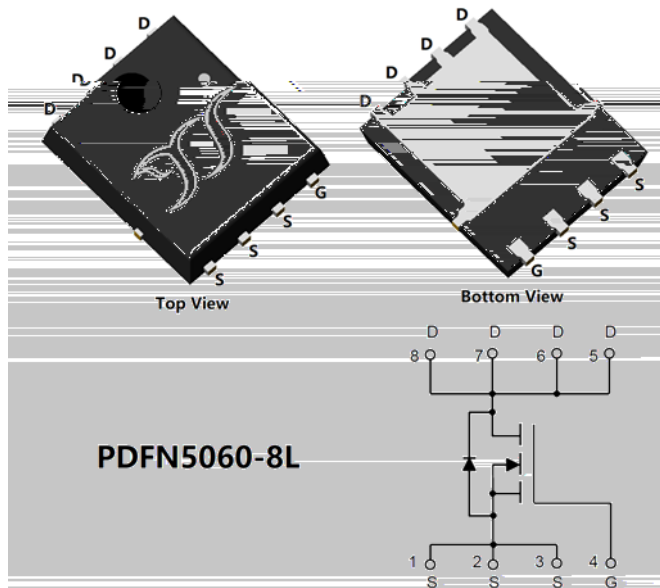


N-Channel Enhancement Mode Field Effect Transistor



Product Summary

| | |
|-----------------------------------|-----------|
| V_{DS} | 60V |
| I_D | 80A |
| $R_{DS(ON)}$ (at $V_{GS}=10V$) | <4.2 mohm |
| $R_{DS(ON)}$ (at $V_{GS}=4.5V$) | <5.2 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 ($T_A=25^\circ\text{C}$ 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 | $T_C=25^\circ\text{C}$ | 80 |
| | | $T_C=100^\circ\text{C}$ | 50 |
| Pulsed Drain Current ^A | I_{DM} | 320 | A |
| Avalanche energy ^B | EAS | 400 | mJ |
| Total Power Dissipation ^C | P_D | $T_C=25^\circ\text{C}$ | 96 |
| | | $T_C=100^\circ\text{C}$ | 38.4 |
| Junction and Storage Temperature Range | T_J, T_{STG} | -55~+150 | $^\circ\text{C}$ |

Thermal resistance

| Parameter | Symbol | Typ | Max | Units |
|---|--------|--------------|-----|--------------------|
| Thermal Resistance Junction-to-Ambient ^D | R | 15 | 20 | $^\circ\text{C/W}$ |
| Thermal Resistance Junction-to-Ambient ^D | | Steady-State | 45 | |
| Thermal Resistance Junction-to-Case | R | 1.0 | 1.3 | |

Ordering Information (Example)

| PREFERRED P/N | PACKING CODE | Marking | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|---------------|--------------|-----------|----------------------|-------------------------|----------------------------|---------------|
| YJG80G06B | F1 | YJG80G06B | 5000 | 10000 | 100000 | 13 reel |



