

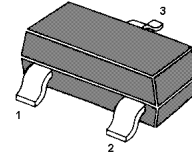
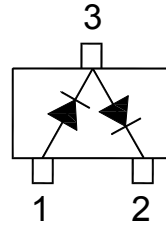
# 1SS396

## Silicon Epitaxial Schottky Barrier Diode

for low voltage high speed switching application

### Features

- Low forward voltage
- Low reverse current



SOT-23 Plastic Package  
1. Anode 2. Cathode 3. Cathode/ Anode

### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Maximum Peak Reverse Voltage	$V_{RM}$	45	V
Reverse Voltage	$V_R$	40	V
Average Rectified Forward Current	$I_{F(AV)}$	100	mA
Maximum Peak Forward Current	$I_{FM}$	300	mA
Non-Repetitive Peak Forward Surge Current ( $t = 10$ ms)	$I_{FSM}$	1	A
Power Dissipation	$P_{tot}$	150	mW
Junction Temperature	$T_j$	125	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	- 55 to + 125	$^\circ\text{C}$

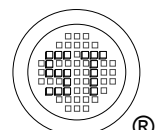
### Thermal Characteristics

Parameter	Symbol	Value	Unit
Typical Thermal Resistance - Junction to Ambient <sup>1)</sup>	$R_{\theta JA}$	667	$^\circ\text{C/W}$

<sup>1)</sup> Device mounted on FR-4 substrate PC board, 2oz copper, with minimum recommended pad layout.

### Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 10 \mu\text{A}$	$V_{(BR)R}$	40	-	V
Forward Voltage at $I_F = 100$ mA	$V_F$	-	0.6	V
Reverse Current at $V_R = 40$ V	$I_R$	-	5	$\mu\text{A}$
Total Capacitance at $V_R = 0$ , $f = 1$ MHz	$C_{tot}$	-	25	pF



