

2SJ0582

Silicon P-channel power MOSFET

■ Features

- Avalanche energy capability guaranteed
- High-speed switching
- No secondary breakdown

■ Applications

- Non-contact relay
- Solenoid drive
- Motor drive
- Control equipment
- Switching mode regulator

■ Absolute Maximum Ratings $T_C = 25^\circ\text{C}$

| Parameter | Symbol | Rating | Unit |
|--------------------------------|-----------|-------------------------------|------------------|
| Drain-source surrender voltage | V_{DSS} | -200 | V |
| Gate-source surrender voltage | V_{GSS} | ± 20 | V |
| Drain current | I_D | ± 2 | A |
| Peak drain current | I_{DP} | ± 4 | A |
| Avalanche energy capability * | EAS | 10 | mJ |
| Power dissipation | P_D | 10 | W |
| | | $T_a = 25^\circ\text{C}$ 1 | |
| Channel temperature | T_{ch} | 150 | $^\circ\text{C}$ |
| Storage temperature | T_{stg} | -55 to +150 | $^\circ\text{C}$ |

Note) *: $L = 5 \text{ mH}$, $I_L = 2 \text{ A}$, 1 pulse

■ Electrical Characteristics $T_C = 25^\circ\text{C} \pm 3^\circ\text{C}$

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|--|----------------|--|------|-----|----------|--------------------|
| Drain-source cutoff current | I_{DSS} | $V_{DS} = -160 \text{ V}$, $V_{GS} = 0$ | | | -10 | μA |
| Gate-source cutoff current | I_{GSS} | $V_{GS} = \pm 20 \text{ V}$, $V_{DS} = 0$ | | | ± 10 | μA |
| Drain-source surrender voltage | V_{DSS} | $I_D = -1 \text{ mA}$, $V_{GS} = 0$ | -200 | | | V |
| Gate threshold voltage | V_{th} | $V_{DS} = -25 \text{ V}$, $I_D = -1 \text{ mA}$ | -2.0 | | -4.0 | V |
| Drain-source ON resistance | $R_{DS(on)}$ | $V_{GS} = -10 \text{ V}$, $I_D = -1.0 \text{ A}$ | | 1.5 | 2.0 | Ω |
| Forward transfer admittance | $ Y_{fs} $ | $V_{DS} = -25 \text{ V}$, $I_D = -1.0 \text{ A}$ | 1.0 | 1.7 | | S |
| Diode forward voltage | V_{DF} | $I_{DR} = -2.0 \text{ A}$, $V_{GS} = 0$ | | | 1.4 | V |
| Short-circuit forward transfer capacitance (Common source) | C_{iss} | $V_{DS} = -20 \text{ V}$, $V_{GS} = 0$, $f = 1 \text{ MHz}$ | | 400 | | pF |
| Short-circuit output capacitance (Common source) | C_{oss} | | | 55 | | pF |
| Reverse transfer capacitance (Common source) | C_{rss} | | | 25 | | pF |
| Turn-on delay time | $t_{d(on)}$ | $V_{DD} = 100 \text{ V}$, $I_D = -1.0 \text{ A}$, $R_L = 100 \Omega$ $V_{GS} = -10 \text{ V}$ | | 12 | | ns |
| Rise time | t_r | | | 15 | | ns |
| Turn-off delay time | $t_{d(off)}$ | | | 50 | | ns |
| Fall time | t_f | | | 25 | | ns |
| Thermal resistance (ch-c) | $R_{th(ch-c)}$ | | | | | 12.5 |
| Thermal resistance (ch-a) | $R_{th(ch-a)}$ | | | | 125 | $^\circ\text{C/W}$ |

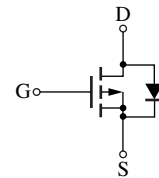
Note) Measuring methods are based on JAPANESE INDUSTRIAL STANDARD JIS C 7030 measuring methods for transistors.

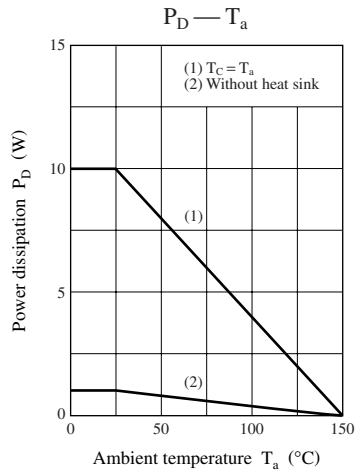
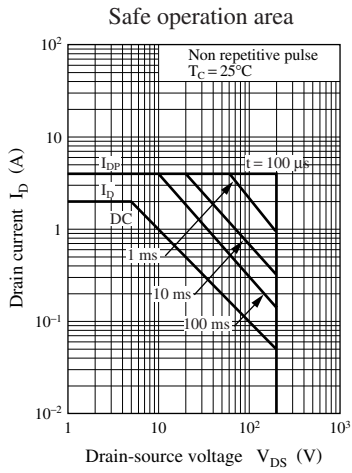
■ Package

- Code
U-G2
- Pin Name
1: Gate
2: Drain
3: Source

■ Marking Symbol: J0582

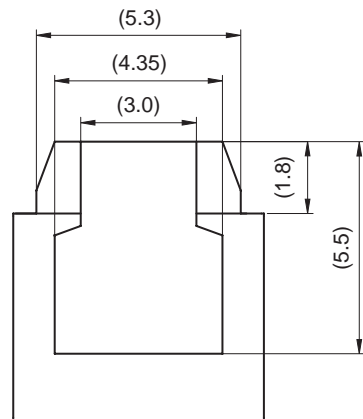
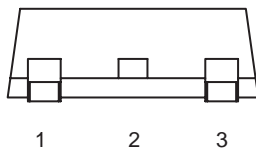
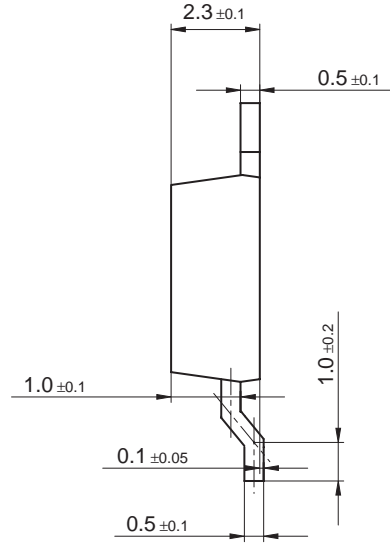
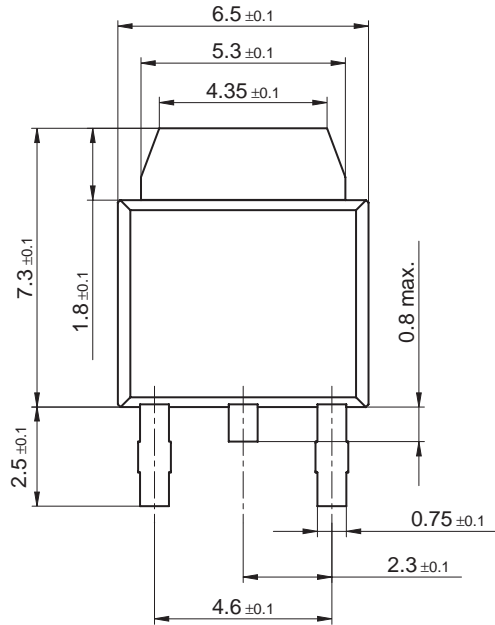
■ Internal Connection





U-G2

Unit: mm



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