



Product Summary

| $V_{(BR)DSS}$ | $R_{DS(on)TYP}$ | I_D |
|---------------|-----------------|-------|
| -30V | 75mΩ@-10V | -2.7A |
| | 105mΩ@-4.5V | |

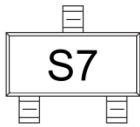
Feature

- TrenchFET Power MOSFET
- Excellent $R_{DS(on)}$ and Low Gate Charge

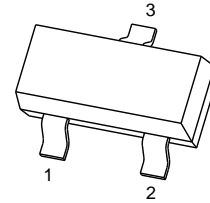
Application

- DC/DC Converter
- Load Switch for Portable Devices
- Battery Switch

MARKING:

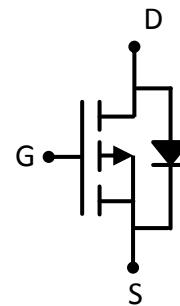


SOT-23



1. GATE
2. SOURCE
3. DRAIN

Schematic diagram



ABSOLUTE MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|---|-----------------|-----------|----------------------|
| Drain-Source Voltage | V_{DS} | -30 | V |
| Gate-Source Voltage | V_{GS} | ± 20 | V |
| Continuous Drain Current | I_D | -2.7 | A |
| Continuous Source-Drain Current | I_S | -0.91 | A |
| Power Dissipation | P_D | 1.1 | W |
| Thermal Resistance from Junction to Ambient | $R_{\theta JA}$ | 114 | $^{\circ}\text{C/W}$ |
| Junction Temperature | T_J | 150 | $^{\circ}\text{C}$ |
| Storage Temperature | T_{STG} | -55~ +150 | $^{\circ}\text{C}$ |

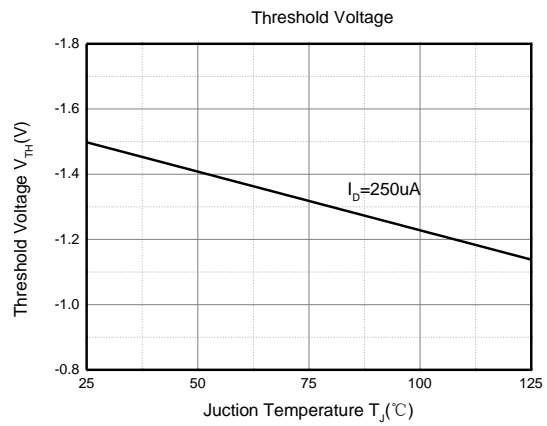
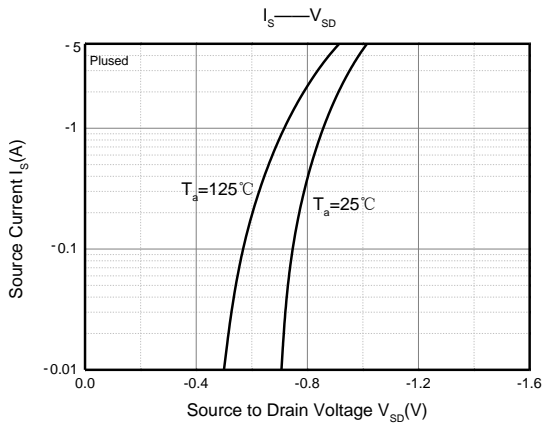
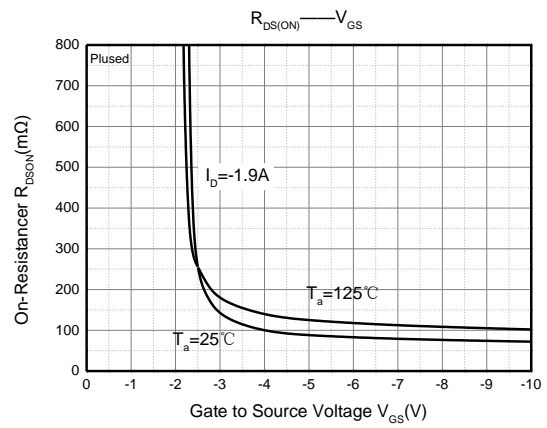
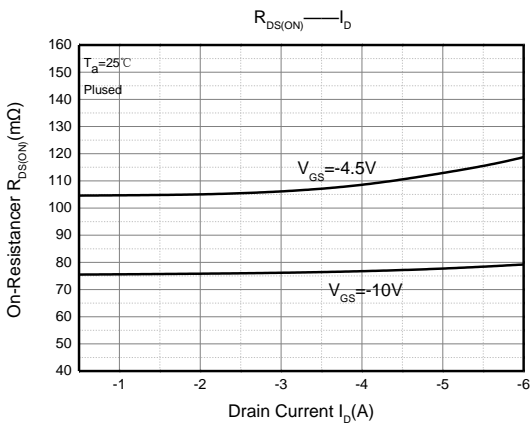
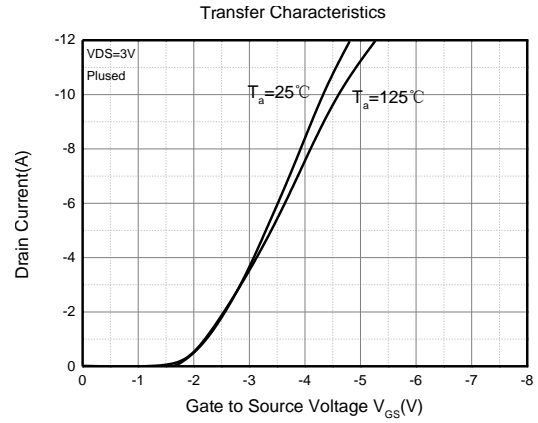
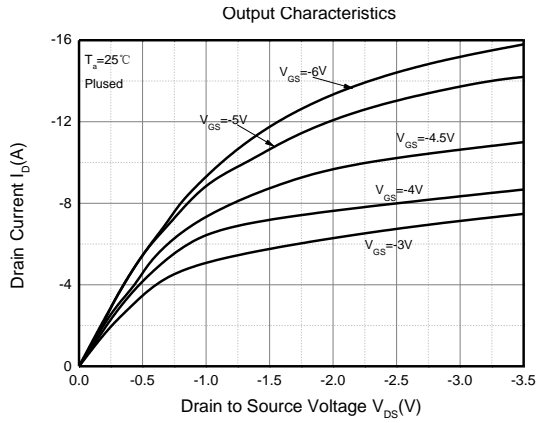
MOSFET ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}\text{C}$ unless otherwise noted)

