

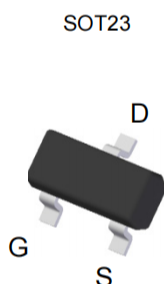
Product Summary

- * $V_{DS(on)} = -20V$
- * $I_D = -3A$
- * $R_{DS(on)} = 90m\Omega @ V_{GS} = 4.5V (Max)$
- * $R_{DS(on)} = 125m\Omega @ V_{GS} = 2.5V (Max)$
- * ESD protection

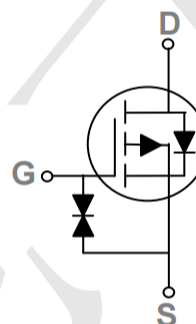
Application

- * Load/Power switch
- * Interfacing, logic switching
- * Battery management for ultra portable electronics

Package and Pin Configuration



Circuit diagram



Marking: YESx

“YES” is Part number, Fixed
“x” is internal code

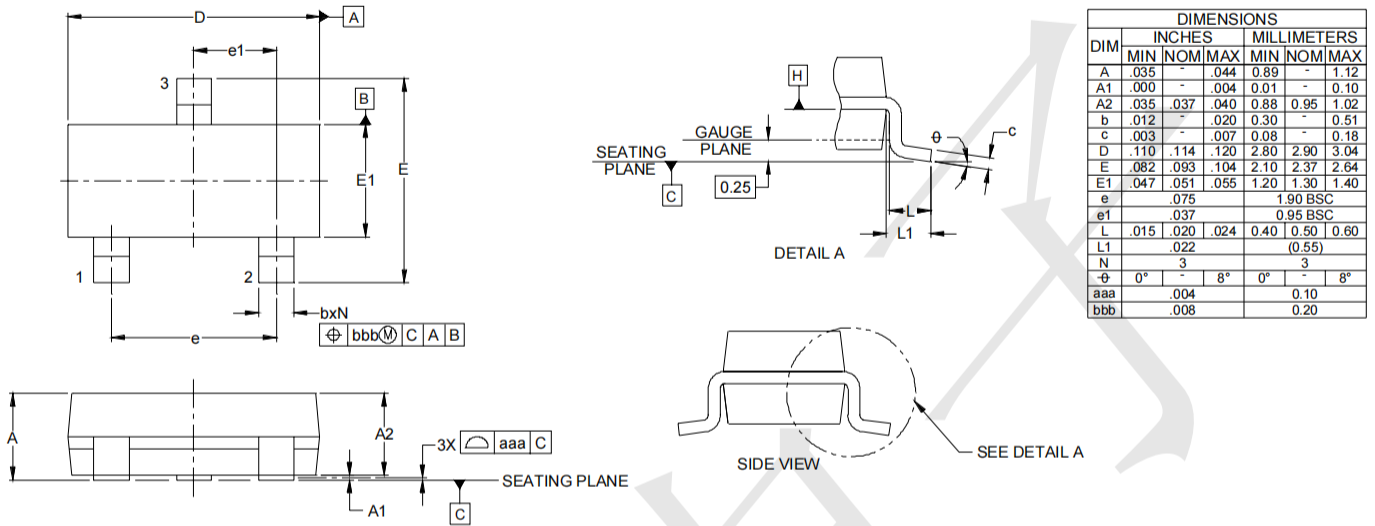
Absolute Maximum Ratings ($T_A = 25^\circ C$ unless otherwise noted)

| Parameter | Symbol | Value | Unit |
|--|-----------------|------------|--------------|
| Drain-source voltage | V_{DS} | -20 | V |
| Typical gate-source voltage | V_{GS} | ± 10 | V |
| Continuous drain current (note 1) | I_D | -3 | A |
| Pulsed drain current | I_{DM} | -13.2 | A |
| Power dissipation (note 2) | P_D | 1.55 | W |
| Thermal resistance from junction to ambient (note 1) | $R_{\theta JA}$ | 80 | $^\circ C/W$ |
| Junction temperature range | T_J | 150 | $^\circ C$ |
| Storage temperature range | T_{STG} | -55 ~ +150 | $^\circ C$ |
| Lead temperature for soldering purposes (1/8" from case for 10s) | T_L | 260 | $^\circ C$ |

