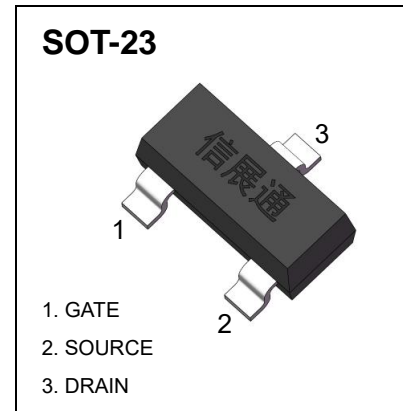




Product Summary

| $V_{(BR)DSS}$ | $R_{DS(on)MAX}$ | I_D |
|---------------|-----------------|-------|
| 60V | 5.0Ω@10V | 340mA |
| | 5.3Ω@4.5V | |



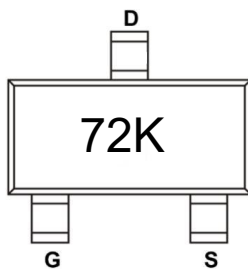
Feature

- High density cell design for ultra low on-resistance
- Voltage controlled small signal switch
- Rugged and reliable
- High saturation current capability
- ESD protected

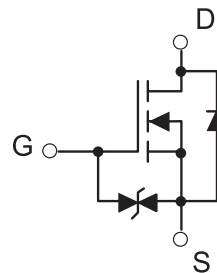
Application

- Load Switch for Portable Devices
- DC/DC Converter

Marking



Circuit diagram



**Absolute maximum ratings (Ta=25°C unless otherwise noted)**

| Parameter | Symbol | Value | Unit |
|---|-----------------|------------|------|
| Drain-Source Voltage | V_{DS} | 60 | V |
| Gate-Source Voltage | V_{GS} | ±20 | V |
| Continuous Drain Current | I_D | 340 | mA |
| Power Dissipation | P_D | 350 | mW |
| Thermal Resistance from Junction to Ambient | $R_{\theta JA}$ | 357 | °C/W |
| Junction Temperature | T_J | 150 | °C |
| Storage Temperature | T_{STG} | -55 ~ +150 | °C |

Electrical characteristics (TA=25 °C, unless otherwise noted)

