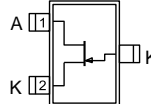


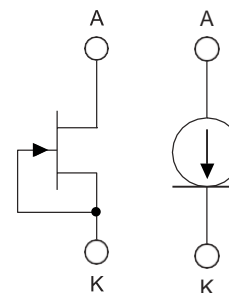
IDEAL CHOICE FOR TEST INSTRUMENTATION AND MEDICAL APPLICATIONS

| FEATURES | |
|--|----------------|
| REPLACES SILICONIX/VISHAY SST502 SERIES | |
| WIDE CURRENT RANGE | 0.19 to 5.6mA |
| BIASING NOT REQUIRED | $V_{GS} = 0V$ |
| ABSOLUTE MAXIMUM RATINGS¹ @ 25 °C (unless otherwise stated) | |
| Maximum Temperatures | |
| Storage Temperature | -55 to 150°C |
| Junction Operating Temperature | -55 to 150°C |
| Maximum Power Dissipation | |
| Continuous Power Dissipation ⁷ | 350mW |
| Maximum Currents | |
| Forward Current | 20mA |
| Reverse Current | 50mA |
| Maximum Voltages | |
| Peak Operating Voltage | $P_{OV} = 50V$ |

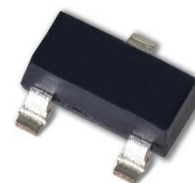
SOT-23 3L
Top View



Short Pins 2 & 3
Via PCB Trace



Package Photo



COMMON ELECTRICAL CHARACTERISTICS @ 25 °C (unless otherwise stated)

| SYMBOL | CHARACTERISTIC | MIN | TYP | MAX | UNITS | CONDITIONS |
|----------|-------------------------------------|-----|-----|-----|-------|-----------------------|
| P_{OV} | Peak Operating Voltage ⁶ | 50 | | | V | $I_F = 1.1I_{F(max)}$ |
| V_R | Reverse Voltage | | 0.8 | | V | $I_R = 1mA$ |
| C_F | Forward Capacitance | | 1.5 | | pF | $V_F = 25V, f = 1MHz$ |

SPECIFIC ELECTRICAL CHARACTERISTICS @ 25 °C (unless otherwise stated)

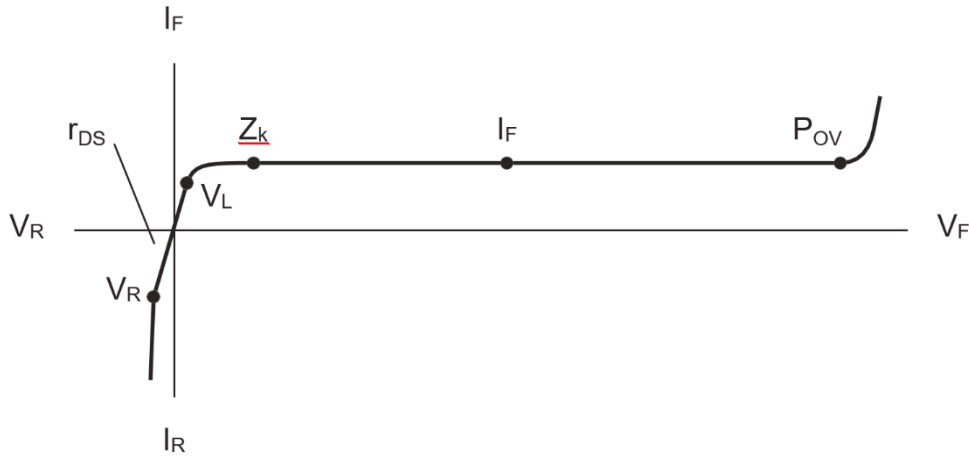
| PART | Forward Current ³ $I_F(mA)$ | | | Dynamic Impedance ⁴ $Z_d(M\Omega)$ | | Knee Impedance $Z_k(M\Omega)$ | Limiting Voltage ⁵ $V_L(V)$ | |
|--------|---|------|-------|--|-----|----------------------------------|---|-----|
| | $V_F = 25V$ | | | $V_F = 25V$ | | $V_F = 6V$ | $I_F = 0.8I_{F(min)}$ | |
| | MIN | NOM | MAX | MIN | TYP | TYP | TYP | MAX |
| SST500 | 0.192 | 0.24 | 0.288 | 4.00 | 15 | 2.50 | 0.4 | 1.2 |
| SST501 | 0.264 | 0.33 | 0.396 | 2.20 | 10 | 1.60 | 0.5 | 1.3 |
| SST502 | 0.344 | 0.43 | 0.516 | 1.0 | 2.7 | 0.7 | 0.6 | 1.5 |
| SST503 | 0.448 | 0.56 | 0.672 | 0.7 | 2.0 | 0.5 | 0.7 | 1.7 |
| SST504 | 0.600 | 0.75 | 0.900 | 0.5 | 1.5 | 0.4 | 0.8 | 1.9 |
| SST505 | 0.800 | 1.00 | 1.200 | 0.4 | 1.0 | 0.3 | 0.9 | 2.1 |
| SST506 | 1.120 | 1.40 | 1.680 | 0.3 | 0.8 | 0.2 | 1.1 | 2.5 |
| SST507 | 1.440 | 1.80 | 2.160 | 0.2 | 0.6 | 0.12 | 1.3 | 2.8 |
| SST508 | 1.900 | 2.40 | 2.900 | 0.1 | 0.4 | 0.08 | 1.5 | 3.1 |
| SST509 | 2.400 | 3.00 | 3.600 | 0.09 | 0.3 | 0.06 | 1.7 | 3.5 |
| SST510 | 2.900 | 3.60 | 4.300 | 0.08 | 0.3 | 0.04 | 1.9 | 3.9 |
| SST511 | 3.800 | 4.70 | 5.600 | 0.07 | 0.2 | 0.03 | 2.1 | 4.2 |

