



PJM05P30PA

P-Channel Enhancement Mode Power MOSFET

Features

- High density cell design for ultra low $R_{DS(on)}$
- Advanced trench technology
- $V_{DS} = -30V, I_D = -5.1A$
 $R_{DS(on)} < 55m\Omega @ V_{GS} = -10V$

Applications

- PWM applications
- Load switch
- Power management

Absolute Maximum Ratings

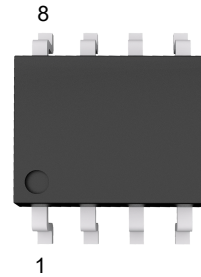
Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter | Symbol | Value | Unit |
|---------------------------------------|-----------|-------------|------|
| Drain-Source Voltage | $-V_{DS}$ | 30 | V |
| Gate-Source Voltage | $-V_{GS}$ | ± 20 | V |
| Drain Current-Continuous | $-I_D$ | 5.1 | A |
| Drain Current-Pulsed ^{Note1} | $-I_{DM}$ | 20.4 | A |
| Maximum Power Dissipation | P_D | 2.15 | W |
| Junction Temperature | T_J | 150 | °C |
| Storage Temperature Range | T_{STG} | -55 to +150 | °C |

Thermal Characteristics

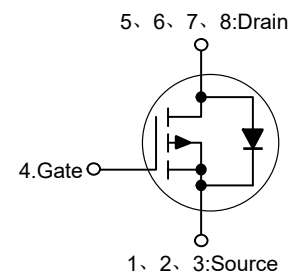
| | | | |
|--|-----------------|----|------|
| Thermal Resistance, Junction-to-Ambient ^{Note2} | $R_{\theta JA}$ | 58 | °C/W |
|--|-----------------|----|------|

SOP-8



Marking code: 9435

Schematic Diagram





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Electrical Characteristics

(Ta=25°C unless otherwise specified)

| Parameter | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|---|----------------|--|------|------|-----------|------------|
| Static Characteristics | | | | | | |
| Drain-Source Breakdown Voltage | $-V_{(BR)DSS}$ | $V_{GS}=0V, I_D=-250\mu A$ | 30 | -- | -- | V |
| Zero Gate Voltage Drain Current | $-I_{DSS}$ | $V_{DS}=-30V, V_{GS}=0V$ | -- | -- | 1 | μA |
| Gate-Body Leakage Current | I_{GSS} | $V_{GS}=\pm 20V, V_{DS}=0V$ | -- | -- | ± 100 | nA |
| Gate Threshold Voltage ^{Note3} | $-V_{GS(th)}$ | $V_{DS}=V_{GS}, I_D=-250\mu A$ | 1 | 1.5 | 2.5 | V |
| Drain-Source On-Resistance ^{Note3} | $R_{DS(on)}$ | $V_{GS}=-10V, I_D=-5.1A$ | -- | 43 | 55 | m Ω |
| | | $V_{GS}=-4.5V, I_D=-4.2A$ | -- | 65 | 90 | m Ω |
| Forward Transconductance ^{Note3} | g_{FS} | $V_{DS}=-5V, I_D=-4A$ | -- | 7.5 | -- | S |
| Dynamic Characteristics | | | | | | |
| Input Capacitance | C_{iss} | $V_{DS}=-15V, V_{GS}=0V, f=1MHz$ | -- | 596 | -- | pF |
| Output Capacitance | C_{oss} | | -- | 95 | -- | pF |
| Reverse Transfer Capacitance | C_{rss} | | -- | 68 | -- | pF |
| Switching Characteristics | | | | | | |
| Turn-on Delay Time | $t_{d(on)}$ | $V_{DD}=-15V, V_{GS}=-10V$ $I_D=-1A, R_{GEN}=2.5\Omega$ | -- | 14 | -- | nS |
| Turn-on Rise Time | t_r | | -- | 61 | -- | nS |
| Turn-off Delay Time | $t_{d(off)}$ | | -- | 19 | -- | nS |
| Turn-off Fall Time | t_f | | -- | 10 | -- | nS |
| Total Gate Charge | Q_g | $V_{DS}=-15V, V_{GS}=-10V$ $I_D=-5.1A$ | -- | 6.8 | -- | nC |
| Gate-Source Charge | Q_{gs} | | -- | 1 | -- | nC |
| Gate-Drain Charge | Q_{gd} | | -- | 1.4 | -- | nC |
| Source-Drain Diode Characteristics | | | | | | |
| Diode Forward Voltage ^{Note3} | $-V_{SD}$ | $V_{GS}=0V, I_S=-5.1A$ | -- | 0.8 | 1.2 | V |
| Diode Forward Current ^{Note2} | $-I_S$ | | -- | -- | 5.1 | A |

Note: 1. Repetitive Rating: Pulse width limited by maximum junction temperature.

