

## 95SQ015 SCHOTTKY RECTIFIER



DO-201AD

### Features

- 125°C  $T_J$  operation ( $V_R < 5V$ )
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- Optimized for OR-ing applications
- Ultra low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Circuit Diagram



### Applications

- Parallel switching power supply
- Converters
- Redundant power subsystems
- Reverse battery protection

### Maximum Ratings( $T_c = 25^\circ\text{C}$ unless otherwise specified)

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	$V_{RRM}$		15(DC)	
Working Peak Reverse Voltage	$V_{RWM}$		25(Working)	V
DC Blocking Voltage	$V_R$	-		
Average Rectified Forward Current	$I_F (\text{AV})$	50% duty cycle @ $T_c = 55^\circ\text{C}$ , rectangular wave form	9	A
Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3 ms, half Sine pulse	480	A
Non-Repetitive Avalanche Energy	$E_{AS}$	$T_J=25^\circ\text{C}, I_{AS}=1.8\text{A}, L=7.4\text{mH}$	12	mJ
Repetitive Avalanche Current	$I_{AR}$	Current decaying linearly to zero in 1 $\mu\text{sec}$ Frequency limited by $T_J$ max. $V_A=1.5 \times V_R$ typical	1.8	A

### Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	$V_{F1}$	@ 9A, Pulse, $T_J = 25^\circ\text{C}$	0.32	0.34	V
	$V_{F2}$	@ 18A, Pulse, $T_J = 25^\circ\text{C}$	0.36	0.37	
Reverse Current*	$I_{R1}$	@ $V_R$ = rated VR, $T_J = 25^\circ\text{C}$	2.5	7.0	mA
	$I_{R2}$	@ $V_R$ = rated VR, $T_J = 100^\circ\text{C}$	119	348	
	$I_{R3}$	@ $V_R = 12\text{ V}$ , $T_J = 100^\circ\text{C}$	130	310	
	$I_{R4}$	@ $V_R = 5\text{ V}$ , $T_J = 100^\circ\text{C}$	80	190	
Junction Capacitance	$C_T$	@ $V_R = 5\text{ V}$ , $T_c = 25^\circ\text{C}$ , $f_{SIG} = 1\text{MHz}$	940	1300	pF
Voltage Rate of Change	$dv/dt$	-	-	10,000	V/us

\* Pulse width < 300  $\mu\text{s}$ , duty cycle < 2%

## Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	$T_J$	-	-55 to +125	°C
Storage Temperature	$T_{stg}$	-	-55 to +150	°C
Typical Thermal Resistance Junction to Lead	$R_{0JL}$	DC operation	8	°C/W
Typical Thermal Resistance Junction to Ambient	$R_{0JA}$	DC operation	44	°C/W
Approximate Weight	wt	-	1.02	g