| Parameter | Symbol | Test Condition | Min | Type | Max | Unit |
|--|---------------|--|-----|-------|-----------|------------|
| Static Characteristics | | | | | | |
| Drain-source breakdown voltage | $V_{(BR)DSS}$ | $V_{GS} = 0V, I_D = -250\mu A$ | -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 | $V_{GS(th)}$ | $V_{DS} = V_{GS}, I_D = -250\mu A$ | -1 | -1.5 | -3 | V |
| Drain-source on-resistance ^a | $R_{DS(on)}$ | $V_{GS} = -10V, I_D = -3.5A$ | | 75 | 90 | m Ω |
| | | $V_{GS} = -4.5V, I_D = -2.5A$ | | 105 | 136 | |
| Forward transconductance ^a | g_{FS} | $V_{DS} = -10V, I_D = -3.5A$ | 1 | | | S |
| Dynamic characteristics^b | | | | | | |
| Input Capacitance | C_{iss} | $V_{DS} = -15V, V_{GS} = 0V, f = 1MHz$ | | 340 | | pF |
| Output Capacitance | C_{oss} | | | 67 | | |
| Reverse Transfer Capacitance | C_{rss} | | | 51 | | |
| Total Gate Charge | Q_g | $V_{DS} = -15V, V_{GS} = -4.5V, I_D = -2.5A$ | | 4.1 | | nC |
| Gate-Source Charge | Q_{gs} | | | 1.2 | | |
| Gate-Drain Charge | Q_{gd} | | | 1.7 | | |
| Turn-on delay time | $t_{d(on)}$ | $V_{DD} = -15V, V_{GEN} = -4.5V, I_D = -1A$ $R_L = 15\Omega, R_{GEN} = 1\Omega$ | | 39 | | ns |
| Turn-on rise time | t_r | | | 40 | | |
| Turn-off delay time | $t_{d(off)}$ | | | 20 | | |
| Turn-off fall time | t_f | | | 17 | | |
| Source-Drain Diode characteristics | | | | | | |
| Diode Forward voltage | V_{DS} | $V_{GS} = 0V, I_S = -1.5A$ | | -0.85 | -1.2 | V |

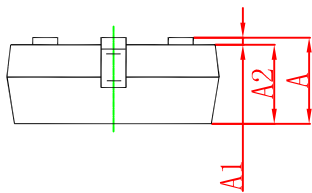
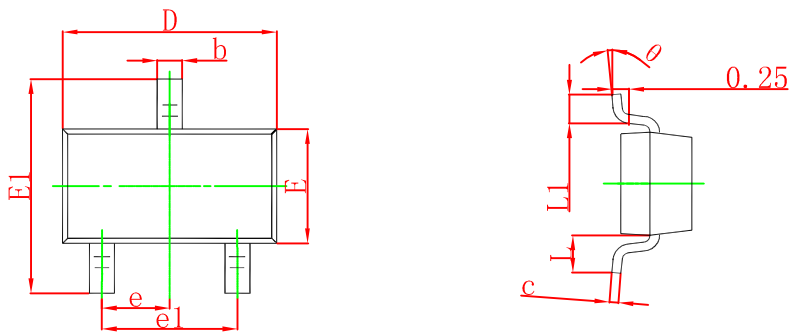
Notes:

- a. Pulse Test : Pulse Width < 300 μs , Duty Cycle $\leq 2\%$.
b. Guaranteed by design, not subject to production testing.