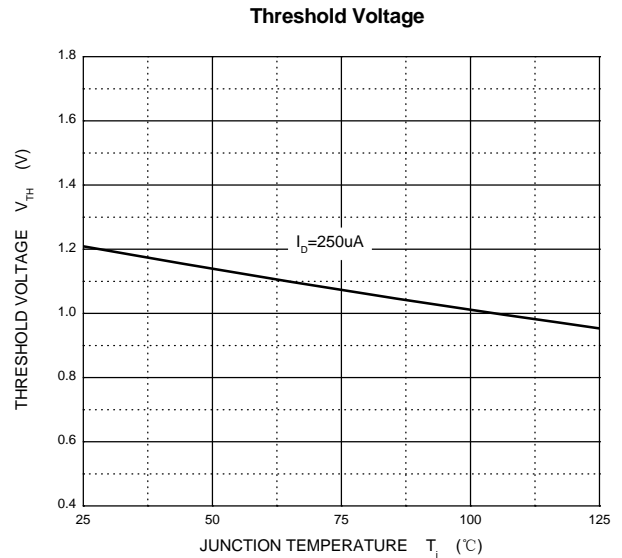
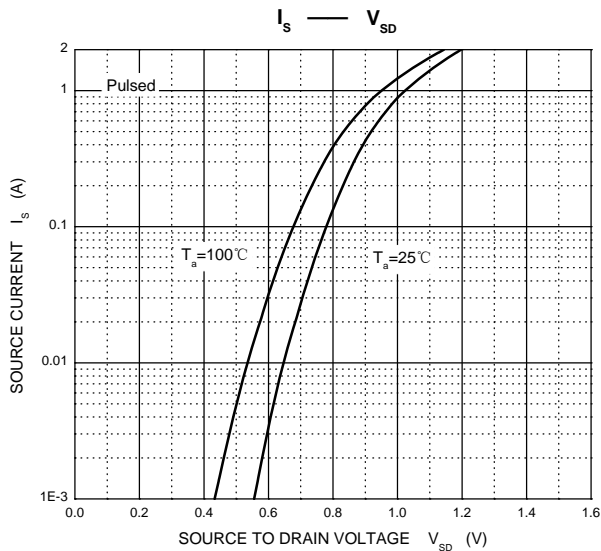
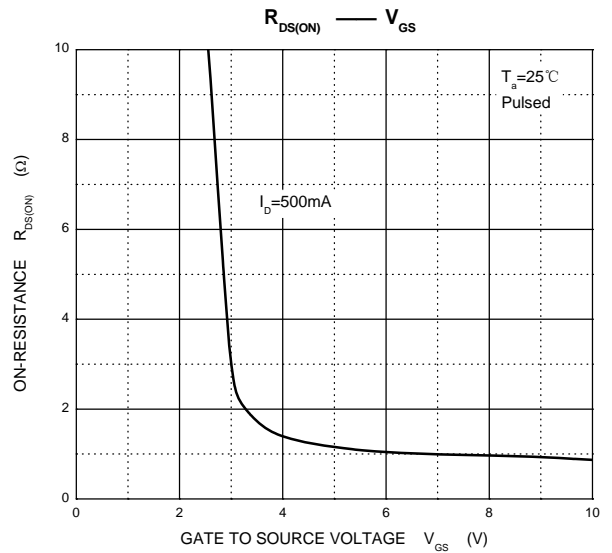
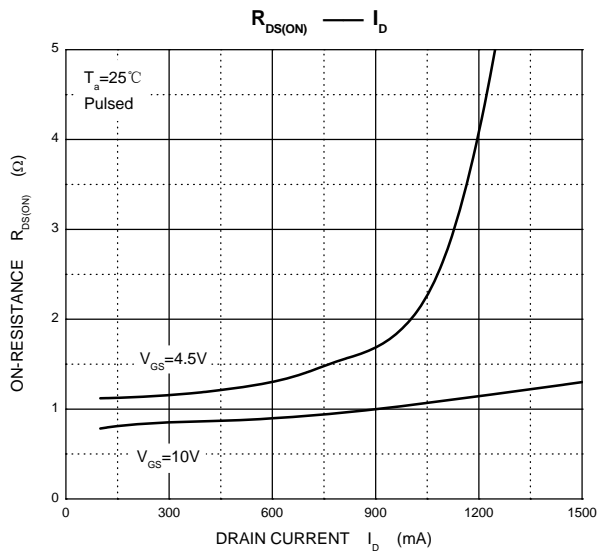
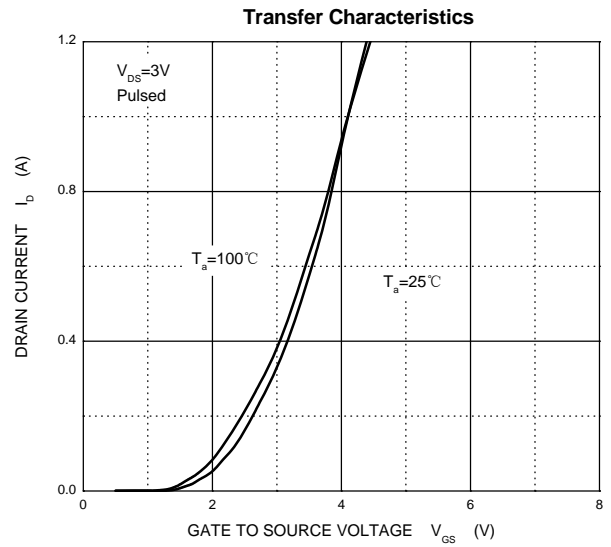
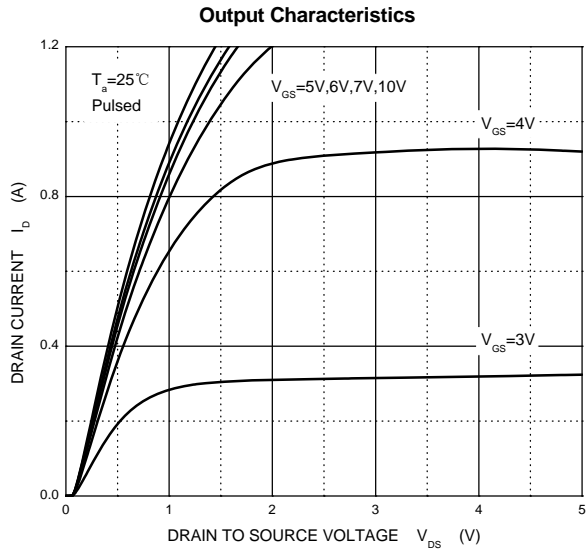
| Parameter | Symbol | Test Condition | Min. | Typ. | Max. | Unit |
|---|---------------|---|------|------|------|------|
| Static Characteristics | | | | | | |
| Drain-source breakdown voltage | $V_{(BR)DSS}$ | $V_{GS} = 0V, I_D = 250\mu A$ | 60 | | | V |
| Zero gate voltage drain current | I_{DSS} | $V_{DS} = 48V, V_{GS} = 0V$ | | | 1 | μA |
| Gate-body leakage current | I_{GSS} | $V_{GS} = \pm 20V, V_{DS} = 0V$ | | | ±10 | μA |
| Gate threshold voltage | $V_{GS(th)}$ | $V_{DS} = V_{GS}, I_D = 1mA$ | 1.0 | | 2.5 | V |
| Drain-source on-resistance ¹⁾ | $R_{DS(on)}$ | $V_{GS} = 10V, I_D = 500A$ | | 0.9 | 5 | Ω |
| | | $V_{GS} = 4.5V, I_D = 200A$ | | 1.1 | 5.3 | |
| Dynamic characteristics²⁾ | | | | | | |
| Input Capacitance | C_{iss} | $V_{DS} = 10V, V_{GS} = 0V, f = 1MHz$ | | | 40 | pF |
| Output Capacitance | C_{oss} | | | | 30 | |
| Reverse Transfer Capacitance | C_{rss} | | | | 10 | |
| Turn-on delay time | $t_{d(on)}$ | $V_{DD} = 50V, V_{GS} = 10V, R_L = 250\Omega, R_{GEN} = 50\Omega$ | | | 10 | nS |
| Turn-off delay time | $t_{d(off)}$ | | | | 15 | |
| Source-Drain Diode characteristics | | | | | | |
| Diode Forward voltage | V_{SD} | $V_{GS} = 0V, I_S = 0.3A$ | | | 1.5 | V |

