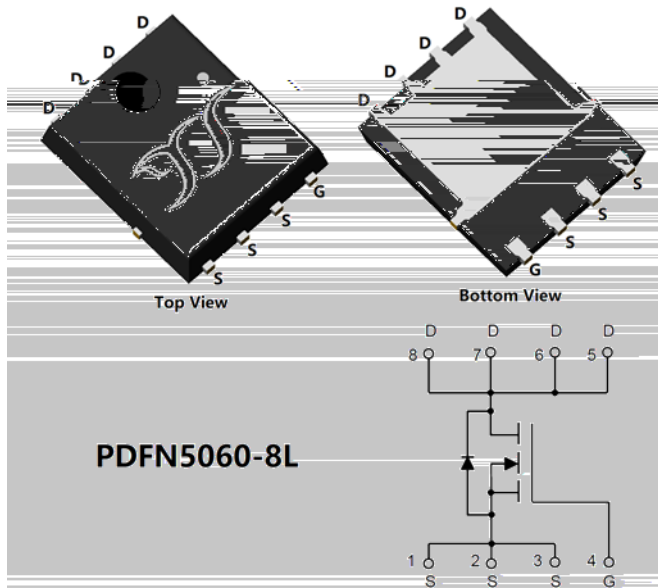


N-Channel Enhancement Mode Field Effect Transistor



Product Summary

V_{DS}	60V
I_D	70A
$R_{DS(ON)}$ (at $V_{GS}=10V$)	<7.5 mohm
$R_{DS(ON)}$ (at $V_{GS}=4.5V$)	<9.5 mohm
100% EAS Tested	
100% ∇V_{DS} Tested	

General Description

Split Gate Trench MOSFET technology
 Excellent package for heat dissipation
 High density cell design for low $R_{DS(ON)}$
 Moisture Sensitivity Level 1
 Epoxy Meets UL 94 V-0 Flammability Rating
 Halogen Free

Applications

DC-DC Converters
 Power management functions
 Industrial and Motor Drive application

Absolute Maximum Ratings ($T_A=25^\circ C$ unless otherwise noted)

Parameter	Symbol	Limit	Unit
Drain-source Voltage	V_{DS}	60	V
Gate-source Voltage	V_{GS}	± 20	V
Drain Current (Silicon limited)	I_D	$T_C=25^\circ C$	70
		$T_C=100^\circ C$	44
Pulsed Drain Current ^A	I_{DM}	210	A
Avalanche energy ^B	EAS	162	mJ
Total Power Dissipation ^C	P_D	$T_C=25^\circ C$	70
		$T_C=100^\circ C$	28
Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	$^\circ C$

Thermal resistance

Parameter	Symbol	Typ	Max	Units
Thermal Resistance Junction-to-Ambient ^D	R	14	17	$^\circ C/W$
Thermal Resistance Junction-to-Ambient ^D		Steady-State	40	
Thermal Resistance Junction-to-Case	R	1.3	1.8	

Ordering Information (Example)

PREFERRED P/N	PACKING CODE	Marking	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
YJG70G06A	F1	YJG70G06A	5000	10000	100000	13 reel



YJG70G06A

Electrical Characteristics ($T_J=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
Static Parameter						
Drain-Source Breakdown Voltage	BV_{DSS}	$V_{GS}=0V, I_D=250$	60			V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=60V, V_{GS}=0V$	$T_J=25^\circ\text{C}$		1	
			$T_J=55^\circ\text{C}$		5	
Gate-Body Leakage Current	I_{GSS}	$V_{GS}=\pm 20V, V_{DS}=0V$			± 100	nA
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250$	1.2	1.7	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=20A$		5.3	7.5	m



