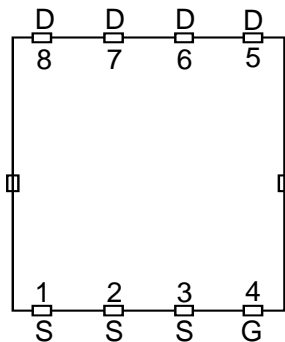


Description

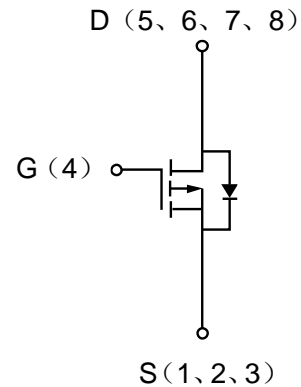
The MOSFET provide the best combination of fast switching, low on-resistance and cost-effectiveness.

MOSFET Product Summary		
$V_{DS}(V)$	$R_{DS(on)}(m\Omega)$	$I_D(A)$
-30	$<30 @ V_{GS}=-4.5V$	-12
	$<18 @ V_{GS}=-10V$	

Top View (PDFN3.3*3.3-8L)



Internal Structure


Absolute maximum ratings @ $T_A=25^\circ C$ (unless otherwise specified)

Parameter	Symbol	Maximum	Units
Drain-Source Voltage	V_{DSS}	-30	V
Gate-Source Voltage	V_{GSS}	± 25	V
Continuous Drain Current ($V_{GS}=-10V$)	I_D	$T_A=25^\circ C$	-12
		$T_A=70^\circ C$	-8.5
300 μs Pulsed Drain Current ($V_{GS}=-10V$)	I_{DM}	-80	A
Continuous Drain Current ($V_{GS}=-10V$)	I_D	$T_C=25^\circ C$	-33
		$T_C=100^\circ C$	-21
Diode Continuous Forward Current	I_S	-3	A
Avalanche Current, Single pulse ($L=0.1mH$)	I_{AS}	-24	A
Avalanche Energy, Single pulse ($L=0.1mH$)	E_{AS}	29	mJ
Maximum Power Dissipation	P_D	$T_A=25^\circ C$	3.1
		$T_A=70^\circ C$	2
Maximum Power Dissipation	P_D	$T_C=25^\circ C$	29
		$T_C=100^\circ C$	12
Maximum Junction Temperature	T_J	150	$^\circ C$
Storage Temperature Range	T_{STG}	-55 to 150	
Thermal Resistance-Junction to Ambient	$R_{\theta JA}$	$t \leq 10s$	40
		Steady State	75
Thermal Resistance-Junction to Case	$R_{\theta JC}$	4.2	$^\circ C/W$

Electrical characteristics per line @25°C(unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Units
Drain-Source Breakdown Voltage	BV_{DSS}	$I_{DS}=-250\mu A, V_{GS}=0V$	-30	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-24V, V_{GS}=0V$ $T_J=85^\circ C$	-	-	-1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$	-	-	± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_{DS}=-250\mu A$	-1.5	-2	-2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=-10V, I_{DS}=-11A$	-	14	18	m Ω
		$V_{GS}=-4.5V, I_{DS}=-4A$	-	22	30	
Drain-Source Diode Forward Voltage	V_{SD}	$V_{GS}=0V, I_{SD}=-1A$	-	-0.7	-1	V
Reverse Recovery Time	t_{rr}	$I_{SD}=-11A, di_{SD}/dt=100A/\mu s$	-	19	-	ns
Reverse Recovery Charge	Q_{rr}		-	10	-	nC
Total Gate Charge	Q_g	$V_{GS}=-10, V_{DS}=-15V,$ $I_{DS}=-11A$	-	21	-	nC
Gate-Source Charge	Q_{gs}		-	2.6	-	
Gate-Drain Charge	Q_{gd}		-	6.2	-	
Input Capacitance	C_{iss}	$V_{GS}=0V, V_{DS}=-15V,$ $f=1MHz$	-	1000	-	pF
Output Capacitance	C_{oss}		-	210	-	
Reverse Transfer Capacitance	C_{rss}		-	150	-	
Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=-15V, V_{GEN}=-10V,$ $R_G=6\Omega, R_L=15\Omega,$ $I_{DS}=-1A$	-	8	-	ns
Turn-Off Delay Time	$t_{d(off)}$		-	32	-	
Turn-On Rise Time	t_r		-	12	-	
Turn-On Fall Time	t_f		-	16	-	
Gate Resistance	R_g	$V_{GS}=0V, V_{DS}=0V, f=1MHz$	-	3	-	Ω