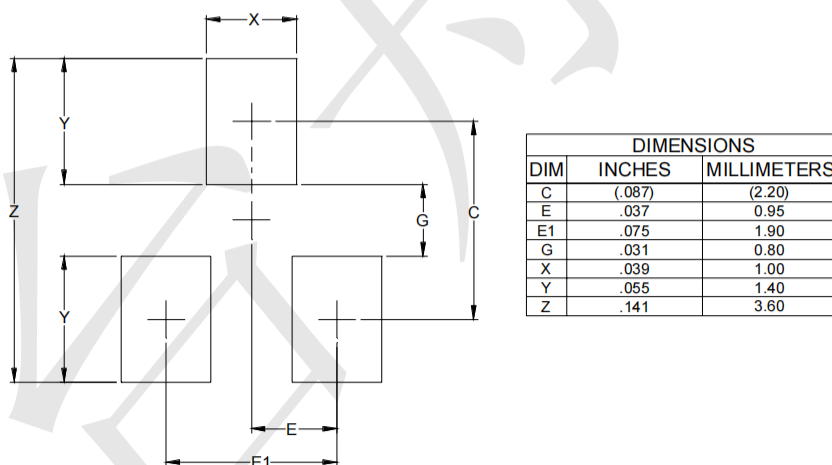
Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

| Parameter | Symbol | Conditions | Min | Typ | Max | Unit |
|--------------------------------------|-----------------|--|-------|-----|----------|------------|
| STATIC PARAMETERS | | | | | | |
| Drain-source breakdown voltage | $V_{(BR)DSS}^A$ | $V_{GS} = 0V, I_D = -250\mu A$ | -20 | | | V |
| Zero gate voltage drain current | I_{DSS} | $V_{DS} = -20V, V_{GS} = 0V$ | | | -1 | μA |
| Gate-body leakage current | I_{GSS} | $V_{GS} = \pm 10V, V_{DS} = 0V$ | | | ± 20 | μA |
| Gate threshold voltage (note 2) | $V_{GS(th)}$ | $V_{DS} = V_{GS}, I_D = -250\mu A$ | -0.35 | | -1.1 | V |
| Drain-source on-resistance (note 2) | $R_{DS(on)}$ | $V_{GS} = -4.5V, I_D = -3A$ | | 80 | 90 | m Ω |
| | | $V_{GS} = -2.5V, I_D = -2A$ | | 100 | 125 | |
| | | $V_{GS} = -1.8V, I_D = -1A$ | | 135 | 180 | |
| Forward transconductance (note 2) | g_{FS} | $V_{DS} = -10V, I_D = -1A$ | | 2.2 | | S |
| Diode forward voltage | V_{SD} | $I_S = -1A, V_{GS} = 0V$ | | | -1.2 | V |
| DYNAMIC PARAMETERS (note 4) | | | | | | |
| Input capacitance | C_{iss} | $V_{DS} = -16V, V_{GS} = 0V, f = 1MHz$ | | 365 | 520 | pF |
| Output capacitance | C_{oss} | | | 75 | 101 | |
| Reverse transfer capacitance | C_{rss} | | | 50 | 80 | |
| SWITCHING PARAMETERS (note 4) | | | | | | |
| Turn-on delay time (note 3) | $t_{d(on)}$ | $V_{GS} = -4.5V, V_{DS} = -10V, I_D = -1000mA, R_{GEN} = 25\Omega$ | | | 9 | ns |
| Turn-on rise time (note 3) | t_r | | | | 25 | |
| Turn-off delay time (note 3) | $t_{d(off)}$ | | | | 65 | |
| Turn-off fall time (note 3) | t_f | | | | 17 | |

SOT23 - Package Outline Drawing



Suggested Land Pattern



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