



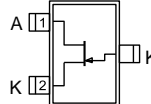
**THE DATASHEET OF
SST510 SOT-23 3L**



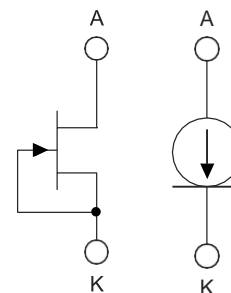
IDEAL CHOICE FOR TEST INSTRUMENTATION AND MEDICAL APPLICATIONS

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	$P_{OV} = 50V$

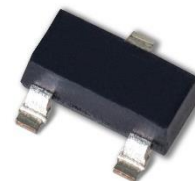
SOT-23 3L
Top View



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)

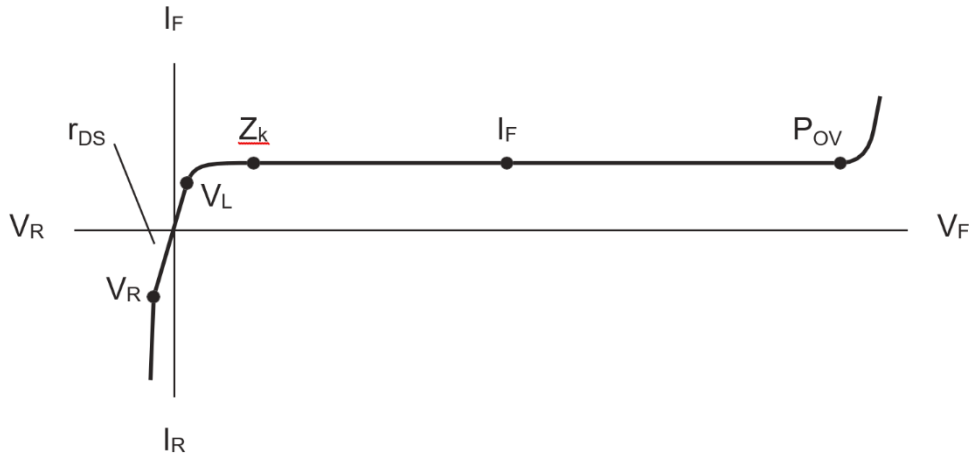
PART	Forward Current ³ $I_F(mA)$			Dynamic Impedance ⁴ $Z_d(M\Omega)$		Knee Impedance $Z_k(M\Omega)$	Limiting Voltage ⁵ $V_L(V)$	
	$V_F = 25V$			$V_F = 25V$		$V_F = 6V$	$I_F = 0.8I_{F(min)}$	
	MIN	NOM	MAX	MIN	TYP	TYP	TYP	MAX
SST500	0.192	0.24	0.288	4.00	15	2.50	0.4	1.2
SST501	0.264	0.33	0.396	2.20	10	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:

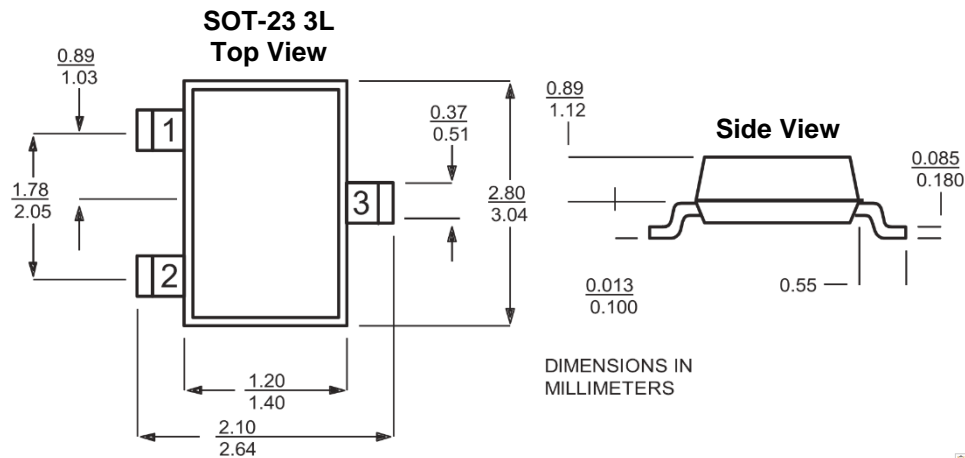
1. Absolute maximum ratings are limiting values above which serviceability may be impaired.
2. Pulsed, $t = 2\text{ms}$. Steady State currents may vary.
3. Pulsed, $t = 2\text{ms}$. Continuous currents may vary.
4. Pulsed, $t = 2\text{ms}$. Continuous impedances may vary.
5. Min V_F required to ensure $I_F = 0.8I_{F(\text{min})}$.
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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