Typical Characteristics

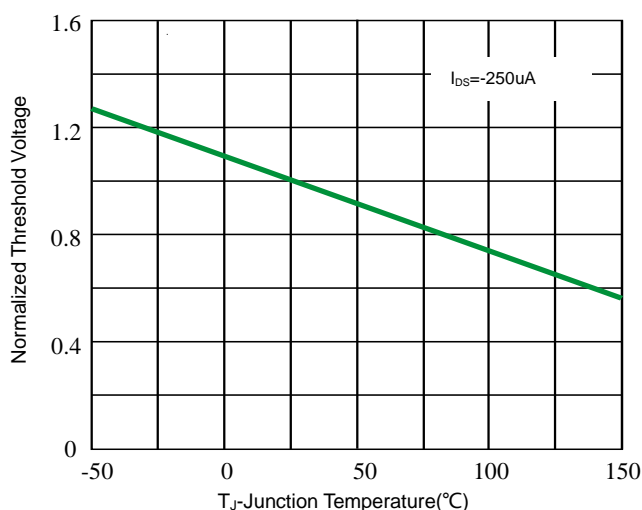


Fig 1. Gate Threshold Voltage

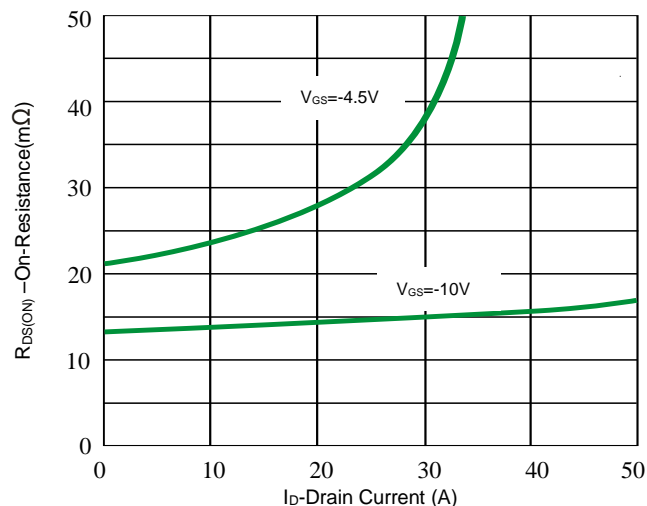
