



Micro Commercial Components



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SI3134KW

Features

- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"
- N-Channel Switch with Low $R_{DS(ON)}$
- Operated at Low Logic Level Gate Drive

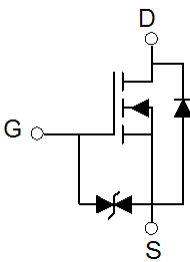
N-Channel Enhancement Mode Field Effect Transistor

Maximum Ratings

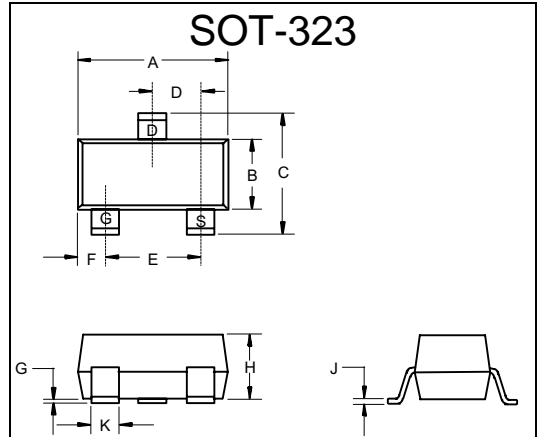
- Operating Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Maximum Thermal Resistance; 625°C/W Junction To Ambient

| Parameter | Symbol | Value | Unit |
|-------------------------------------|----------|----------|------|
| Drain-Source Voltage | V_{DS} | 20 | V |
| Gate-Source Voltage | V_{GS} | ± 12 | V |
| Continuous Drain Current | I_D | 0.75 | A |
| Pulsed Drain Current ⁽¹⁾ | I_{DM} | 3 | A |
| Power Dissipation ⁽²⁾ | P_D | 200 | mW |

Equivalent circuit

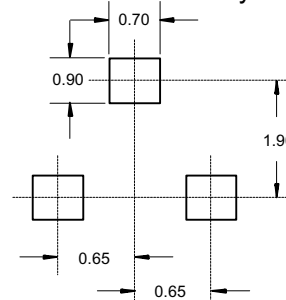


MARKING: 34K



| DIM | INCHES | | MM | | NOTE |
|-----|--------------|------|-------------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | .071 | .087 | 1.80 | 2.20 | |
| B | .045 | .053 | 1.15 | 1.35 | |
| C | .083 | .096 | 2.10 | 2.45 | |
| D | .026 Nominal | | 0.65Nominal | | |
| E | .047 | .055 | 1.20 | 1.40 | |
| F | .012 | .016 | .30 | .40 | |
| G | .000 | .004 | .000 | .100 | |
| H | .035 | .039 | .90 | 1.00 | |
| J | .004 | .010 | .100 | .250 | |
| K | .006 | .016 | .15 | .40 | |