Typical Performance Characteristics

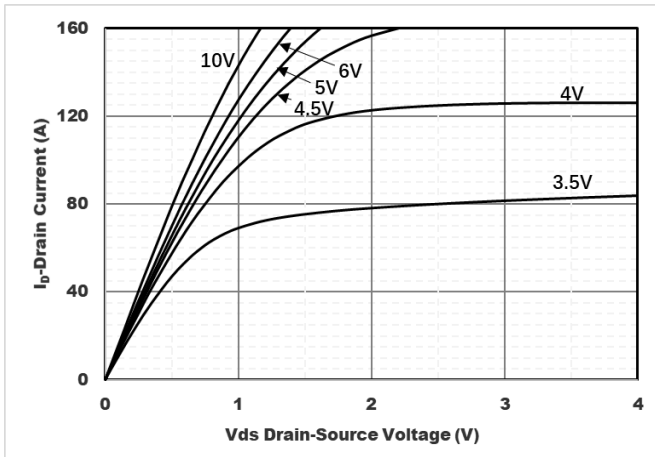


Figure1. Output Characteristics

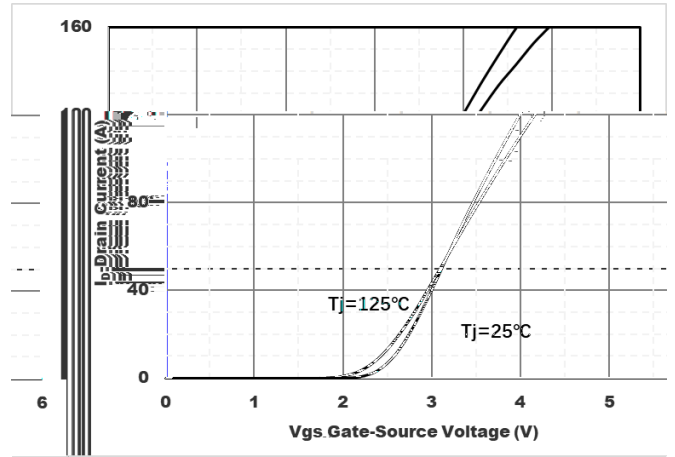


Figure2. Transfer Characteristics

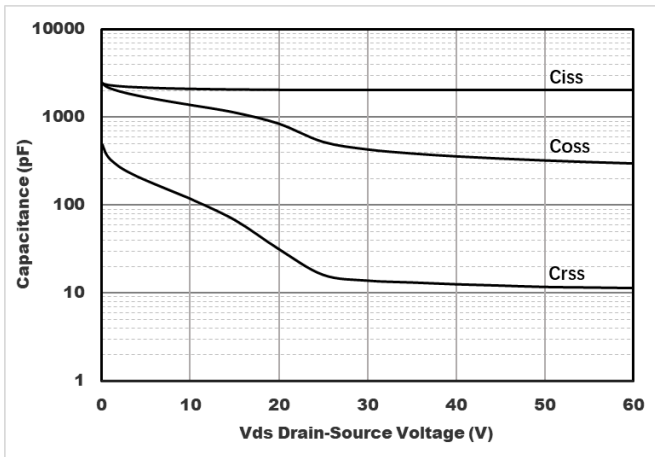


Figure3. Capacitance Characteristics

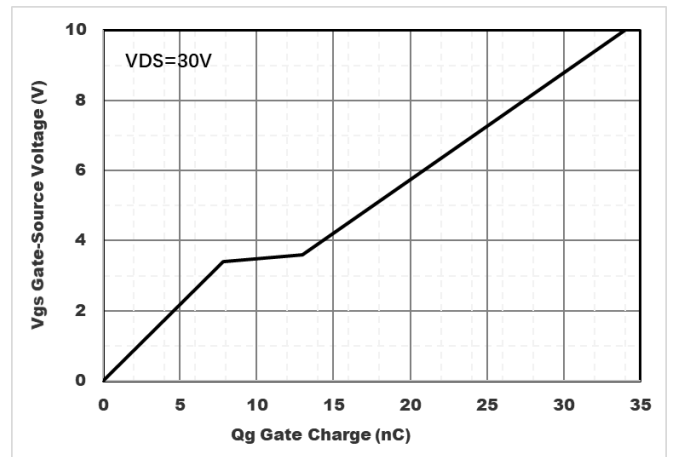