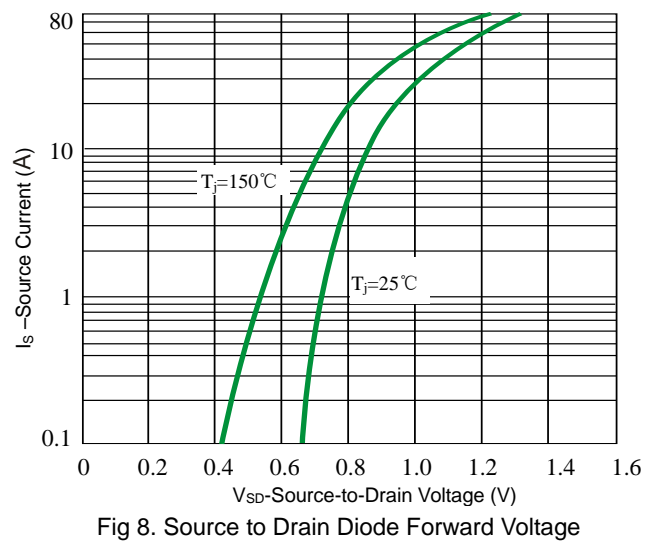
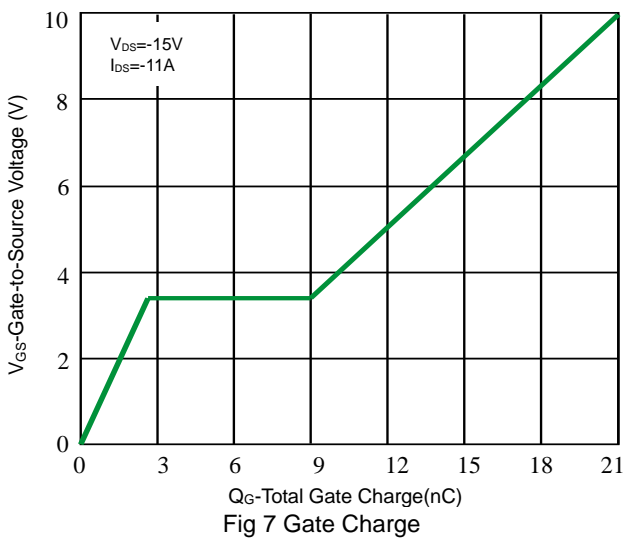
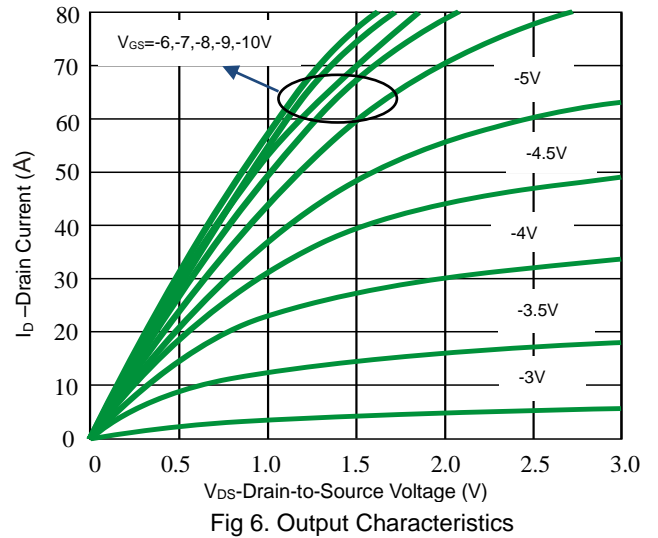