2. Surface Mounted on FR4 Board, $t \leq 10$ sec.

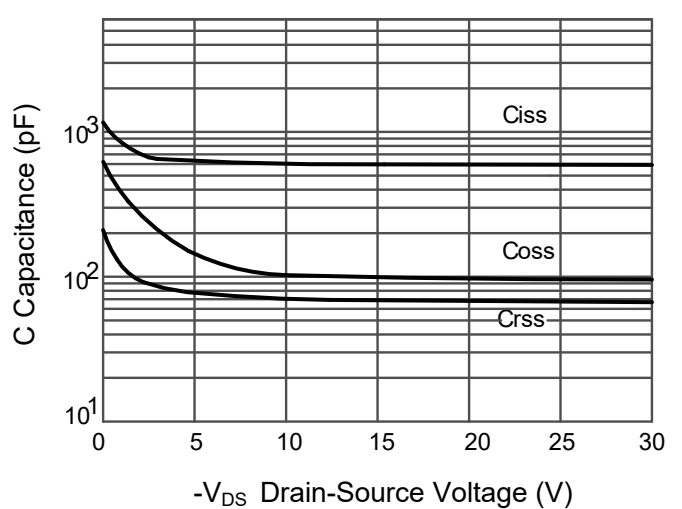
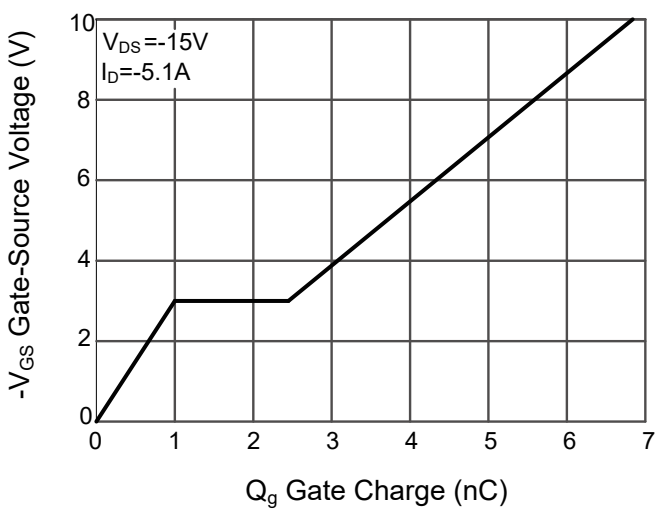
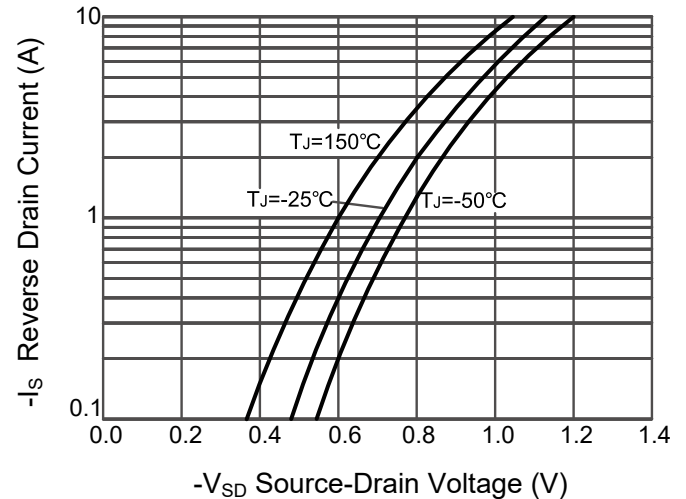
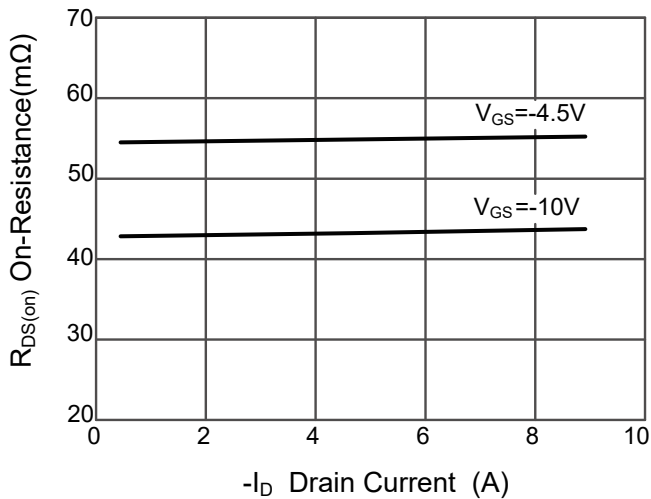
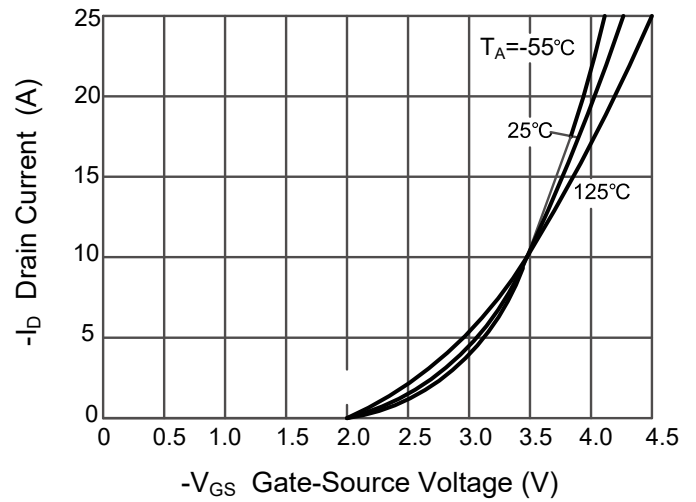
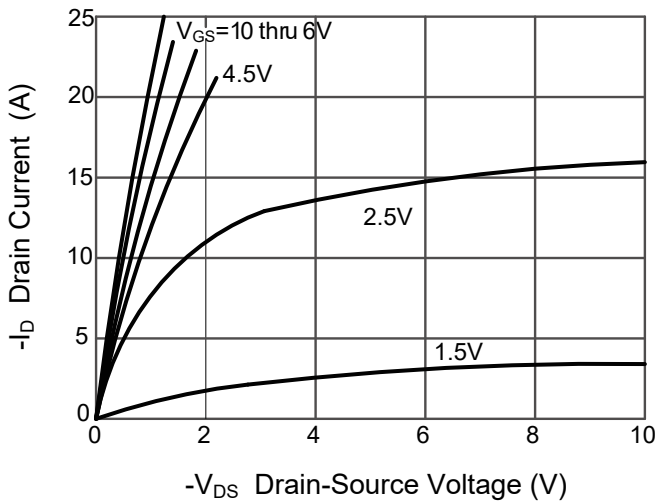
3. Pulse Test: Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$