Electrical Characteristics Curves

Fig 1. Reverse Characteristics Curve

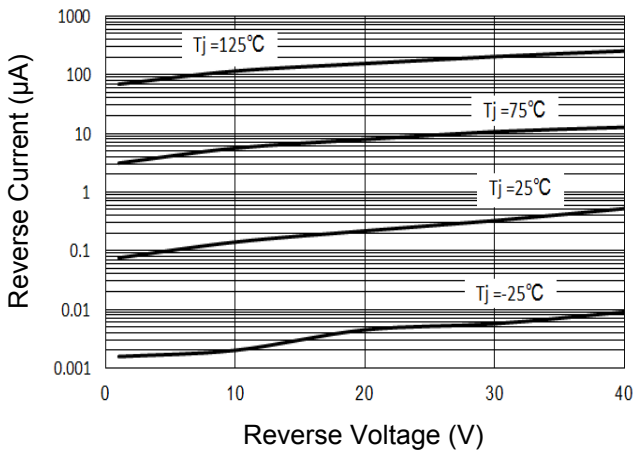


Fig 2. Forward Characteristics Curve

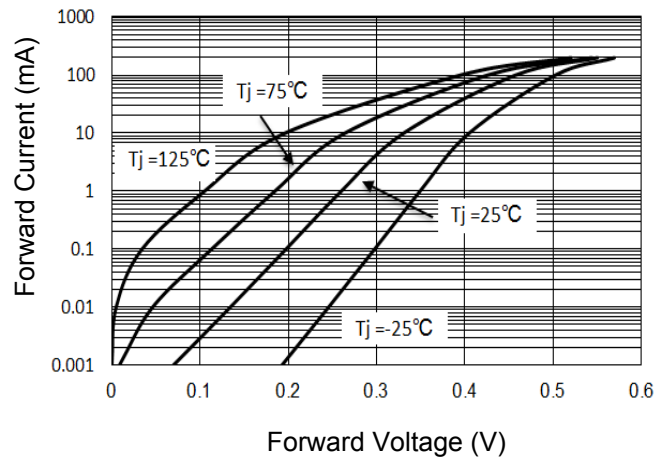


Fig 3. Junction Capacitance

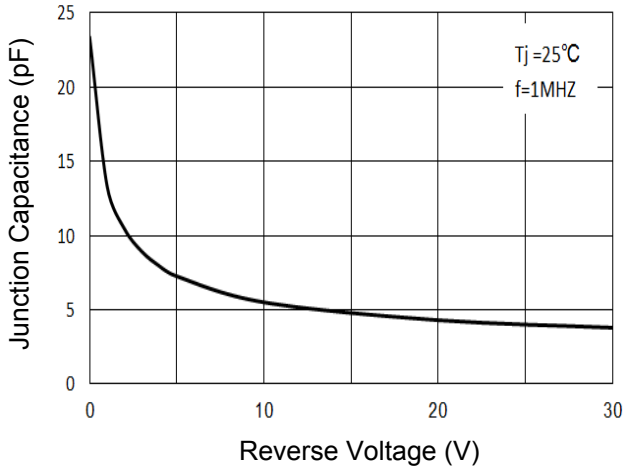
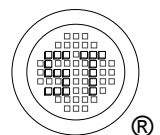
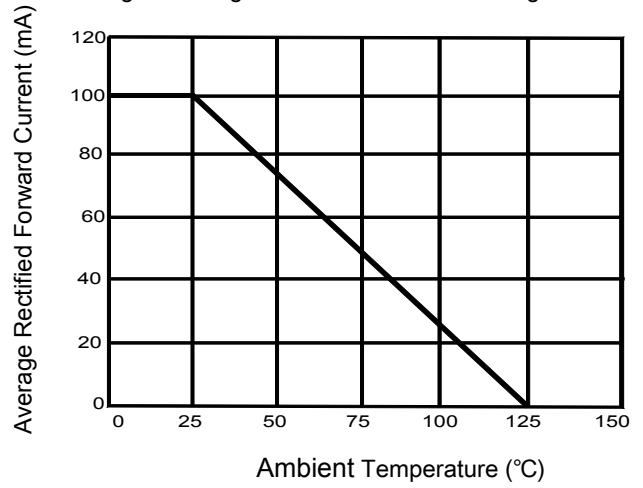


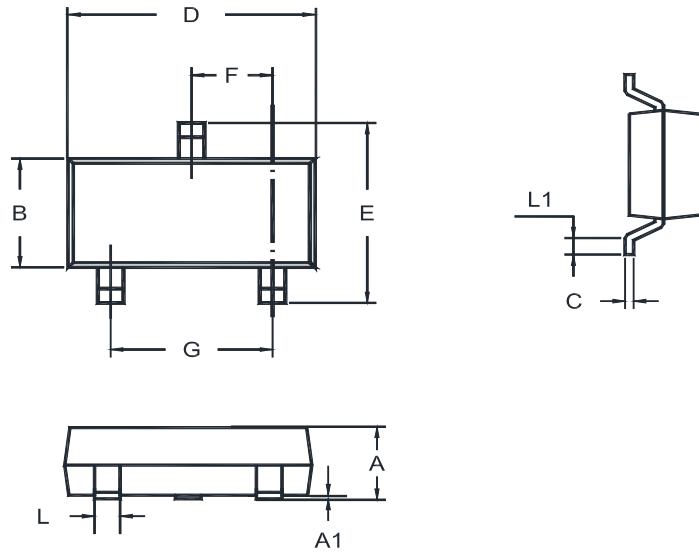
Fig 4. Average Rectified Current Derating Curve



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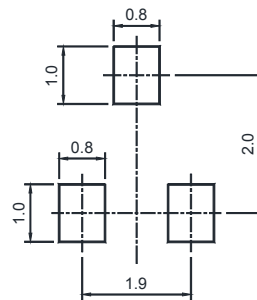
## Package Outline (Dimensions in mm)

SOT-23



Unit	A	A1	B	C	D	E	F	G	L	L1
mm	1.20	0.100	1.40	0.19	3.04	2.6	1.02	2.04	0.51	0.2
	0.89	0.013	1.20	0.08	2.80	2.2	0.89	1.78	0.37	MIN

## Recommended Soldering Footprint

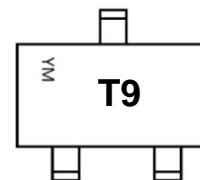


## Packing information

Package	Tape Width (mm)	Pitch		Reel Size		Per Reel Packing Quantity
		mm	inch	mm	inch	
SOT-23	8	4 ± 0.1	0.157 ± 0.004	178	7	3,000

## Marking information

- " T9 " = Part No.
  - " YM " = Date Code Marking
  - " Y " = Year
  - " M " = Month
- Font type: Arial



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