



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

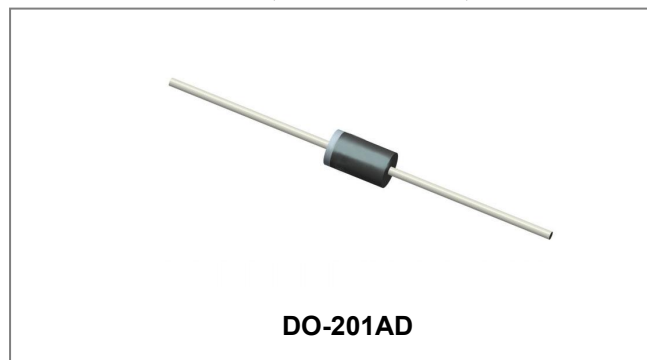
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## 90SQ035/90SQ040/90SQ045 SCHOTTKY RECTIFIER



### Features

- 150°C T<sub>J</sub> operation
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- 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

- Switching power supply
- Converters
- Free-Wheeling diodes
- Reverse battery protection

### Maximum Ratings:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	-	35(90SQ035) 40(90SQ040) 45(90SQ045)	V
Average Rectified Forward Current	I <sub>F(AV)</sub>	50% duty cycle @T <sub>C</sub> = 69°C, rectangular wave form	9	A
Peak One Cycle Non-Repetitive Surge Current	I <sub>FSM</sub>	8.3 ms, half Sine pulse	400	A
Non-Repetitive Avalanche Energy	E <sub>AS</sub>	T <sub>J</sub> =25°C, I <sub>AS</sub> =1.8A, L=7.4mH	12	mJ
Repetitive Avalanche Current	I <sub>AR</sub>	Current decaying linearly to zero in 1 µsec Frequency limited by T <sub>J</sub> max. V <sub>A</sub> =1.5×V <sub>R</sub> typical	1.8	A

### Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V <sub>F1</sub>	@ 9A, Pulse, T <sub>J</sub> = 25 °C @ 18A, Pulse, T <sub>J</sub> = 25 °C	0.46 0.55	0.48 0.57	V
	V <sub>F2</sub>	@ 9A, Pulse, T <sub>J</sub> = 125 °C @ 18A, Pulse, T <sub>J</sub> = 125 °C	0.40 0.50	0.42 0.52	V
Reverse Current*	I <sub>R1</sub>	@V <sub>R</sub> = rated VR T <sub>J</sub> = 25 °C	0.06	2	mA
	I <sub>R2</sub>	@V <sub>R</sub> = rated VR T <sub>J</sub> = 125 °C	35	70	mA
Junction Capacitance	C <sub>T</sub>	@V <sub>R</sub> = 5V, T <sub>C</sub> = 25 °C, f <sub>SIG</sub> = 1MHz	650	900	pF
Voltage Rate of Change	dv/dt	-	-	10,000	V/us

