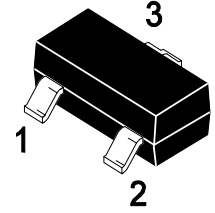
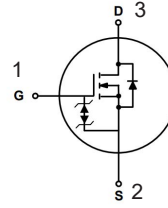


## N-Channel Enhancement Mode MOSFET

### Feature

- Super High dense cell design for extremely low  $R_{DS(ON)}$ .
- Reliable and Rugged.
- Low Threshold Voltage (1.5V—2.5 V) Make it Ideal for Low Voltage Applications.
- ESD protected.
- SOT-323 for Surface Mount Package.



### Applications

- Power Management in DC/DC Converters
- Portable and Battery-powered Products.

### Absolute Maximum Ratings

$T_A=25^\circ\text{C}$

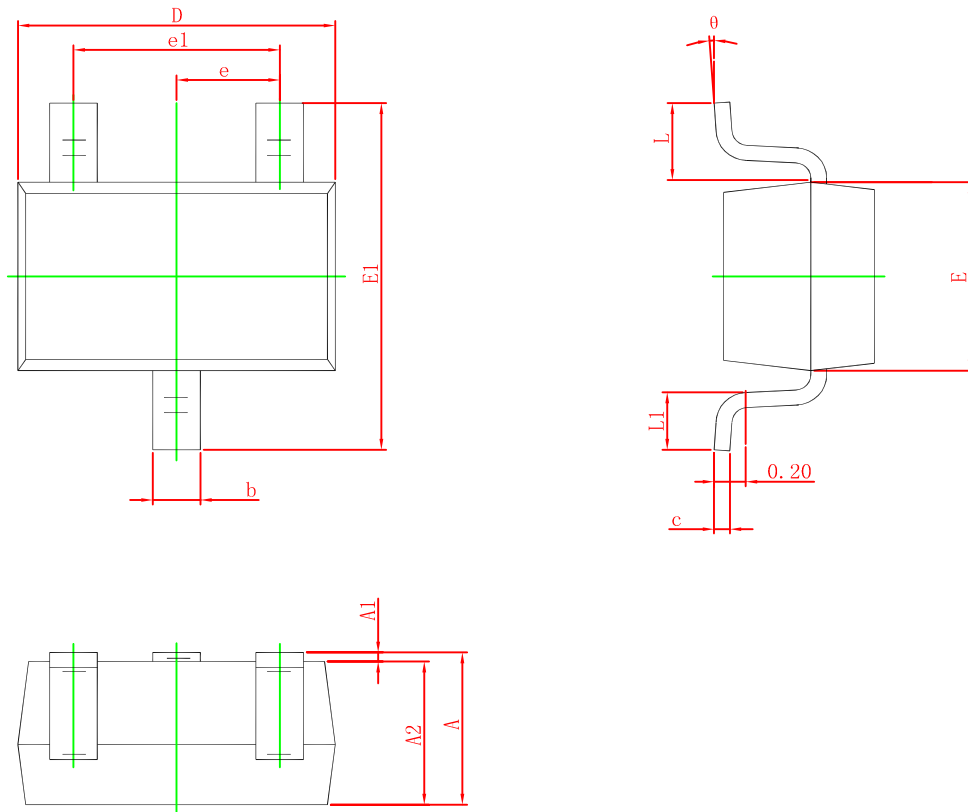
Unless Otherwise noted

| Parameter                | Symbol   | Limit    | Units |
|--------------------------|----------|----------|-------|
| Drain-Source Voltage     | $V_{DS}$ | 100      | V     |
| Gate-Source Voltage      | $V_{GS}$ | $\pm 20$ | V     |
| Drain Current-Continuous | $I_D$    | 0.17     | A     |

### Electrical Characteristics ( $T_a = 25^\circ\text{C}$ Unless Otherwise Noted )

| Symbol                 | Parameter                      | Conditions                                       | Min | Typ  | Max      | Unit          |
|------------------------|--------------------------------|--|-----|------|----------|---------------|
| Static Characteristics |                                |  |     |      |          |               |
| $BV_{DSS}$             | Drain-Source Breakdown Voltage | $V_{GS} = 0\text{ V}, I_{DS} = 250\ \mu\text{A}$ | 100 | -    | -        | V             |
| $V_{GS(th)}$           | Gate Threshold Voltage         | $V_{DS} = V_{GS}, I_{DS} = 250\ \mu\text{A}$     | 1.5 | 2.0  | 2.5      | V             |
| $I_{DSS}$              | Drain Leakage Current          | $V_{DS} = 80\text{ V}, V_{GS} = 0\text{ V}$      | -   | -    | 1        | $\mu\text{A}$ |
|                        |                                | $T_J = 85^\circ\text{C}$                         | -   | -    | 30       | $\mu\text{A}$ |
| $I_{GSS}$              | Gate Leakage Current           | $V_{GS} = \pm 20\text{ V}, V_{DS} = 0\text{ V}$  | -   | -    | $\pm 10$ | $\mu\text{A}$ |
| $R_{DS(ON)}^a$         | On-State Resistance            | $V_{GS} = 10\text{ V}, I_{DS} = 0.25\text{ A}$   | -   | 3.5  | 6        | $\Omega$      |
|                        |                                | $V_{GS} = 4.5\text{ V}, I_{DS} = 0.2\text{ A}$   | -   | 4.5  | 9        |               |
| Diode Characteristics  |                                |  |     |      |          |               |
| $V_{SD}$               | Diode Forward Voltage          | $I_{SD} = 0.4\text{ A}, V_{GS} = 0\text{ V}$     | -   | 0.91 | 1.3      | V             |

## SOT-323 PACKAGE OUTLINE DIMENSIONS



| Symbol   | Dimensions In Millimeters |       | Dimensions In Inches |       |
|----------|---------------------------|-------|----------------------|-------|
|          | Min.                      | Max.  | Min.                 | Max.  |
| A        | 0.900                     | 1.100 | 0.035                | 0.043 |
| A1       | 0.000                     | 0.100 | 0.000                | 0.004 |
| A2       | 0.900                     | 1.000 | 0.035                | 0.039 |
| b        | 0.200                     | 0.400 | 0.008                | 0.016 |
| c        | 0.080                     | 0.150 | 0.003                | 0.006 |
| D        | 2.000                     | 2.200 | 0.079                | 0.087 |
| E        | 1.150                     | 1.350 | 0.045                | 0.053 |
| E1       | 2.150                     | 2.450 | 0.085                | 0.096 |
| e        | 0.650 TYP.                |       | 0.026 TYP.           |       |
| e1       | 1.200                     | 1.400 | 0.047                | 0.055 |
| L        | 0.525 REF.                |       | 0.021 REF.           |       |
| L1       | 0.260                     | 0.460 | 0.010                | 0.018 |
| $\theta$ | 0°                        | 8°    | 0°                   | 8°    |

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