Suggested Solder Pad Layout



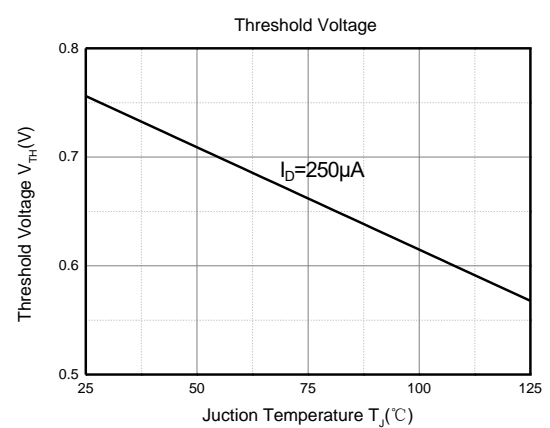
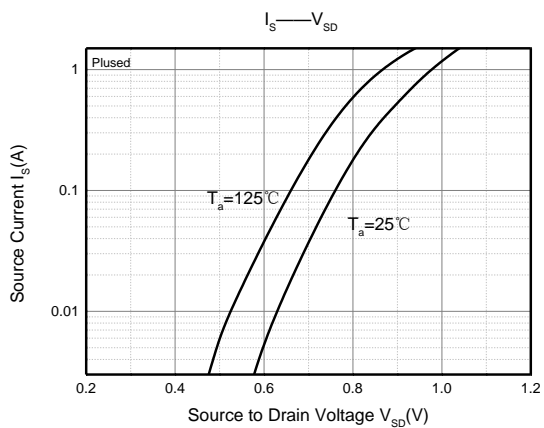
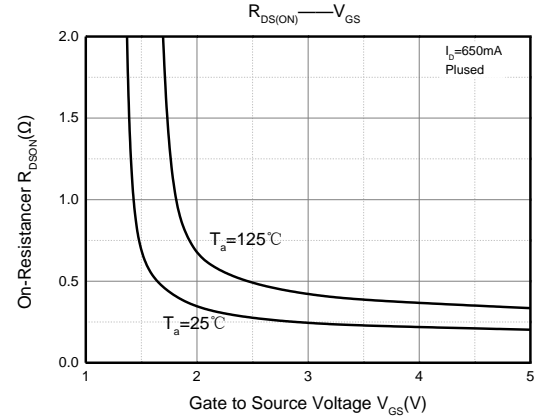
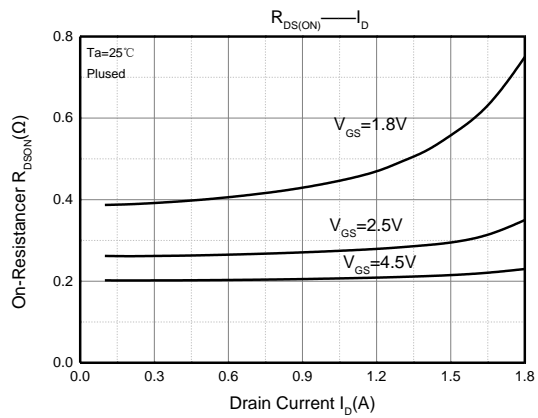
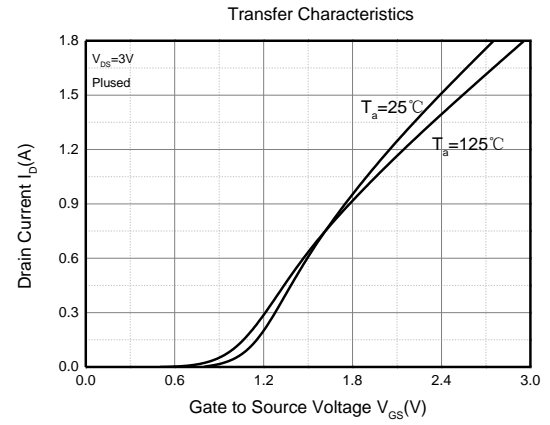
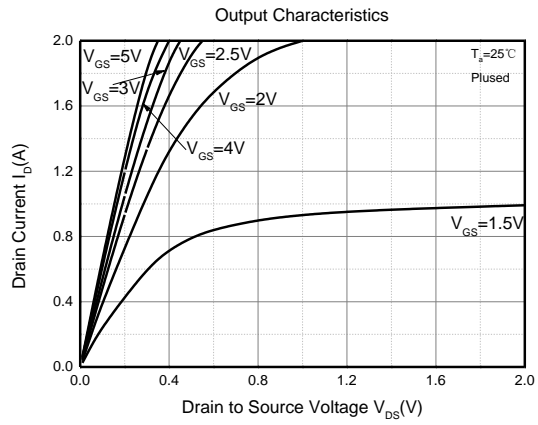
MOSFET ELECTRICAL CHARACTERISTICS(T_a=25°C unless otherwise noted)

| Parameter | Symbol | Test Condition | Min | Type | Max | Unit |
|--|----------------------|--|------|------|-----|------|
| Static Characteristics | | | | | | |
| Drain-source breakdown voltage | V _{(BR)DSS} | V _{GS} = 0V, I _D =250μA | 20 | | | V |
| Zero gate voltage drain current | I _{DSS} | V _{DS} =20V, V _{GS} = 0V | | | 1 | μA |
| Gate-body leakage current | I _{GSS} | V _{GS} =±10V, V _{DS} = 0V | | | ±20 | μA |
| Gate threshold voltage ⁽³⁾ | V _{GS(th)} | V _{DS} =V _{GS} , I _D =250μA | 0.35 | 0.75 | 1.1 | V |
| Drain-source on-resistance ⁽³⁾ | R _{DS(on)} | V _{GS} =4.5V, I _D =650mA | | 190 | 380 | mΩ |
| | | V _{GS} =2.5V, I _D =550mA | | 260 | 450 | |
| | | V _{GS} =1.8V, I _D =450mA | | 350 | 800 | |
| Forward tranconductance | g _{FS} | V _{DS} =10V, I _D =800mA | | 1.6 | | S |
| Dynamic characteristics⁽⁴⁾ | | | | | | |
| Input Capacitance | C _{iss} | V _{DS} =16V, V _{GS} =0V, f=1MHz | | 79 | 120 | pF |
| Output Capacitance | C _{oss} | | | 13 | 20 | |
| Reverse Transfer Capacitance | C _{rss} | | | 9 | 15 | |
| Switching Characteristics⁽⁴⁾ | | | | | | |
| Turn-on delay time | t _{d(on)} | V _{DS} =10V, I _D =500mA, V _{GS} =4.5V, R _G =10Ω | | 6.7 | | ns |
| Turn-on rise time | t _r | | | 4.8 | | |
| Turn-off delay time | t _{d(off)} | | | 17.3 | | |
| Turn-off fall time | t _f | | | 7.4 | | |
| Source-Drain Diode characteristics | | | | | | |
| Diode Forward voltage ⁽³⁾ | V _{DS} | I _S =0.15A, V _{GS} = 0V | | | 1.2 | V |

Notes:

1. Repetitive Rating: Pulse width limited by maximum junction temperature.
2. This test is performed with no heat sink at T_a=25°C.
3. Pulse Test : Pulse Width≤300μs, Duty Cycle≤0.5%.
4. These parameters have no way to verify.

Typical Electrical and Thermal Characteristics





Ordering Information :

| Device | Packing |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel: 3Kpcs/Reel |

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



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