NOTES:

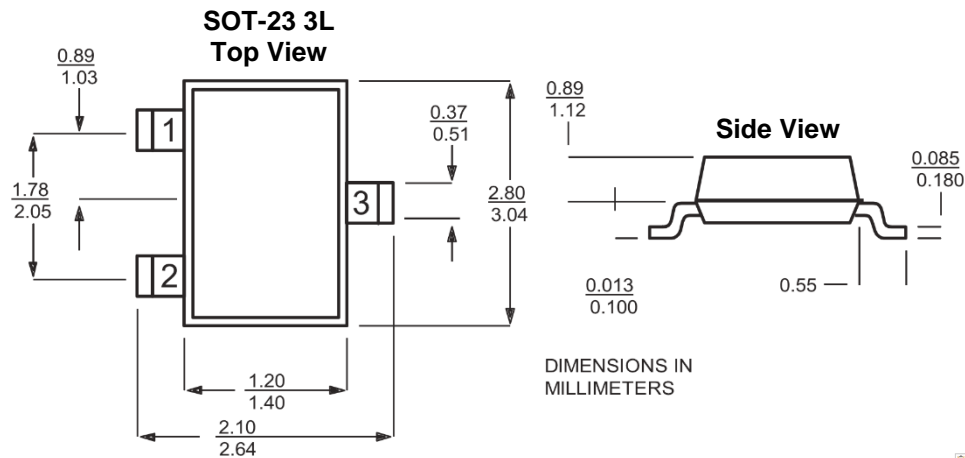
1. Absolute maximum ratings are limiting values above which serviceability may be impaired.
2. Pulsed, $t = 2\text{ms}$. Steady State currents may vary.
3. Pulsed, $t = 2\text{ms}$. Continuous currents may vary.
4. Pulsed, $t = 2\text{ms}$. Continuous impedances may vary.
5. Min V_F required to ensure $I_F = 0.8I_{F(\text{min})}$.
6. Max V_F where $I_F = 1.1 \times I_{F \text{ max}}$ is guaranteed. Pulsed test $\leq 2\text{mS}$.
7. Derate $2.8 \text{ m W}^\circ\text{C}$ above 25°C .

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V-I Characteristics Current Regulating Diode



Packaging Details



Ordering Information

| |
|--|
| Standard Part Call-Out |
| SST500 SOT-23 3L RoHS |
| Custom Part Call-Out (Custom Parts Include SEL + 4 Digit Numeric Code) |
| SST500 SOT-23 3L RoHS SELXXXX |

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