Typical Performance Characteristics

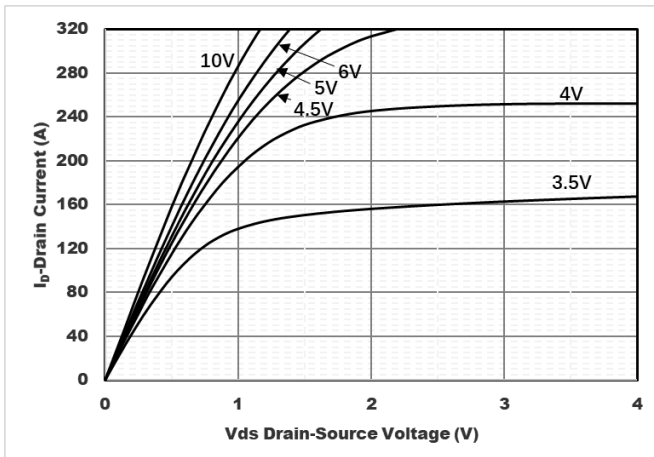


Figure1. Output Characteristics

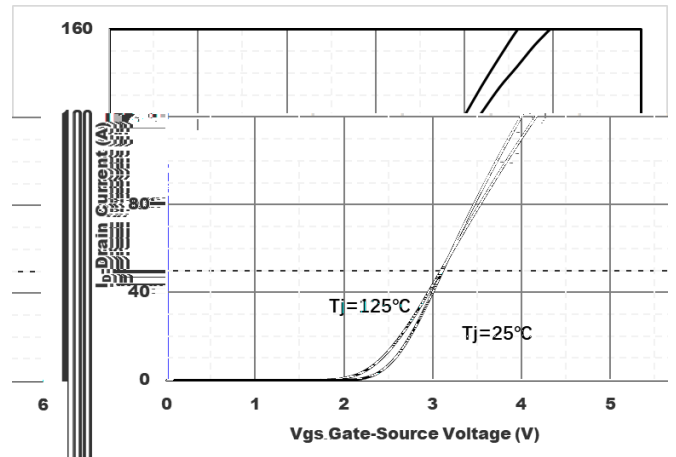


Figure2. Transfer Characteristics

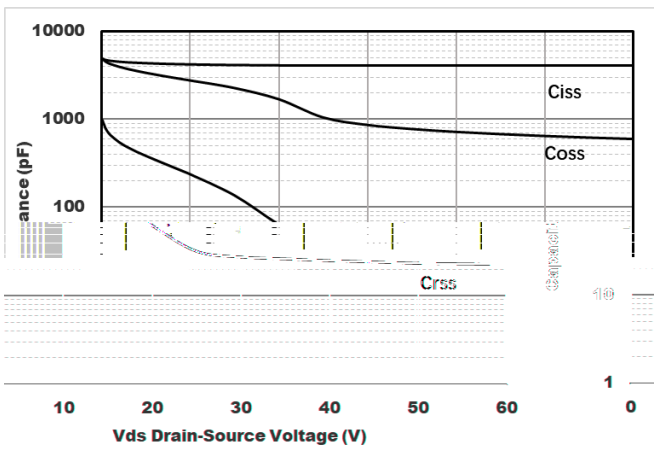


Figure3. Capacitance Characteristics

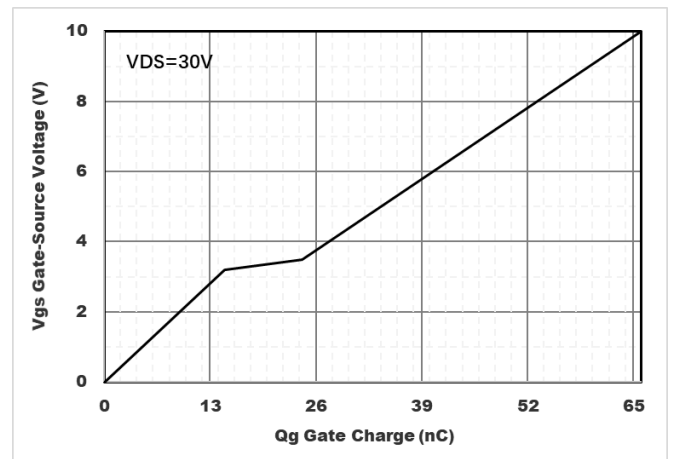


