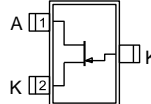


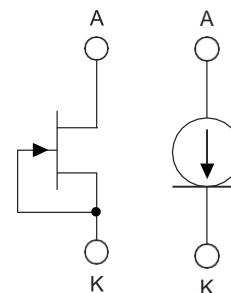
### IDEAL CHOICE FOR TEST INSTRUMENTATION AND MEDICAL APPLICATIONS

FEATURES	
REPLACES SILICONIX/VISHAY SST502 SERIES	
WIDE CURRENT RANGE	0.19 to 5.6mA
BIASING NOT REQUIRED	$V_{GS} = 0V$
<b>ABSOLUTE MAXIMUM RATINGS<sup>1</sup></b> @ 25 °C (unless otherwise stated)	
<b>Maximum Temperatures</b>	
Storage Temperature	-55 to 150°C
Junction Operating Temperature	-55 to 150°C
<b>Maximum Power Dissipation</b>	
Continuous Power Dissipation <sup>7</sup>	350mW
<b>Maximum Currents</b>	
Forward Current	20mA
Reverse Current	50mA
<b>Maximum Voltages</b>	
Peak Operating Voltage	$P_{OV} = 50V$

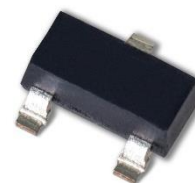
SOT-23 3L  
Top View



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 <sup>6</sup>	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)

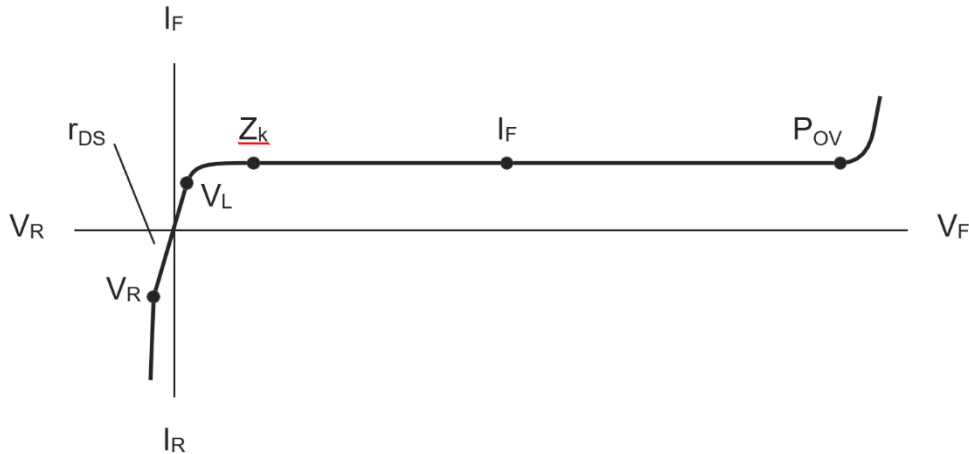
PART	Forward Current <sup>3</sup> $I_F(mA)$			Dynamic Impedance <sup>4</sup> $Z_d(M\Omega)$		Knee Impedance $Z_k(M\Omega)$	Limiting Voltage <sup>5</sup> $V_L(V)$	
	$V_F = 25V$			$V_F = 25V$		$V_F = 6V$	$I_F = 0.8I_{F(min)}$	
	MIN	NOM	MAX	MIN	TYP	TYP	TYP	MAX
SST500	0.192	0.24	0.288	4.00	15	2.50	0.4	1.2
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:

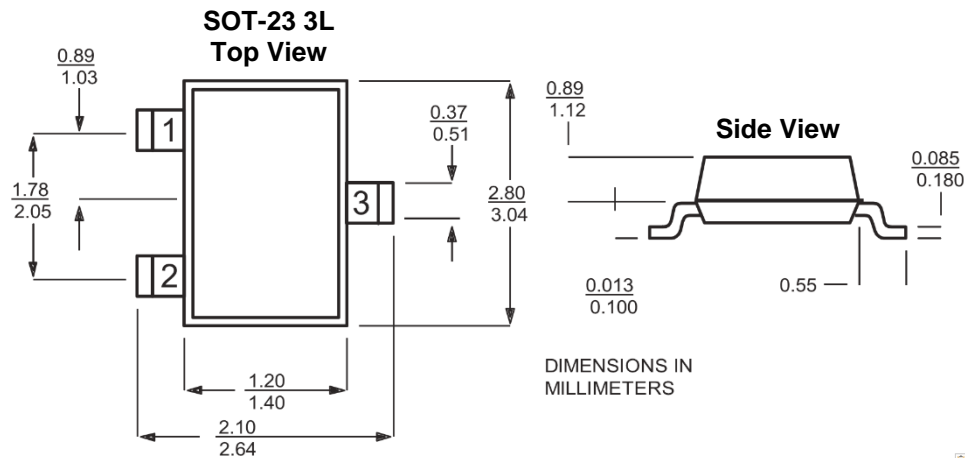
1. Absolute maximum ratings are limiting values above which serviceability may be impaired.
2. Pulsed,  $t = 2\text{ms}$ . Steady State currents may vary.
3. Pulsed,  $t = 2\text{ms}$ . Continuous currents may vary.
4. Pulsed,  $t = 2\text{ms}$ . Continuous impedances may vary.
5. Min  $V_F$  required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

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## V-I Characteristics Current Regulating Diode



## Packaging Details



## Ordering Information

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