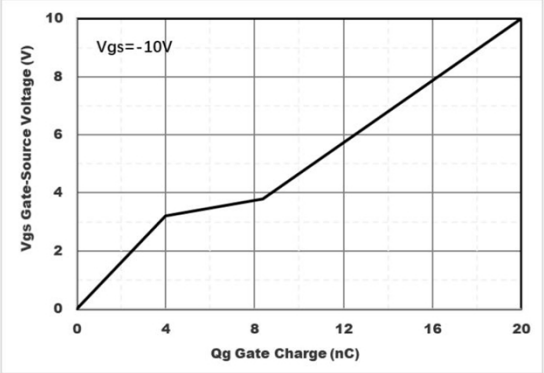
Output Characteristics



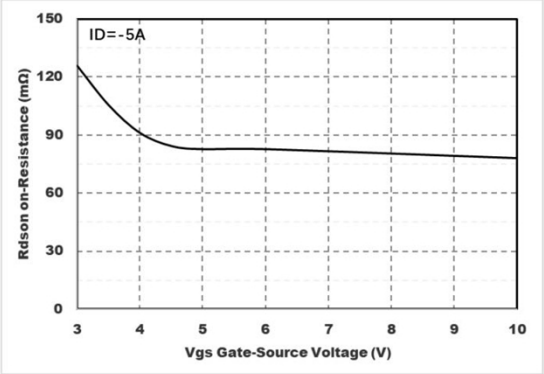
Transfer Characteristics



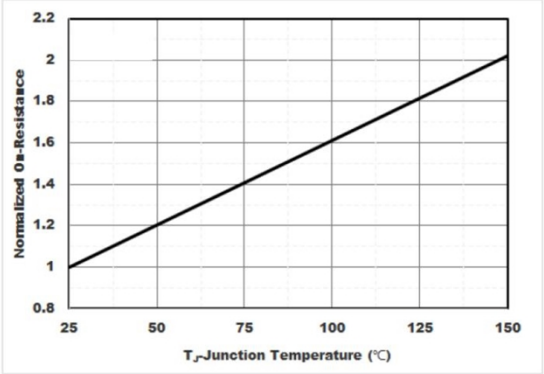
Capacitance Characteristics



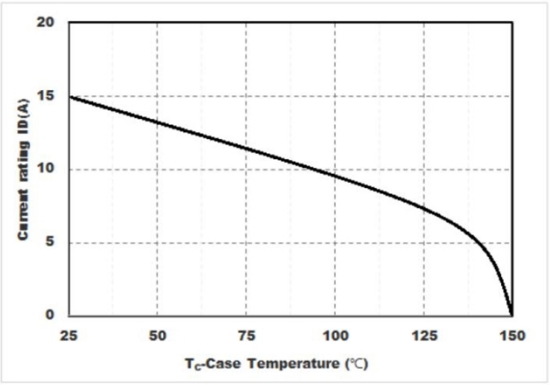
Gate Charge



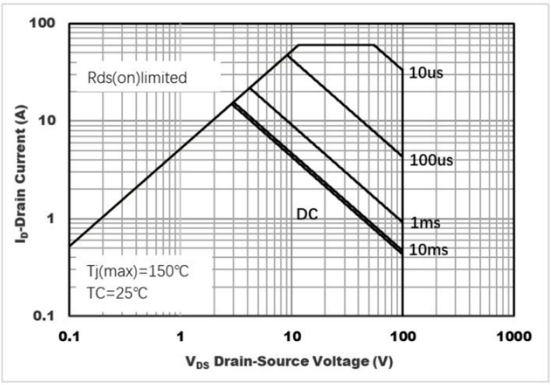
On-Resistance vs. Gate to Source Voltage



