



# YJG85G06AK

## N-Channel Enhancement Mode Field Effect Transistor

### Product Summary

$V_{DS}$	60V
$I_D$	85A
$R_{DS(ON)}$ ( at $V_{GS}=10V$ )	3.7 mohm
$R_{DS(ON)}$ ( at $V_{GS}=4.5V$ )	5.0 mohm
100% EAS Tested	
100% $V_{DS}$ Tested	
ESD Protected up to 2.0KV(HBM)	

### 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  
 Synchronous-rectification application

### Absolute Maximum Ratings ( $T_A=25$ unless otherwise noted)

Parameter		Symbol	Limit	Unit
Drain-source Voltage		$V_{DS}$	60	V
Gate-source Voltage		$V_{GS}$	$\pm 20$	V
Drain Current <sup>A</sup>	$T_C=25$	$I_D$	85	A
	$T_C=100$		54	
Pulsed Drain Current <sup>B</sup>		$I_{DM}$	340	A
Avalanche energy		EAS	400	mJ
Total Power Dissipation <sup>C</sup>	$T_C=25$	$P_D$	110	W
	$T_C=100$		44	
Junction and Storage Temperature Range		$T_J, T_{STG}$	-55 +150	

### Thermal resistance

Parameter	Symbol	Typ	Max	Units
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Thermal Resistance Junction-to-Ambient <sup>D</sup>



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## Electrical Characteristics ( $T_J=25$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Units
<b>Static Parameter</b>						
Drain-Source Breakdown Voltage	$BV_{DSS}$	$V_{GS}=0V, I_D=250$	60			V
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=60V, V_{GS}=0V$			1	A
Gate-Body Leakage Current	$I_{GSS}$	$V_{GS}=\pm 20V, V_{DS}=0V$			$\pm 10$	
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250$	1.0	1.6	2.5	V
Static Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=20A$		2.9	3.7	m