Figure4. Gate Charge

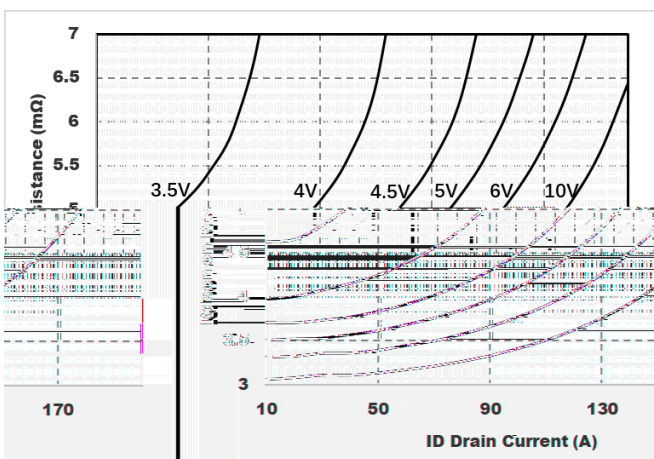


Figure5. Drain-Source on Resistance

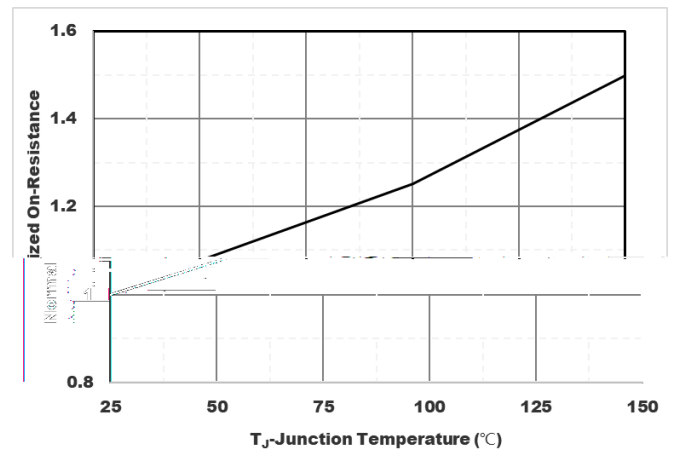


Figure6. Normalized On-Resistance



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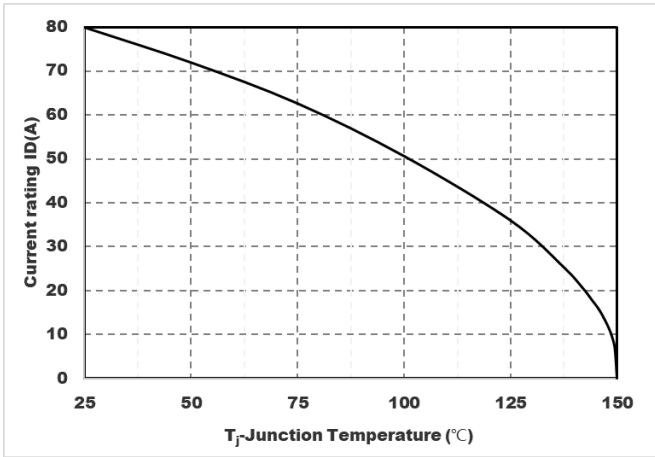