Notes: 1) Pulse Test: Pulse Width < 300μs, Duty Cycle ≤2%.

2) Guaranteed by design, not subject to production testing.

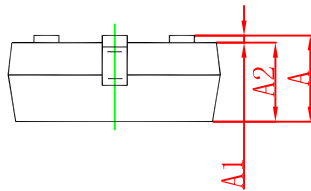
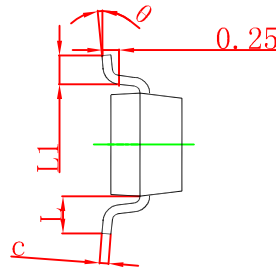
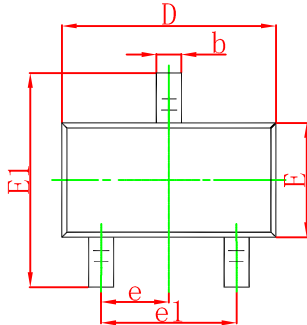


Typical Characteristics



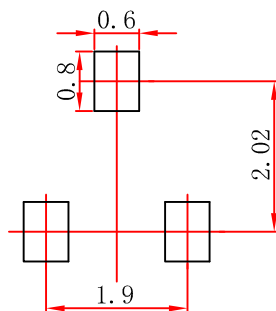


SOT-23 Package Outline Dimensions



| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 0.900 | 1.150 | 0.035 | 0.045 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.050 | 0.035 | 0.041 |
| b | 0.300 | 0.500 | 0.012 | 0.020 |
| c | 0.080 | 0.150 | 0.003 | 0.006 |
| D | 2.800 | 3.000 | 0.110 | 0.118 |
| E | 1.200 | 1.400 | 0.047 | 0.055 |
| E1 | 2.250 | 2.550 | 0.089 | 0.100 |
| e | 0.950 TYP | | 0.037 TYP | |
| e1 | 1.800 | 2.000 | 0.071 | 0.079 |
| L | 0.550 REF | | 0.022 REF | |
| L1 | 0.300 | 0.500 | 0.012 | 0.020 |
| θ | 0° | 8° | 0° | 8° |

SOT-23 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05mm.
3. The pad layout is for reference purposes only.

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