## Typical Performance Characteristics

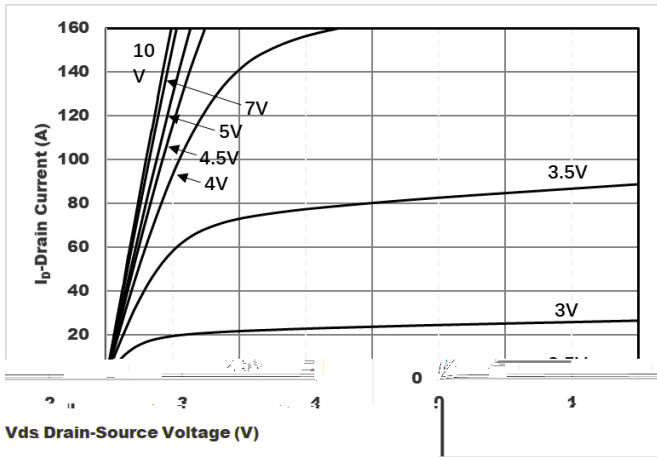


Figure1. Output Characteristics

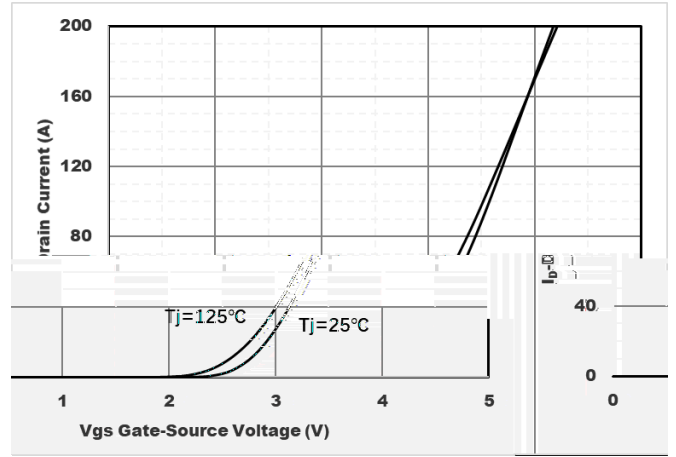


Figure2. Transfer Characteristics

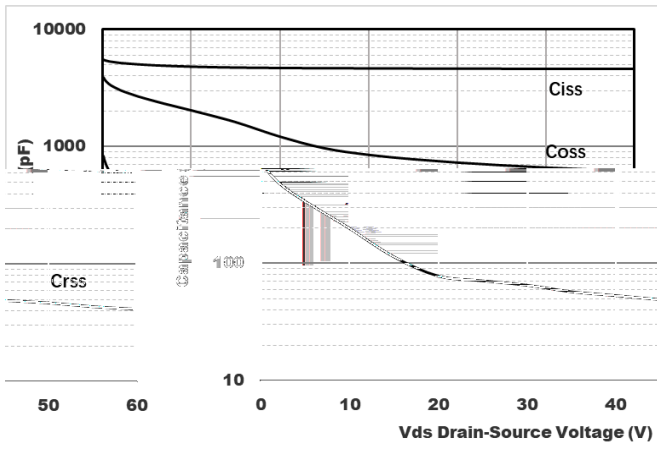


Figure3. Capacitance Characteristics

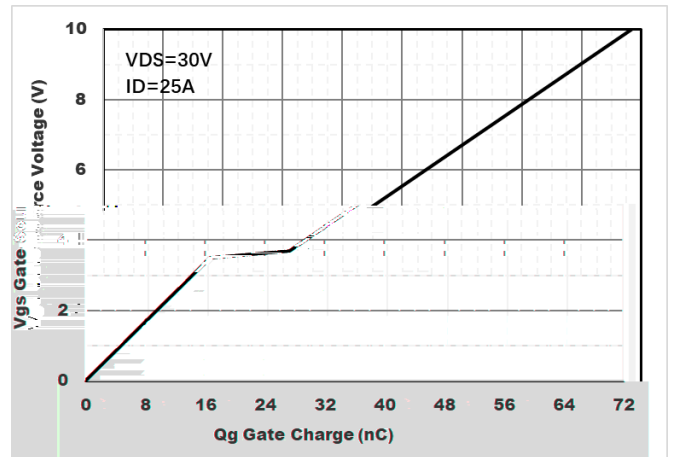


Figure4. Gate Charge

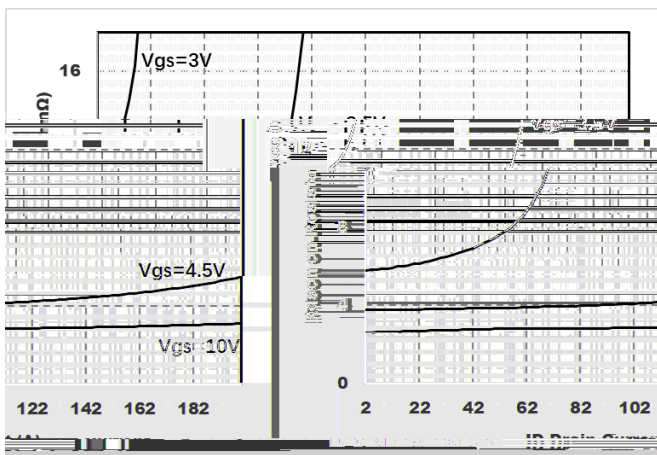


Figure5. Drain-Source on Resistance

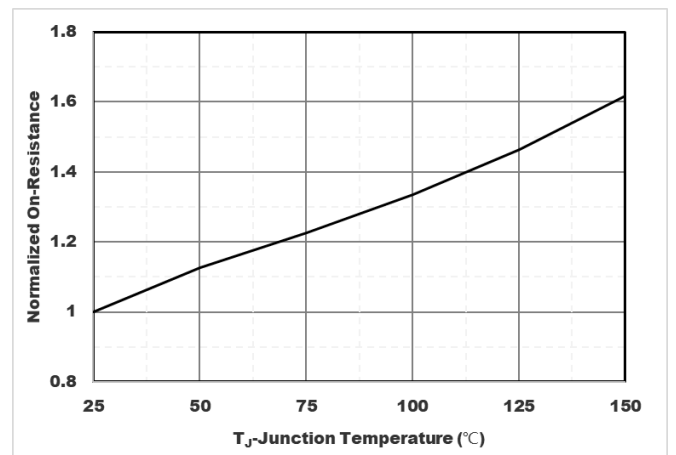


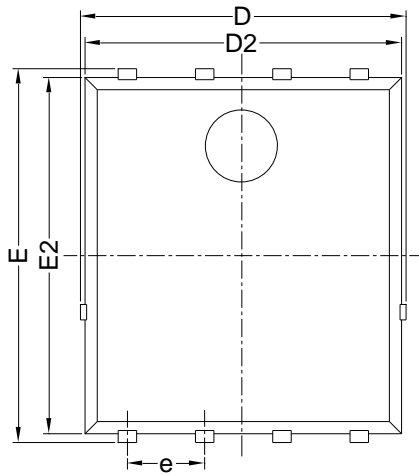
Figure6. Drain-Source on Resistance



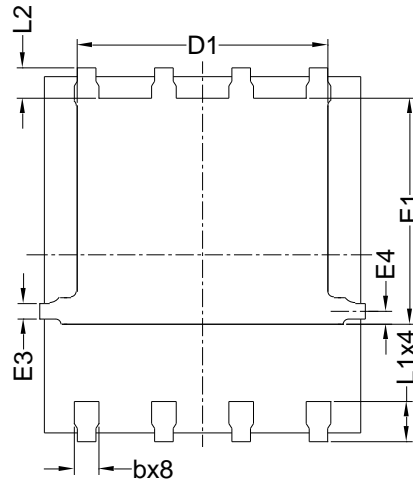


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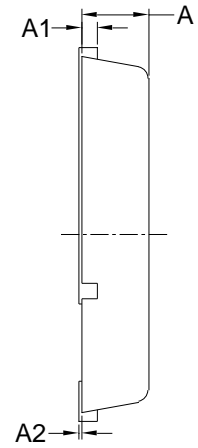
## PDFN5060-8L-B-1.1MM Package information



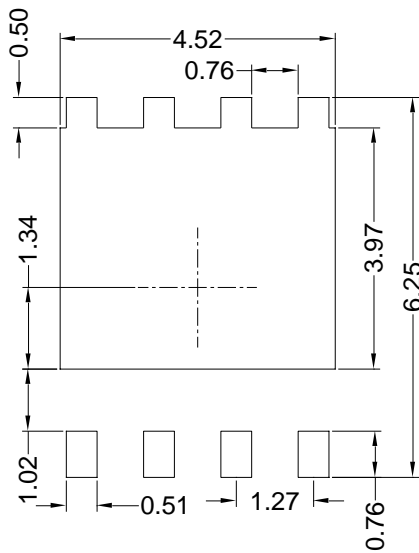
Top View



Bottom View



Side View



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:  $\pm 0.10$ mm.
3. The pad layout is for reference purposes only.



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