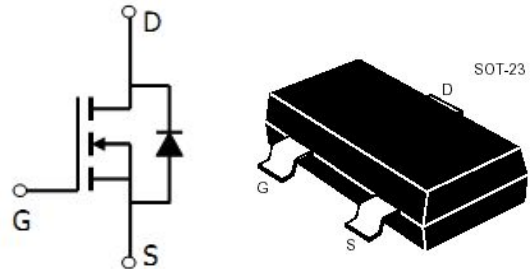


N-Channel Power MOSFET



MAXIMUM RATINGS

| Characteristic | Symbol | Max | Unit |
|--------------------------|------------|----------|------|
| Drain-Source Voltage | BV_{DSS} | 60 | V |
| Gate- Source Voltage | V_{GS} | ± 20 | V |
| Drain Current-continuous | I_{DR} | 3 | A |
| Drain Current-pulsed | I_{DRM} | 10 | A |

THERMAL CHARACTERISTICS

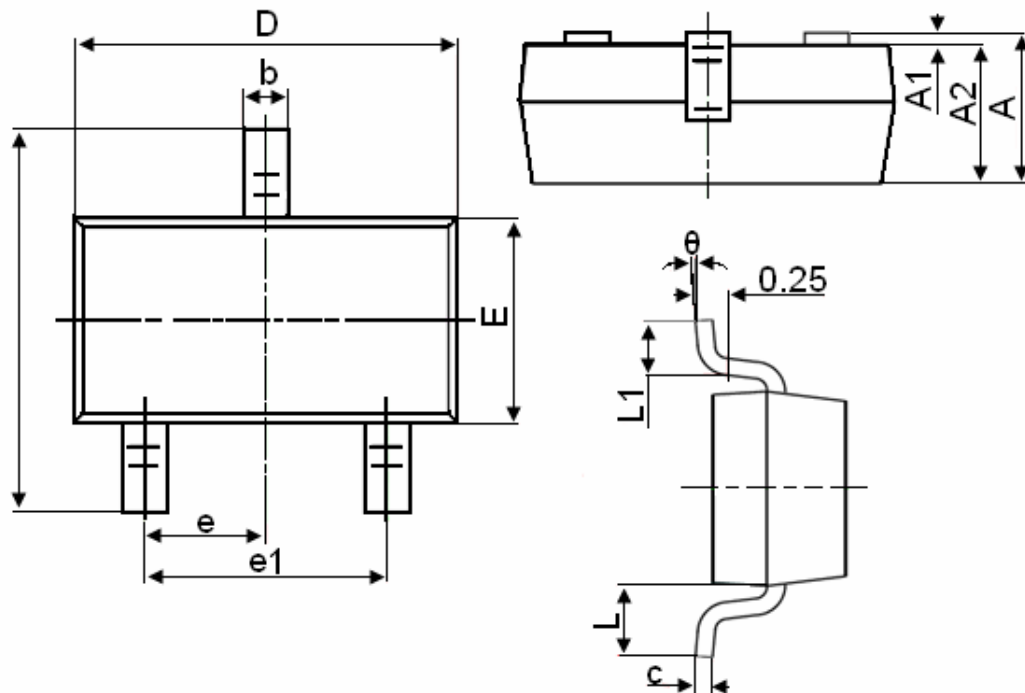
| Characteristic | Symbol | Max | Unit |
|---|-----------------|---|----------------------------|
| Total Device Dissipation $T_A=25^\circ\text{C}$ Derate above 25°C | PD | 1380 3.8 | mW mW/ $^\circ\text{C}$ |
| Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | 90 | $^\circ\text{C}/\text{W}$ |
| Junction and Storage Temperature | T_J, T_{stg} | 150 $^\circ\text{C}$, -55to+150 $^\circ\text{C}$ | |

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} | 60 | — | — | V |
| Gate Threshold Voltage (I _D =250uA, V _{GS} = V _{DS}) | V _{GS(th)} | 1 | — | 3 | V |
| Diode Forward Voltage Drop (I _{SD} =1A, V _{GS} =0V) | V _{SD} | — | — | 1.5 | V |
| Zero Gate Voltage Drain Current (V _{GS} =0V, V _{DS} = 60V) | I _{DSS} | — | — | 1 | uA |
| Gate Body Leakage (V _{GS} =±20V, V _{DS} =0V) | I _{GSS} | — | — | ±100 | nA |
| Static Drain-Source On-State Resistance (I _D =3A, V _{GS} =10V) (I _D =2A, V _{GS} =4.5V) | R _{DS(ON)} | — | — | 90 120 | mΩ |
| Input Capacitance (V _{GS} =0V, V _{DS} =25V, f=1MHz) | C _{ISS} | — | — | 550 | pF |
| Common Source Output Capacitance (V _{GS} =0V, V _{DS} =25V, f=1MHz) | C _{OSS} | — | — | 125 | pF |
| Turn-ON Time (V _{DS} =30V, I _D =200mA, R _{GEN} =25Ω) | t _(on) | — | — | 40 | ns |
| Turn-OFF Time (V _{DS} =30V, I _D =200mA, R _{GEN} =25Ω) | t _(off) | — | — | 80 | ns |

1. FR-5=1.0×0.75×0.062in.
2. Alumina=0.4×0.3×0.024in.99.5%alumina.
3. Pulse Width≤300 μ s; 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° |