Figure4. Gate Charge

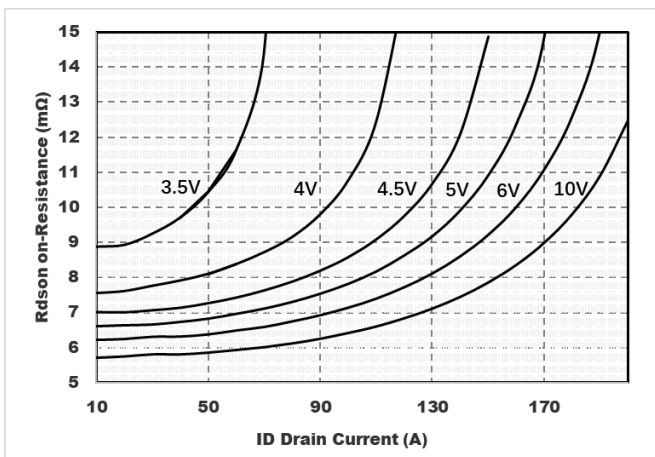


Figure5. Drain-Source on Resistance

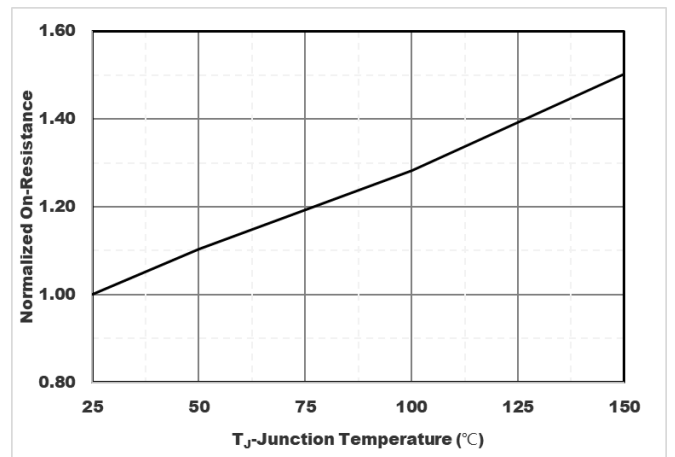


Figure6. Normalized On-Resistance



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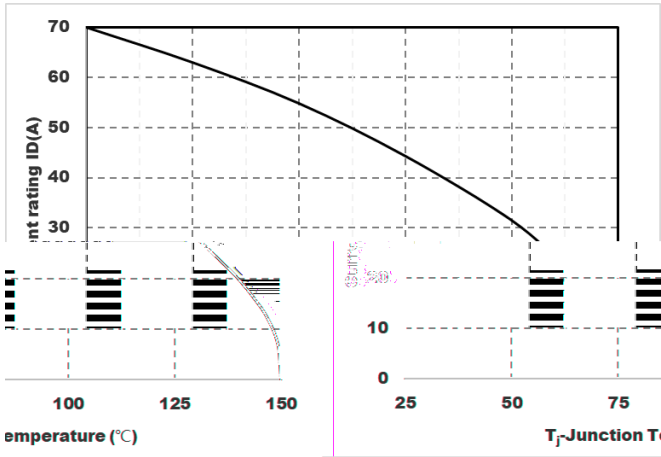