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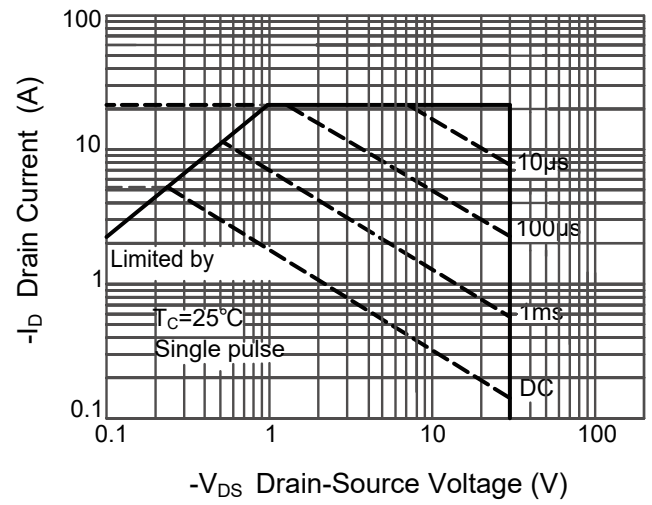
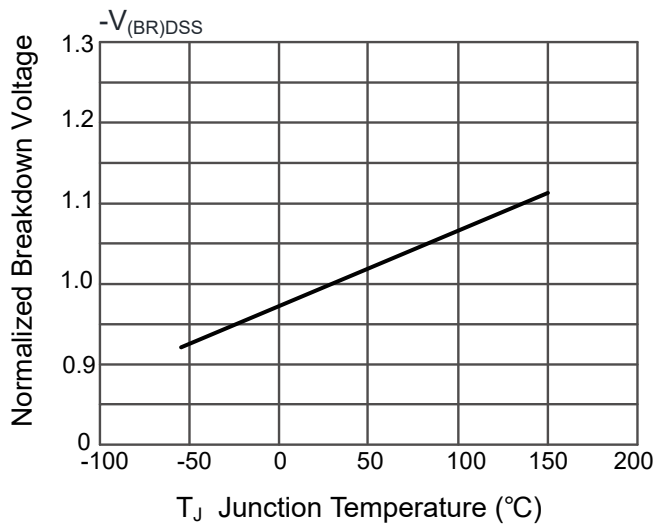
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Typical Characteristic Curves