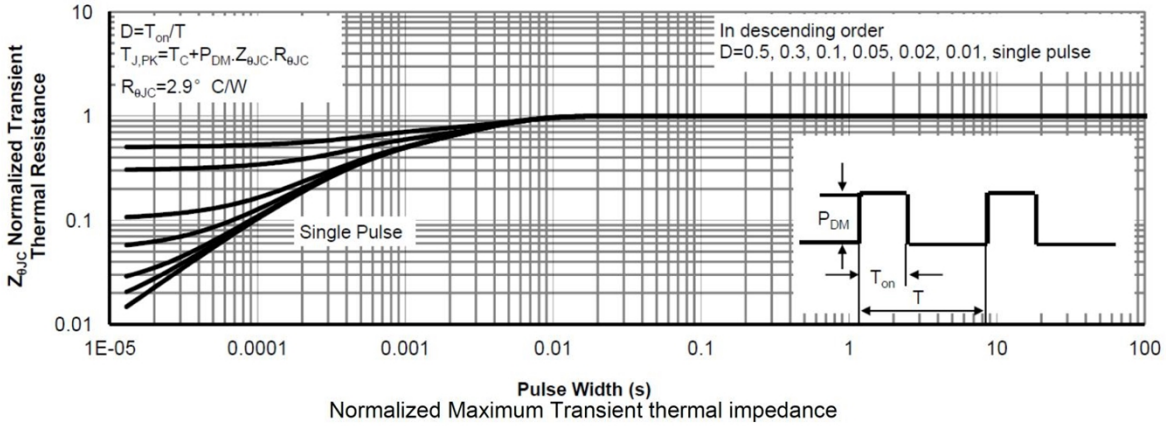
Normalized On-Resistance



Drain current

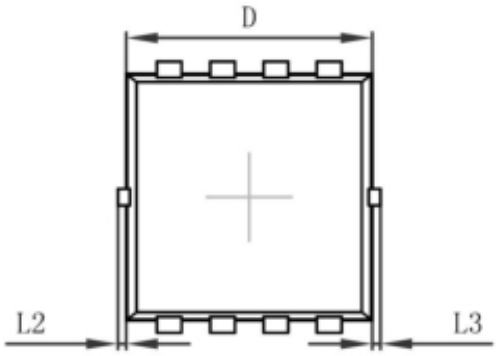


Safe Operation Area

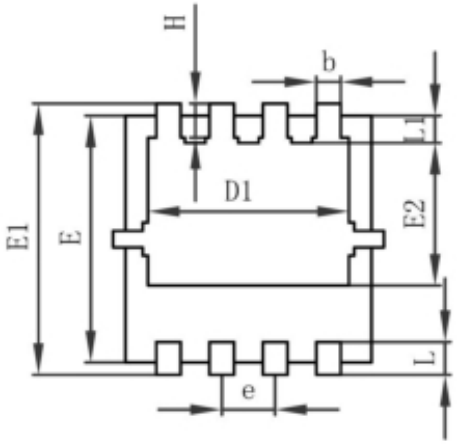


Normalized Maximum Transient thermal impedance

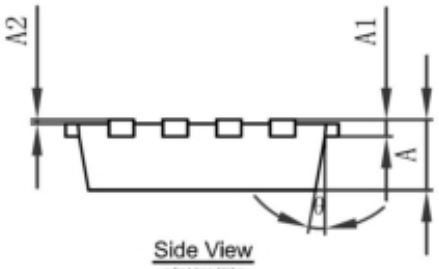
PDFN3×3-8L Package Information



Top View
[顶视图]



Bottom View
[背视图]



Side View
[侧视图]

Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.650	0.850	0.026	0.033
A1	0.152 REF.		0.006 REF.	
A2	0~0.05		0~0.002	
D	2.900	3.100	0.114	0.122
D1	2.300	2.600	0.091	0.102
E	2.900	3.100	0.114	0.122
E1	3.150	3.450	0.124	0.136
E2	1.535	1.935	0.060	0.076
b	0.200	0.400	0.008	0.016
e	0.550	0.750	0.022	0.030
L	0.300	0.500	0.012	0.020
L1	0.180	0.480	0.007	0.019
L2	0~0.100		0~0.004	
L3	0~0.100		0~0.004	
H	0.315	0.515	0.012	0.020
θ	9°	13°	9°	13°