Figure7. Drain current

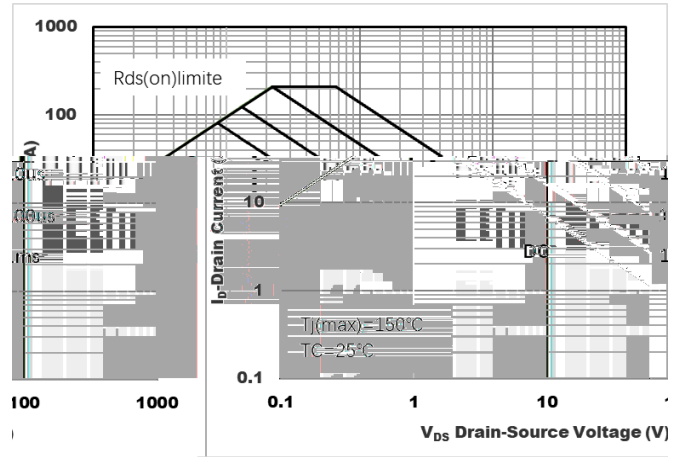


Figure8. Safe Operation Area

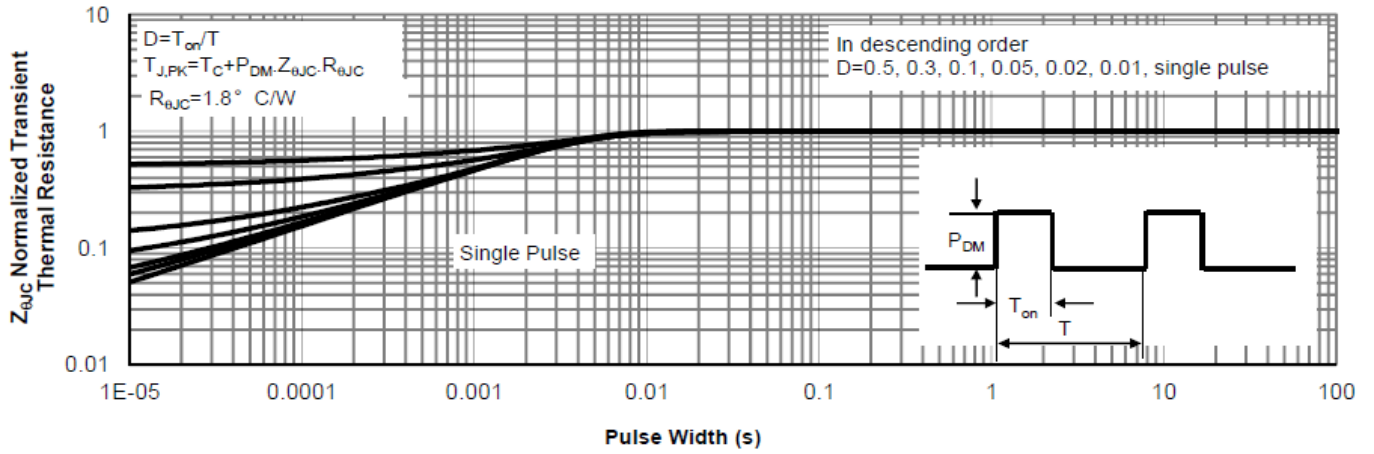
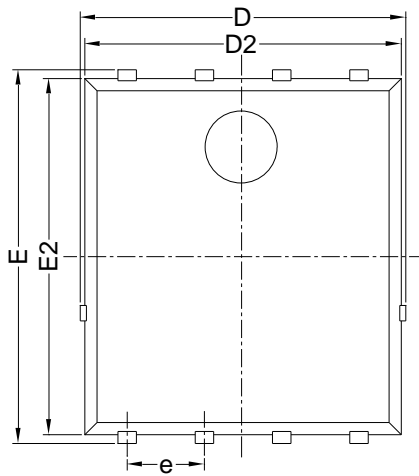


Figure8. Normalized Maximum Transient Thermal Impedance

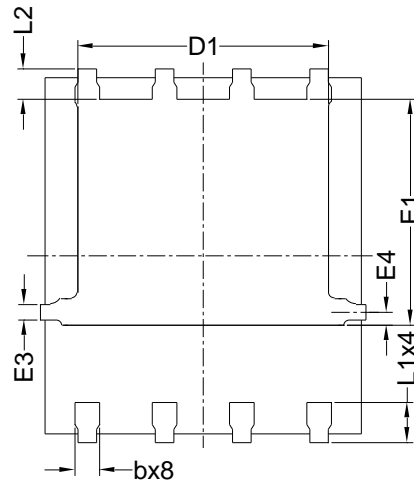


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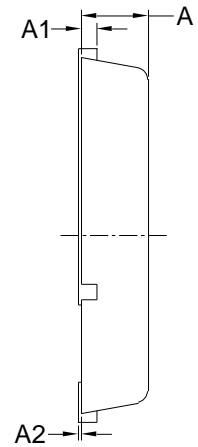
PDFN5060-8L-B-1.1MM Package information



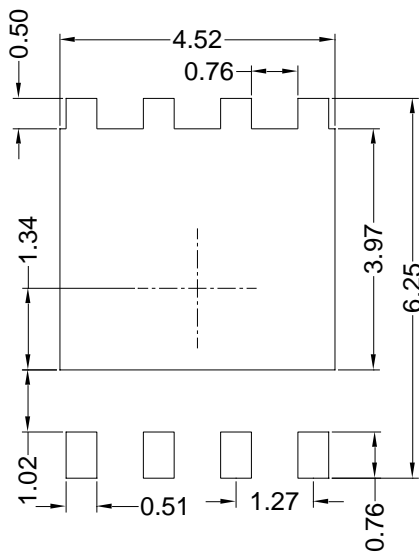
Top View
正面视图



Bottom View
背面视图



Side View
侧面视图



Suggested Solder Pad Layout
Top View

SYMBOL	MILLIMETER		
	MIN	NOM	MAX
D	5.15	5.35	5.55
E	5.95	6.15	6.35
A	1.00	1.10	1.20
A1	0.254 BSC		
A2			0.10
D1	3.92	4.12	4.32
E1	3.52	3.72	3.92
D2	5.00	5.20	5.40
E2	5.66	5.86	6.06
E3	0.254 REF		
E4	0.21 REF		
L1	0.56	0.66	0.76
L2	0.50 BSC		
b	0.31	0.41	0.51
e	1.27 BSC		

Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.10 mm.
3. The pad layout is for reference purposes only.



YJG70G06A

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