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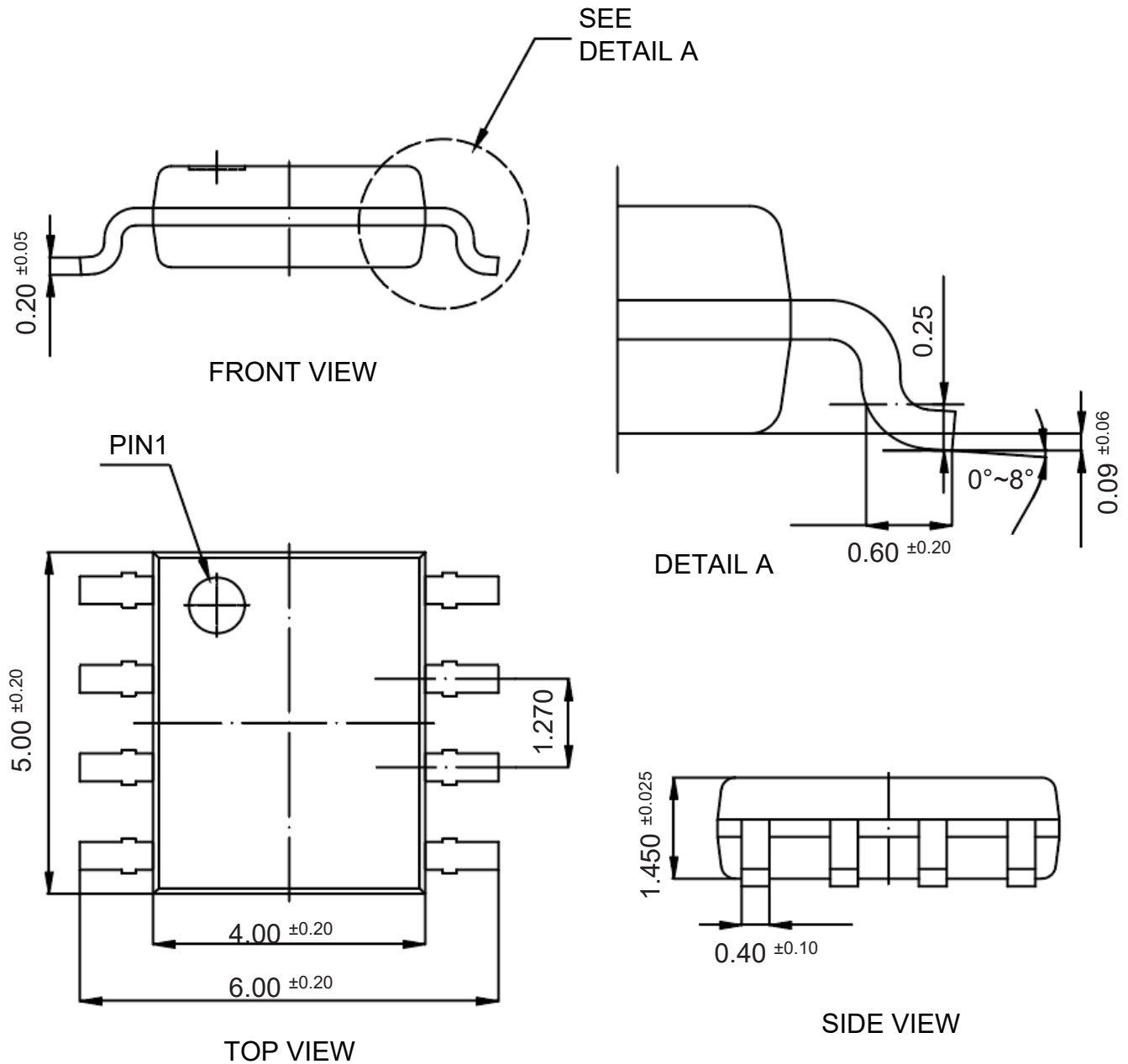
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Package Outline

SOP-8

Dimensions in mm



Ordering Information

| Device | Package | Shipping |
|------------|---------|------------------------|
| PJM05P30PA | SOP-8 | 4,000PCS/Reel&13inches |

单击下面可查看定价，库存，交付和生命周期等信息

[>>PJSEMI\(平晶微\)](#)