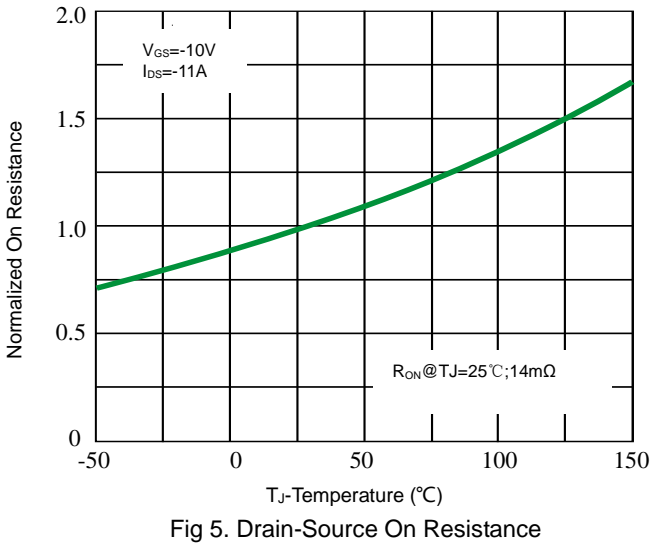
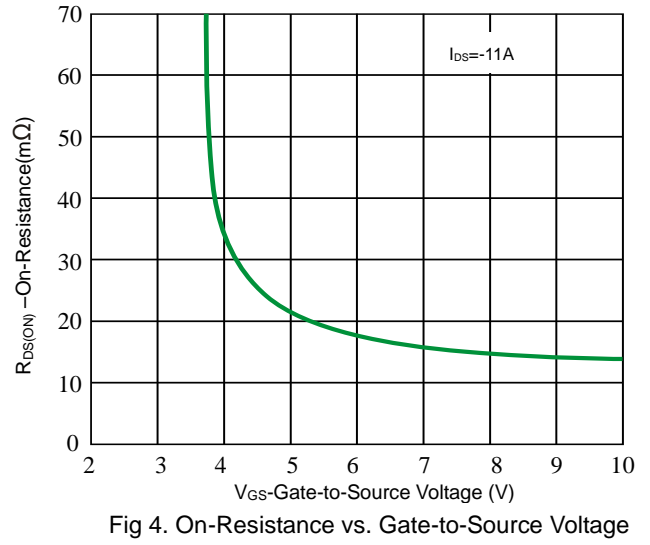
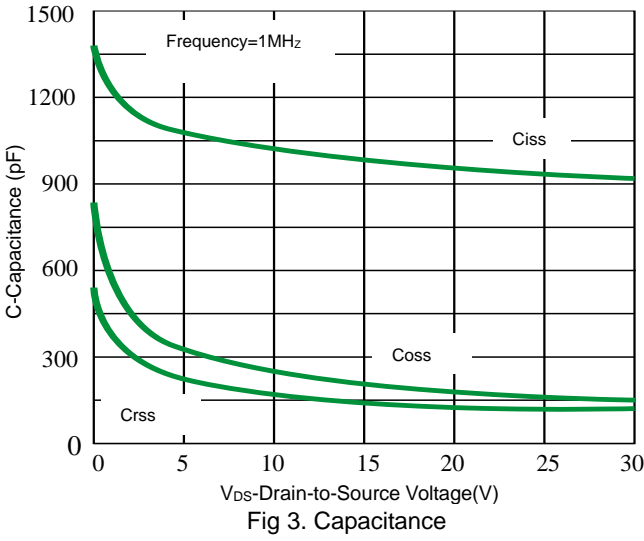