Typical Electrical and Thermal Characteristics



SOT-23 Package Information

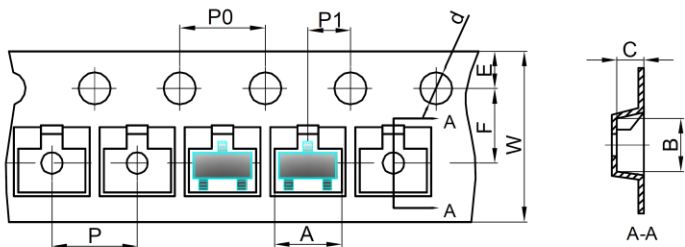


| Symbol | Dimensions In Millimeters | | Dimensions In Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min | Max | Min | Max |
| A | 0.900 | 1.150 | 0.035 | 0.045 |
| A1 | 0.000 | 0.100 | 0.000 | 0.004 |
| A2 | 0.900 | 1.050 | 0.035 | 0.041 |
| b | 0.300 | 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 Tape and Reel

SOT-23 Tape and reel

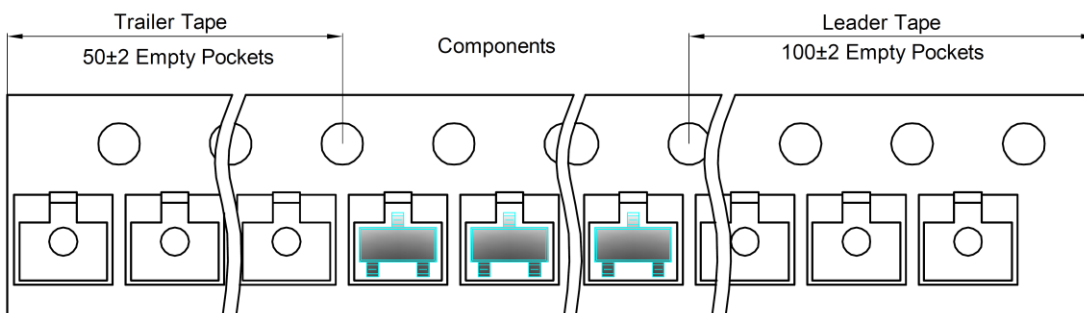
SOT-23 Embossed Carrier Tape



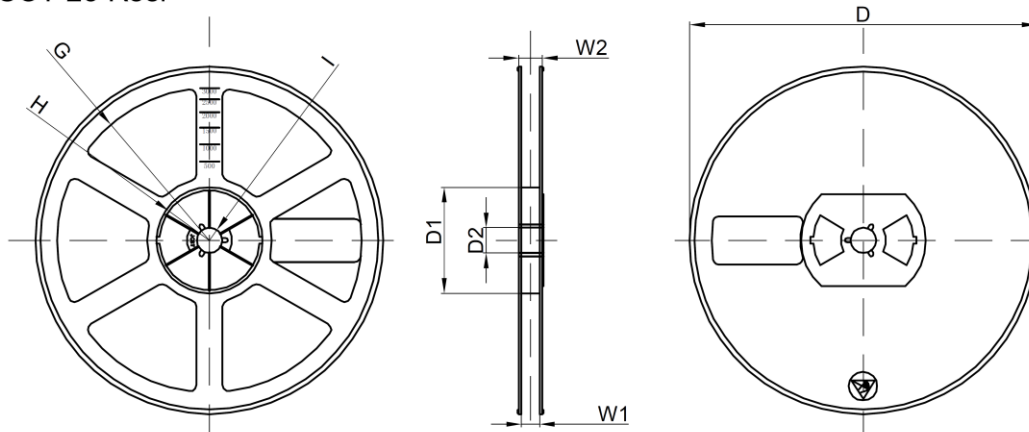
Dimensions are in millimeter

| Pkg type | A | B | C | d | E | F | P0 | P | P1 | W |
|----------|------|------|------|-------|------|------|------|------|------|------|
| SOT-23 | 3.15 | 2.77 | 1.22 | Ø1.50 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |

SOT-23 Tape Leader and Trailer



SOT-23 Reel



Dimensions are in millimeter

| Reel Option | D | D1 | D2 | G | H | I | W1 | W2 |
|-------------|---------|-------|-------|--------|--------|-------|------|-------|
| 7" Dia | Ø178.00 | 54.40 | 13.00 | R78.00 | R25.60 | R6.50 | 9.50 | 12.30 |

| REEL | Reel Size | Box | Box Size(mm) | Carton | Carton Size(mm) | G.W.(kg) |
|----------|-----------|------------|--------------|-------------|-----------------|----------|
| 3000 pcs | 7 inch | 30,000 pcs | 203×203×195 | 120,000 pcs | 438×438×220 | |

单击下面可查看定价，库存，交付和生命周期等信息

[>>GP\(格瑞宝\)](#)