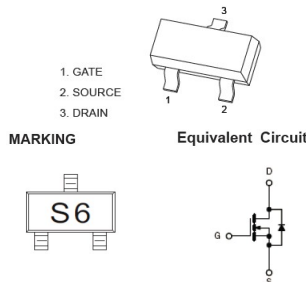




N-Channel Enhancement Mode Power MOSFET

| | | |
|----------|------------|-------|
| V(BR)DSS | RDS(ON)MAX | ID |
| 30V | 47mΩ@10V | 3.16A |
| | 65mΩ@4.5V | |

SOT-23



特征 Features

- TrenchFET Power MOSFET
- Load Switch for Portable Devices.
- DC/DC Converter.

机械数据 Mechanical Data

- 封装: SOT-23 封装 SOT-23 Small Outline Plastic Package.
- 环氧树脂 UL 易燃等级 Epoxy UL: 94V-0.
- 安装位置: 任意 Mounting Position: Any.

极限值和温度特性(TA = 25°C 除非另有规定)

Maximum Ratings & Thermal Characteristics (Ratings at 25°C ambient temperature unless otherwise specified.)

| 参数 Parameters | 符号 Symbol | 数值 Value | 单位 Unit |
|---|-----------|----------|---------|
| Drain-Source Voltage | VDS | 30 | V |
| Gate-Source Voltage | VGS | ±20 | V |
| Continuous Drain Current | ID | 3.16 | A |
| Pulsed Drain Current | IDM | 20 | |
| Continuous Source-Drain Diode Current | IS | 0.62 | |
| Power Dissipation | PD | 750 | mW |
| Junction Temperature | Tj | 150 | °C |
| Storage Temperature | Tstg | -50-+150 | °C |
| Thermal Resistance From Junction to Ambient | RθJA | 100 | °C/W |

电特性 (TA = 25°C 除非另有规定) **Electrical Characteristics** (Ratings at 25°C ambient temperature unless otherwise specified.)

| 参数 Parameter | 符号 Symbols | 测试条件 Test Condition | 界限 Limits | | | 单位 Unit |
|---------------------------------|---------------|---|-----------|-----|------|------------|
| | | | Min | Typ | Max | |
| Static | | | | | | |
| Drain-Source Breakdown Voltage | V(BR)DSS | VGS=0V, ID=250uA | 30 | | | V |
| Gate-Threshold voltage* | VGS(th) | VDS=VGS, ID=250uA | 1 | | 3.0 | V |
| Gate-body Leakage | IGSS | VDS=0V, VGS=±20V | | | ±100 | nA |
| Zero Gate Voltage Drain current | IDSS | VDS=30V, VGS=0V | | | 0.5 | uA |
| Drain-Source On-Resistance (a) | RDS(ON) | VGS=10V, ID=3.5A | | 38 | 47 | mΩ |
| | | VGS=4.5V, IC=2.8A | | 52 | 65 | |
| Forward trans conductance (a) | gfs | VDS=4.5V, ID=2.5A | | 70 | | S |
| Diode forward voltage | VSD | IS=1.25A, VGS=0V | | 0.8 | 1.2 | V |
| Dynamic | | | | | | |
| Input capacitance(b) | Ciss | VDS=15V, VGS=0V, f=1MHz | | 305 | | pF |
| Output capacitance(b) | Coss | | | 65 | | |
| Reverse Transfer capacitance(b) | Crss | | | 29 | | |
| Gate Charge | Qg | VDS=15V, VGS=5V, ID=2.5A | | 3.0 | 4.5 | nC |
| Total gate charge | Qgt | VDS=15V, VGS=10V, ID=2.5A | | 6 | 9 | |
| Gate-source charge | Qgs | | | 1.6 | | |
| Gate-drain charge | Qgd | | | 0.6 | | |
| Gate resistance | Rg | f=1.0MHz | 2.5 | 5 | 7.5 | Ω |
| Switching (b) | | | | | | |
| Turn-on Time | td(on) | VDD=15V, RL=15Ω, VGEN=10V, ID≈1A, RG=6Ω | | 7 | 11 | ns |
| Rise time | tr | | | 12 | 18 | |
| Turn-off Time | td(off) | | | 14 | 25 | |
| Fall time | tf | | | 6 | 10 | |

Notes: a. Pulse Test: Pulse Width ≤300us, Duty Cycles≤2%.
b. These parameters have no way to verify.