Fig 2. On-Resistance vs. Drain Current



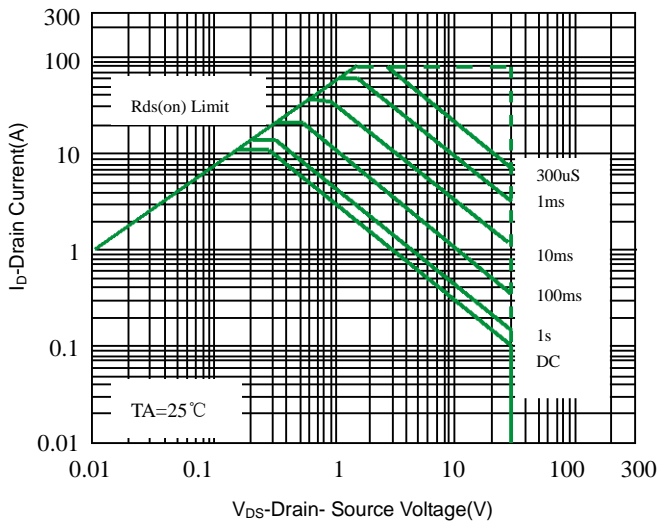


Fig 9. Maximum Forward Biased Safe Operating Area

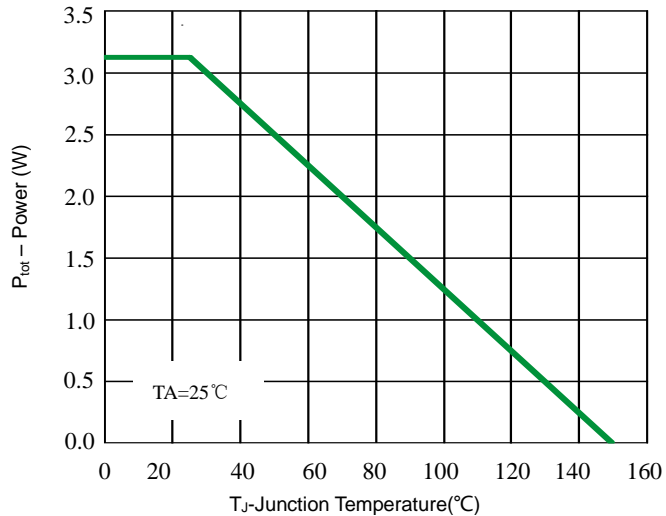


Fig 10. Power Dissipation

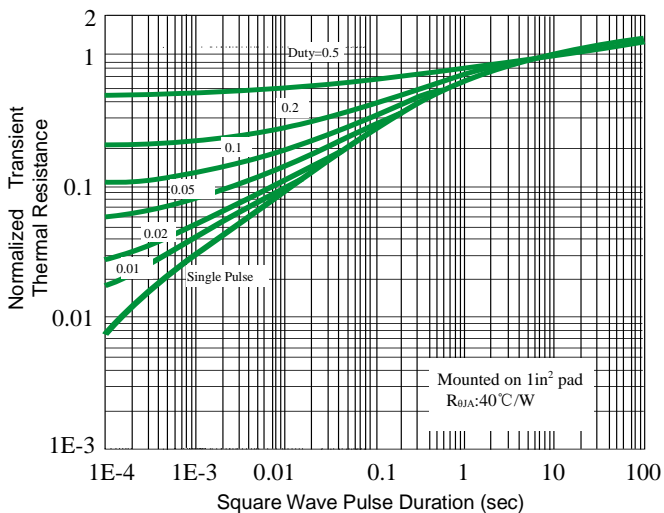


Fig 11. Thermal Transient Impedance

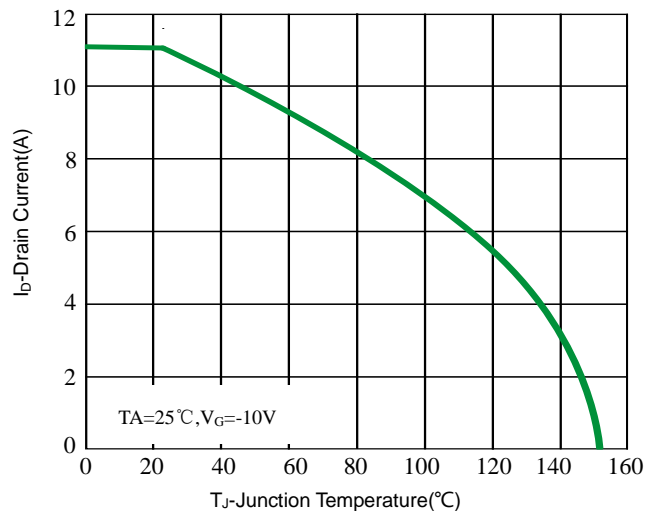
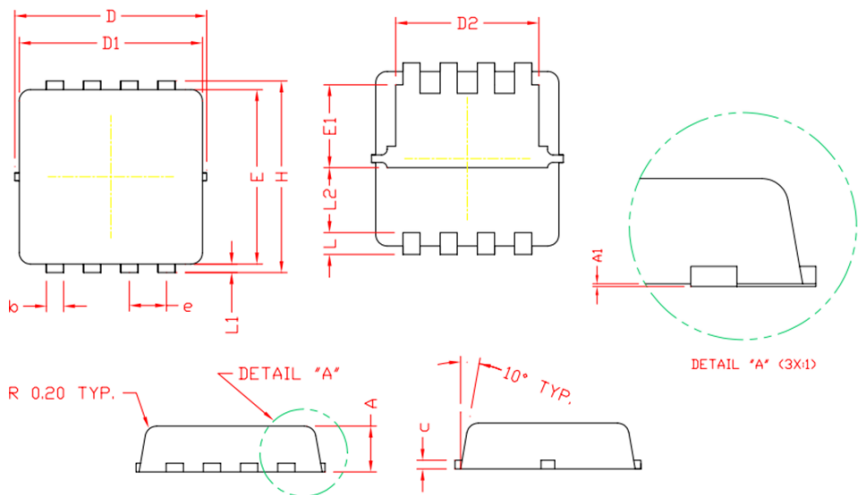
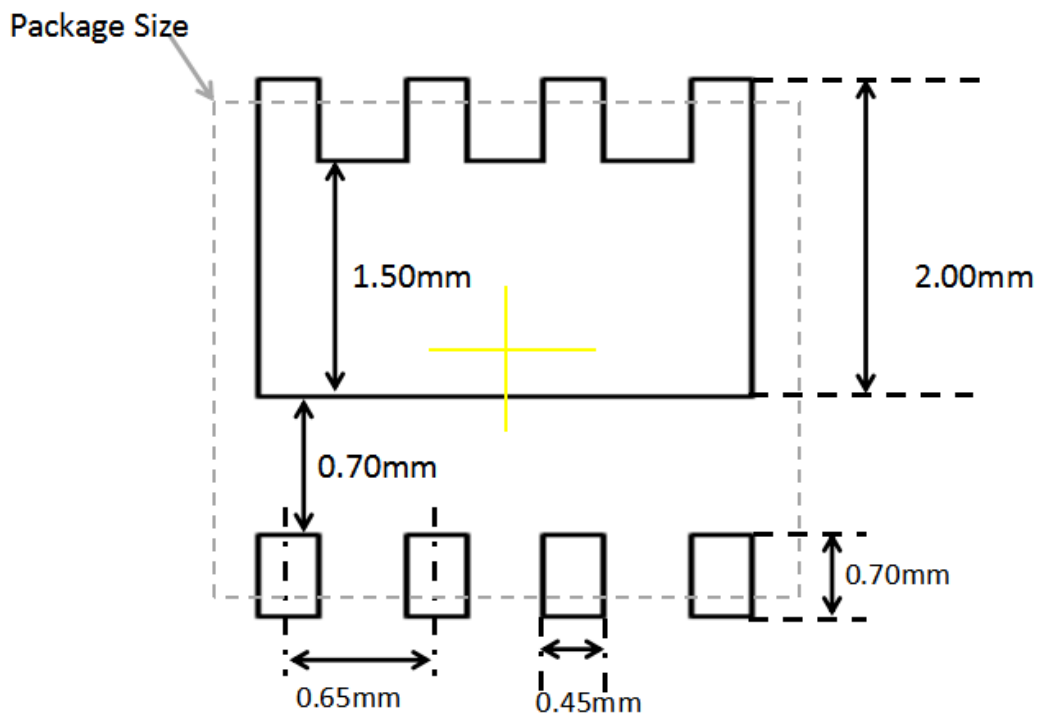


Fig 12. Drain Current

Product dimension (PDFN3.3*3.3-8L)




SYMBOL	MIN	NOM	MAX
A	0.70	0.80	0.90
A1	0.00	0.03	0.05
b	0.24	0.30	0.35
c	0.10	0.15	0.20
D	3.25	3.32	3.40
D1	3.05	3.15	3.25
D2	2.40	2.50	2.60
E	3.00	3.10	3.20
E1	1.35	1.45	1.55
e	0.65 BSC.		
H	3.20	3.30	3.40
L	0.30	0.40	0.50
L1	0.10	0.15	0.20
L2	1.13 REF.		



Ordering information

Device	Package	Shipping
PPM8PN30V12	PDFN3.3*3.3-8L (Pb-Free)	5000 / Tape & Reel

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