## Ratings and Characteristics Curves

Figure 1 Typical Forward Characteristics

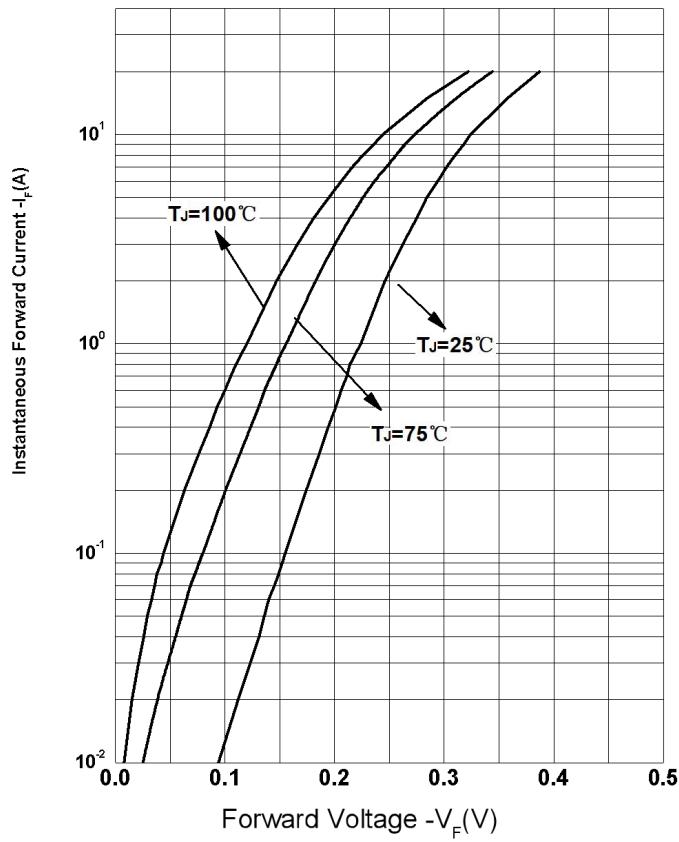


Figure 2 Typical Reverse Characteristics

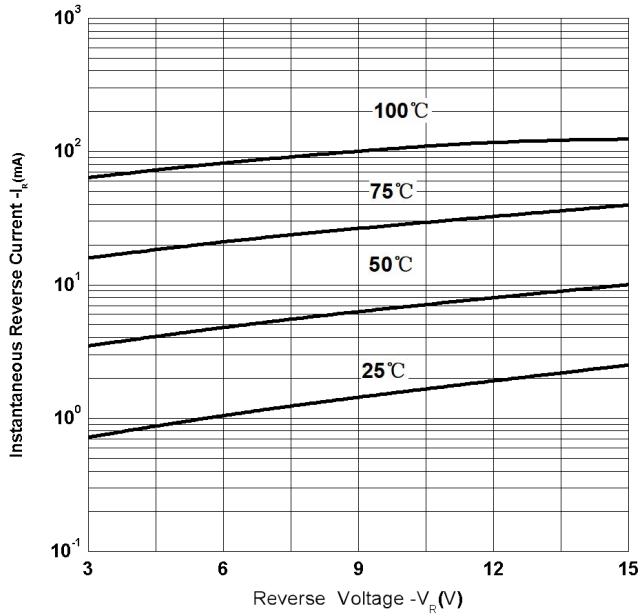
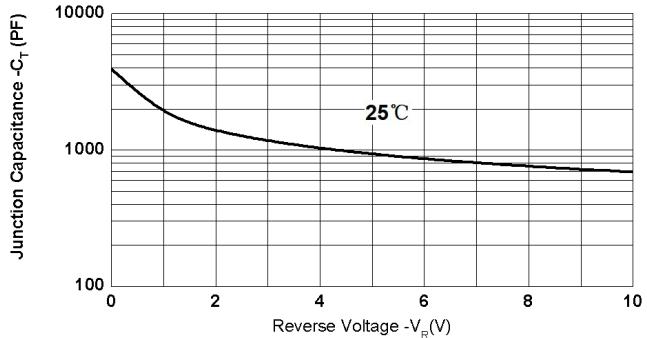
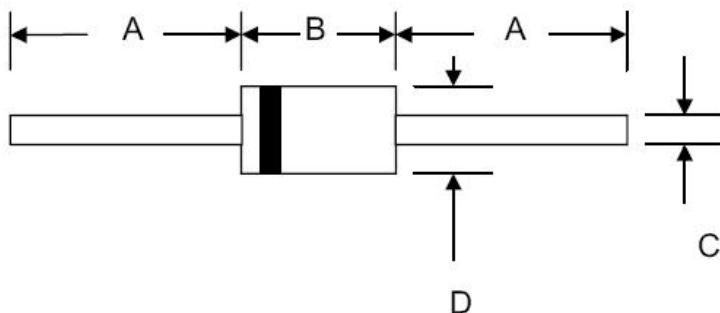


Figure 3 Typical Junction Capacitance



## Mechanical Dimensions DO-201AD



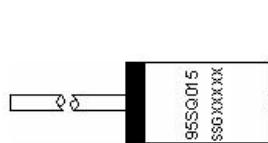
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	8.50	9.50	0.335	0.374
C	1.2	1.3	0.048	0.052
D	5.0	5.6	0.197	0.220

## Ordering Information

Device	Package	Shipping
95SQ015	DO-201AD (Pb-Free)	1250pcs / tape

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

## Marking Diagram

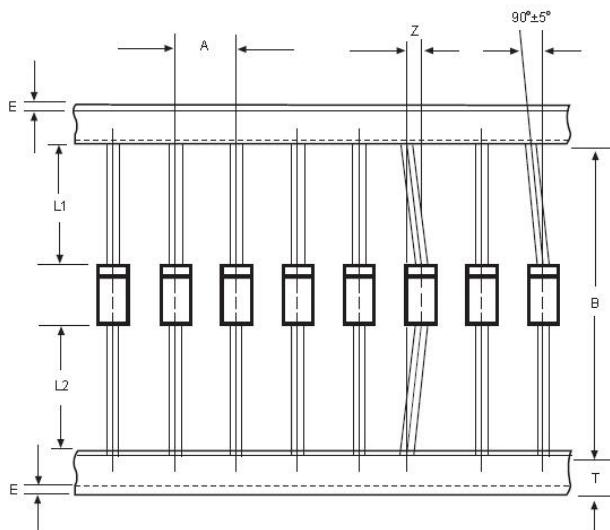


Where XXXXX is YYWWL

95SQ015 = Part Name  
 SSG = SSG  
 YY = Year  
 WW = Week  
 L = Lot Number

Cautions: Molding resin  
Epoxy resin UL:94V-0

## Carrier Tape Specification DO-201AD



SYMBOL	Millimeters	
	Min.	Max.
A	9.50	10.50
B	50.9	53.9
Z	-	1.20
T	5.60	6.40
E	-	0.80
IL1-L2I	-	1.0

**Technical Data  
Data Sheet N0181, Rev.A**

**RoHS**



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