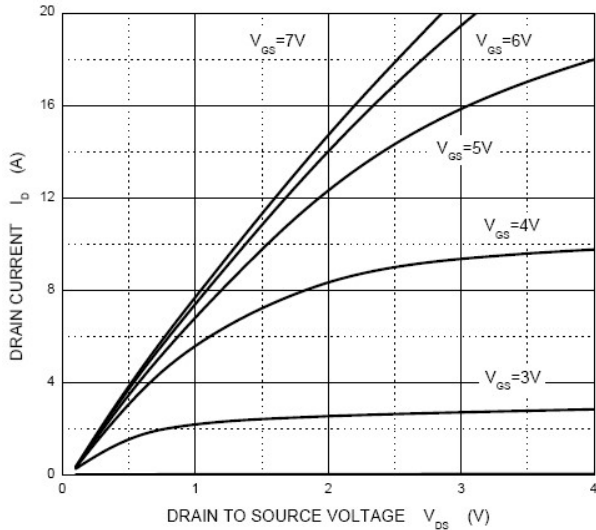




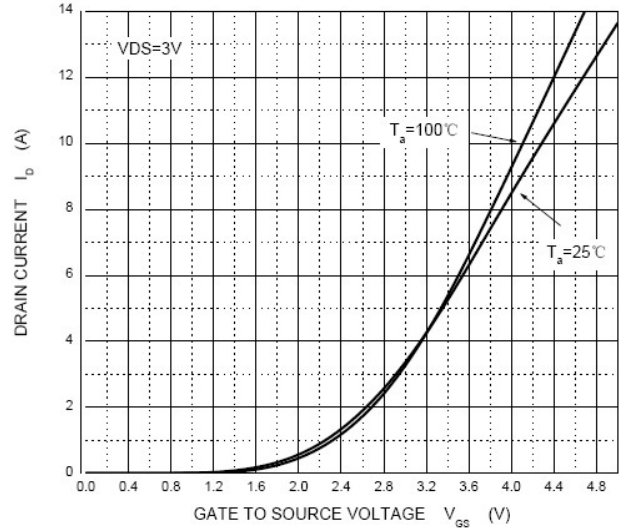
N-Channel Enhancement Mode Power MOSFET

Typical characteristics

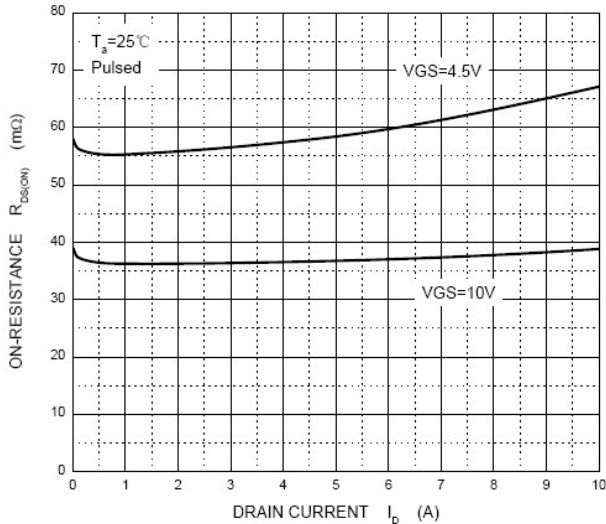
Output Characteristics



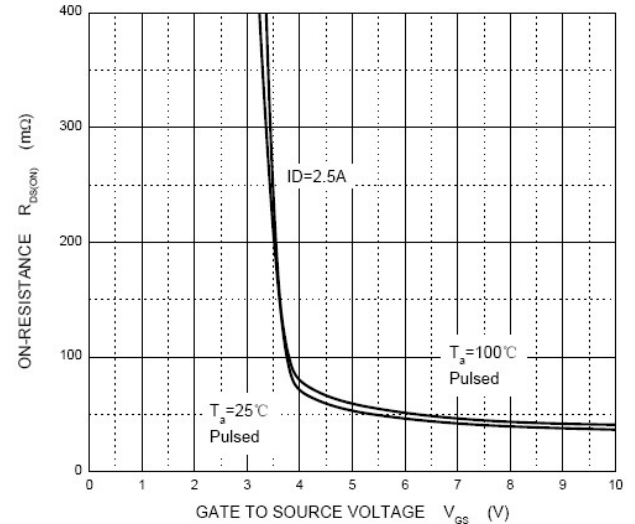
Transfer Characteristics



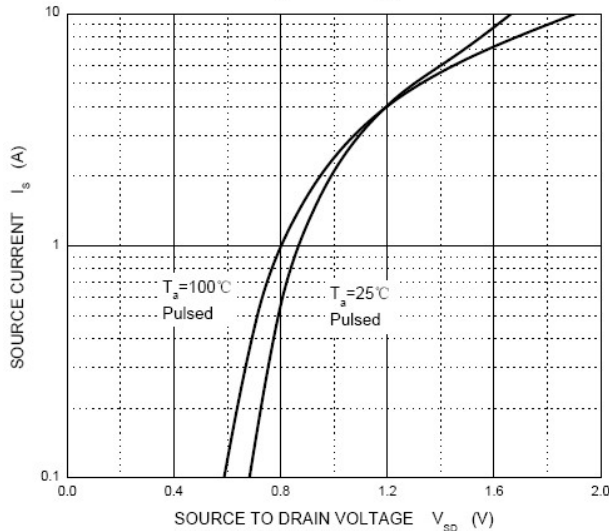
$R_{DS(ON)}$ — I_D



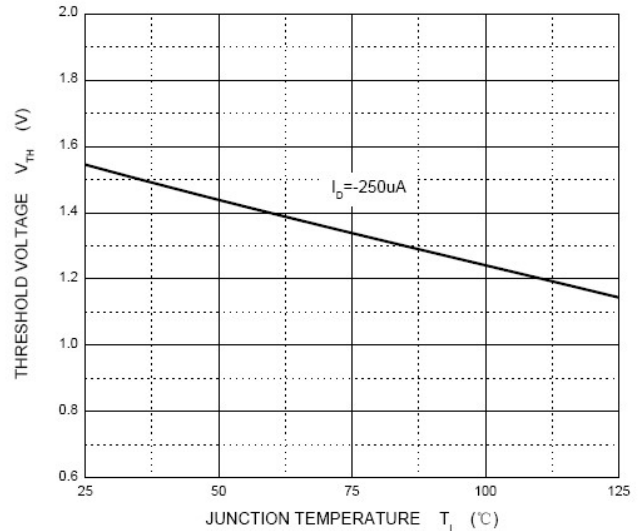
$R_{DS(ON)}$ — V_{GS}



I_S — V_{SD}



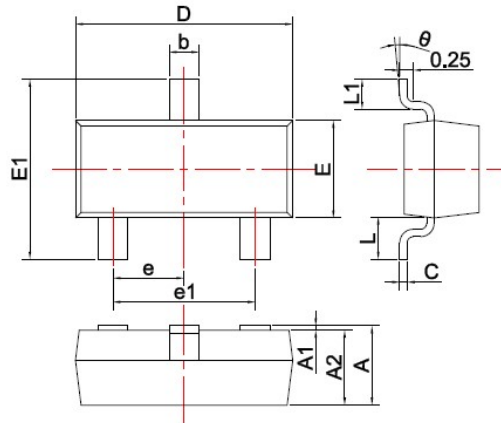
Threshold Voltage





N-Channel Enhancement Mode Power MOSFET

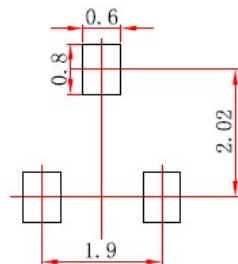
SOT-23 PACKAGE OUTLINE Plastic surface mounted package



| SYMBOL | DIMENSIONS | |
|--------|------------|-------|
| | MIN. | MAX. |
| A | 0.900 | 1.150 |
| A1 | 0.000 | 0.100 |
| A2 | 0.900 | 1.050 |
| b | 0.300 | 0.500 |
| c | 0.080 | 0.150 |
| D | 2.800 | 3.000 |
| E | 1.200 | 1.400 |
| E1 | 2.250 | 2.550 |
| e | 0.950TYP | |
| e1 | 1.800 | 2.000 |
| L | 0.550REF | |
| L1 | 0.300 | 0.500 |
| θ | 0° | 8° |

Unit: mm

焊盘设计参考 Precautions: PCB Design
Recommended land dimensions for SOT-23 diode. Electrode patterns for PCBs



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

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[PJMF600N65E1_T0_00201](#) [PJMF900N65E1_T0_00201](#) [PJMF900N60E1_T0_00201](#)