Figure7. Drain current

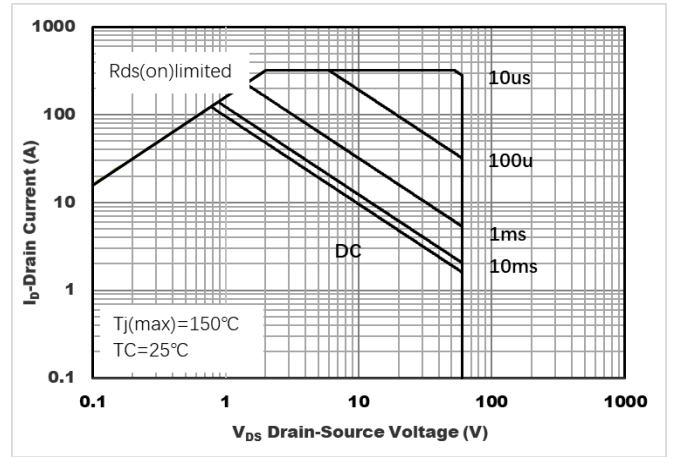


Figure8. Safe Operation Area

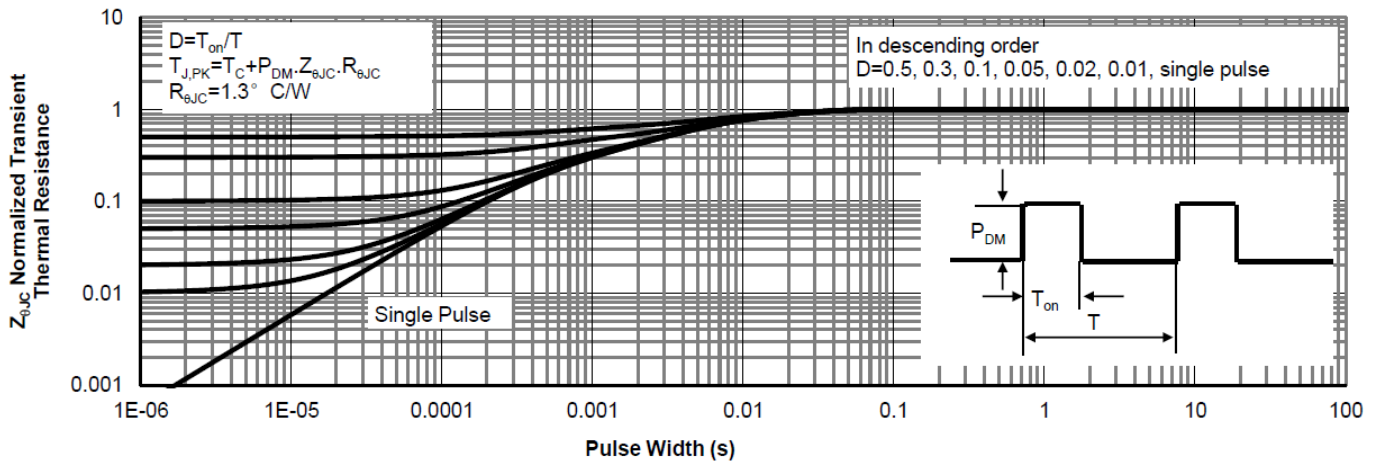
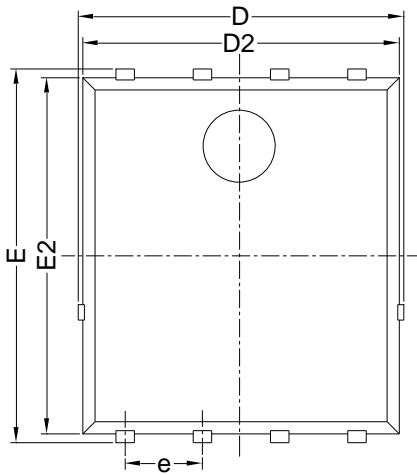


Figure8. Normalized Maximum Transient Thermal Impedance

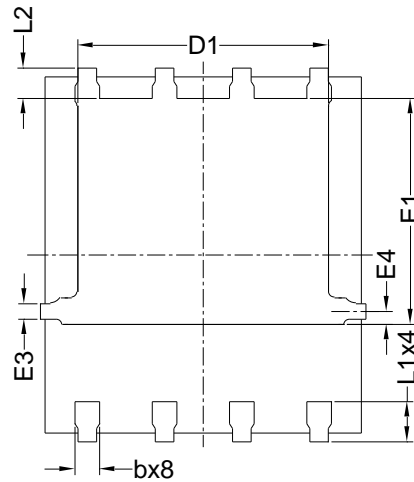


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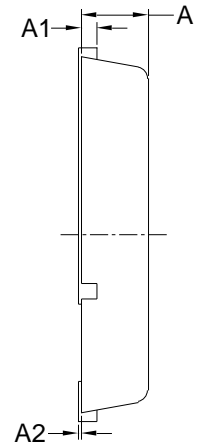
PDFN5060-8L-B-1.1MM Package information



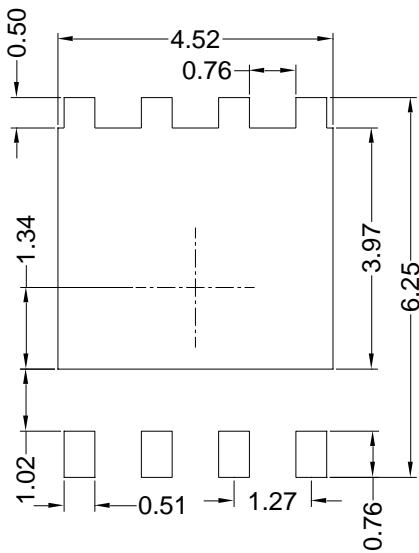
Top View
正面视图



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.



YJG80G06B

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