

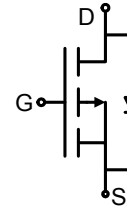
P-Channel Power MOSFET

General Features

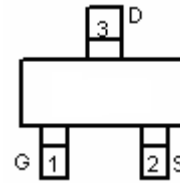
- $V_{DS} = -20V, I_D = -2.4A$
 $R_{DS(ON)} < 200m\Omega @ V_{GS} = -2.5V$
 $R_{DS(ON)} < 140m\Omega @ V_{GS} = -4.5V$
- High power and current handling capability
- Lead free product is acquired
- Surface mount package

Application

- PWM applications
- Load switch
- Power management



Schematic diagram



Marking and Pin Assignment



SOT-23 top view

MAXIMUM RATINGS

| Characteristic | Symbol | Max | Unit |
|--|------------|-----------|------------|
| Drain-Source Voltage | BV_{DSS} | -20 | V |
| Gate- Source Voltage | V_{GS} | ± 8 | V |
| Drain Current (continuous) | I_D | -2.4 | A |
| Drain Current (pulsed) | I_{DM} | -10 | A |
| Total Device Dissipation $T_A = 25^\circ C$ | P_D | 900 | mW |
| Junction | T_J | 150 | $^\circ C$ |
| Storage Temperature | T_{stg} | -55to+150 | $^\circ C$ |

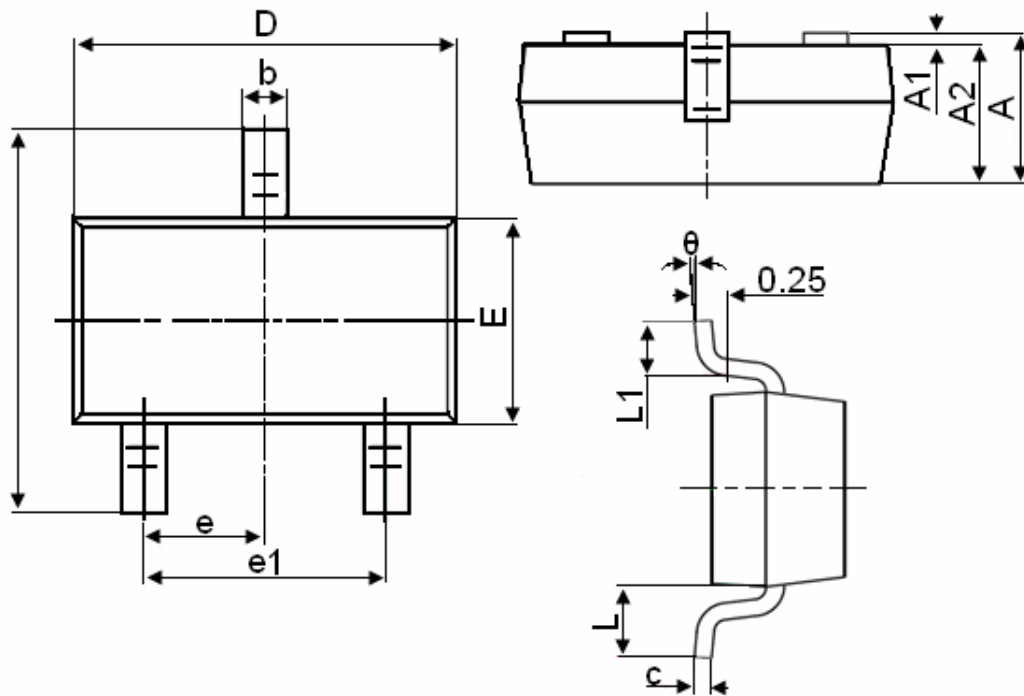
ELECTRICAL CHARACTERISTICS

 (T_A=25°C unless otherwise noted)

| Characteristic | Symbol | Min | Typ | Max | Unit |
|--|---------------------|------|-----|-----------|------|
| Drain-Source Breakdown Voltage (I _D = -250uA, V _{GS} =0V) | BV _{DSS} | -20 | — | — | V |
| Gate Threshold Voltage (I _D = -250uA, V _{GS} = V _{DS}) | V _{GS(th)} | -0.4 | — | -1.5 | V |
| Diode Forward Voltage Drop (I _S = -0.75A, V _{GS} =0V) | V _{SD} | — | — | -1.5 | V |
| Zero Gate Voltage Drain Current (V _{GS} =0V, V _{DS} = -16V, T _A =55°C) | I _{DSS} | — | — | -1 -10 | uA |
| Gate Body Leakage (V _{GS} =±8V, V _{DS} =0V) | I _{GSS} | — | — | ±100 | nA |
| Static Drain-Source On-State Resistance (I _D = -2.4A, V _{GS} = -4.5V) | R _{DS(ON)} | — | — | 140 | mΩ |
| Static Drain-Source On-State Resistance (I _D = -2A, V _{GS} = -2.5V) | R _{DS(ON)} | — | — | 200 | mΩ |
| Input Capacitance (V _{GS} =0V, V _{DS} = -10V, f=1MHz) | C _{ISS} | — | 600 | — | pF |
| Output Capacitance (V _{GS} =0V, V _{DS} = -10V, f=1MHz) | C _{OSS} | — | 120 | — | pF |
| Turn-ON Time (V _{DS} = -10V, I _D = -2.4A, R _{GEN} =6Ω) | t _(on) | — | 8 | — | ns |
| Turn-OFF Time (V _{DS} = -10V, I _D = -2.4A, R _{GEN} =6Ω) | t _(off) | — | 60 | — | ns |

Pulse Width ≤ 300 μs; Duty Cycle ≤ 2.0%

SOT-23 Package Information



| Symbol | Dimensions in Millimeters | |
|----------|---------------------------|-------|
| | 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° |

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