\* Pulse width < 300 µs, duty cycle < 2%

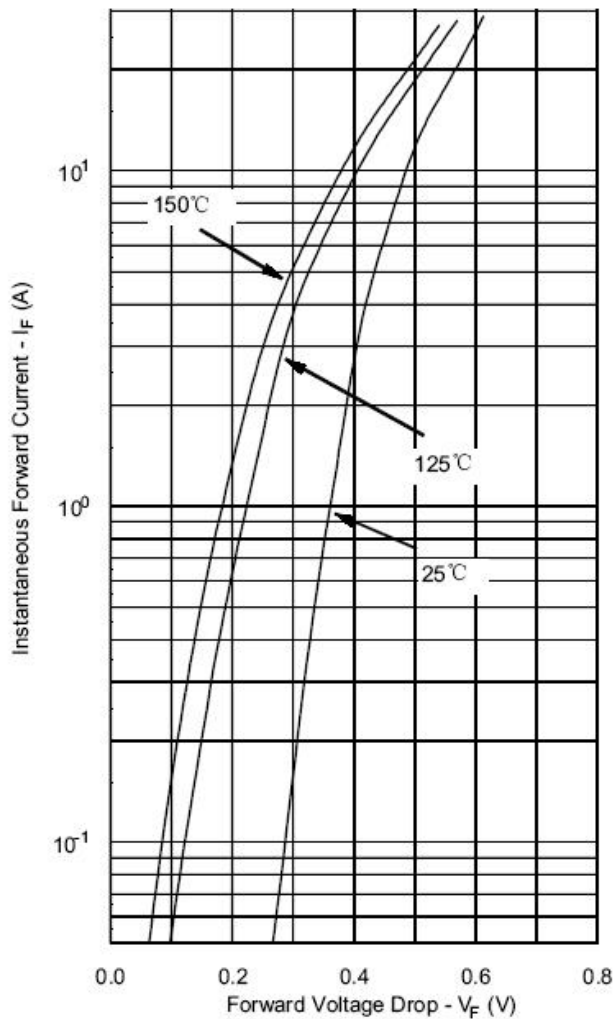


**Thermal-Mechanical Specifications:**

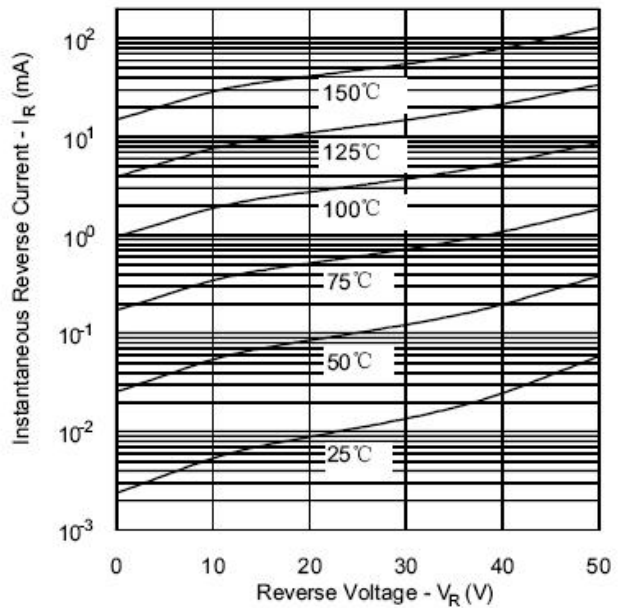
Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	$T_J$	-	-55 to +150	°C
Storage Temperature	$T_{stg}$	-	-55 to +150	°C
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	DC operation	8	°C/W
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	DC operation	44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

**Ratings and Characteristics Curves**

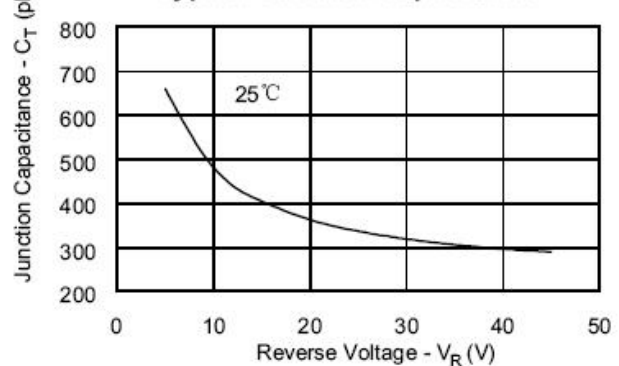
**Typical Forward Characteristics**



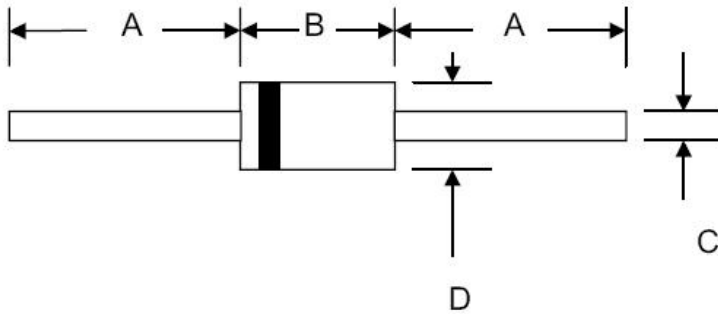
**Typical Reverse Characteristics**



**Typical Junction Capacitance**



## Mechanical Dimensions DO-201AD



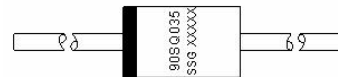
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	8.50	9.50	0.335	0.374
C	1.2	1.3	0.048	0.052
D	5.0	5.6	0.197	0.220

## Ordering Information

Device	Package	Shipping
90SQ SERIES	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

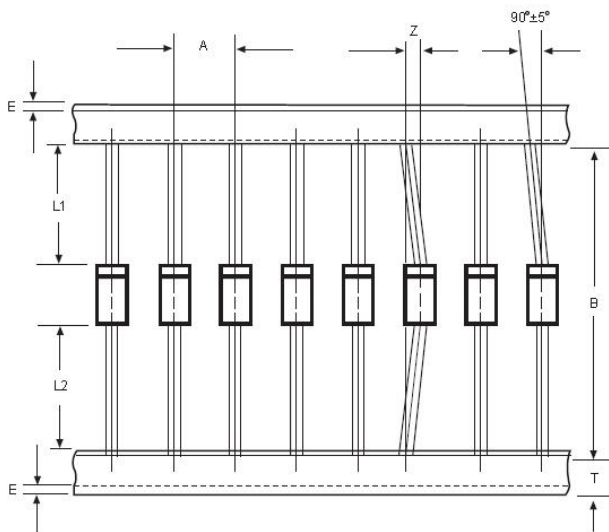


Where XXXXX is YYWWL

90SQ035 = 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 N1455, Rev.A**



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