

95SQ015 SCHOTTKY RECTIFIER



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:

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	-	15(DC) 25(Working)	V
Average Rectified Forward Current	I _{F(AV)}	50% duty cycle @T _C =55°C, rectangular wave form	9	A
Peak One Cycle Non-Repetitive Surge Current	I _{FSM}	8.3 ms, half Sine pulse, T _C =25°C	480	A
Non-Repetitive Avalanche Energy	E _{AS}	T _J =25°C, I _{AS} =1.8A, L=7.4mH	12	mJ
Repetitive Avalanche Current	I _{AR}	Current decaying linearly to zero in 1 μsec Frequency limited by T _J max. V _A =1.5×V _R typical	1.8	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V _{F1}	@ 9A, Pulse, T _J = 25 °C @ 18A, Pulse, T _J = 25 °C	0.31 0.35	0.34 0.37	V
	V _{F2}	@ 9A, Pulse, T _J = 125 °C @ 18A, Pulse, T _J = 125 °C	0.22 0.28	0.25 0.31	V
Reverse Current*	I _{R1}	@V _R = rated VR, T _J = 25 °C	2	7.0	mA
	I _{R2}	@V _R = rated VR, T _J = 100 °C	180	348	mA
	I _{R3}	@V _R = 12 V, T _J = 100 °C	130	310	mA
	I _{R4}	@V _R = 5 V, T _J = 100 °C	80	190	mA
Junction Capacitance	C _T	@V _R = 5V, T _C = 25 °C, f _{SIG} = 1MHz	1100	1300	pF
Voltage Rate of Change	dv/dt	-	-	10,000	V/us

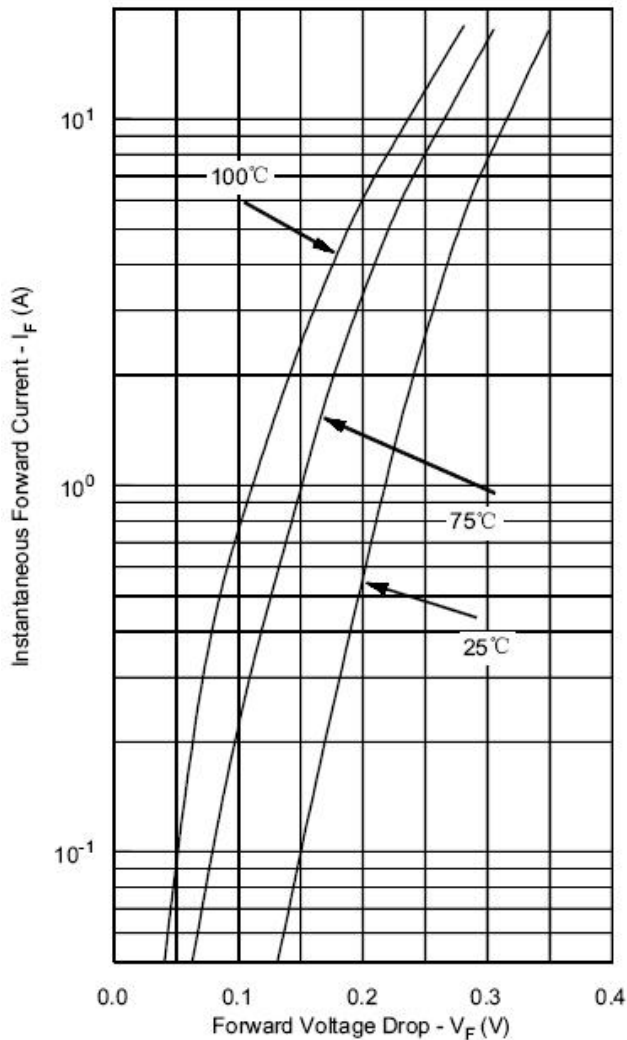
* Pulse width < 300 μs, duty cycle < 2%

Thermal-Mechanical Specifications:

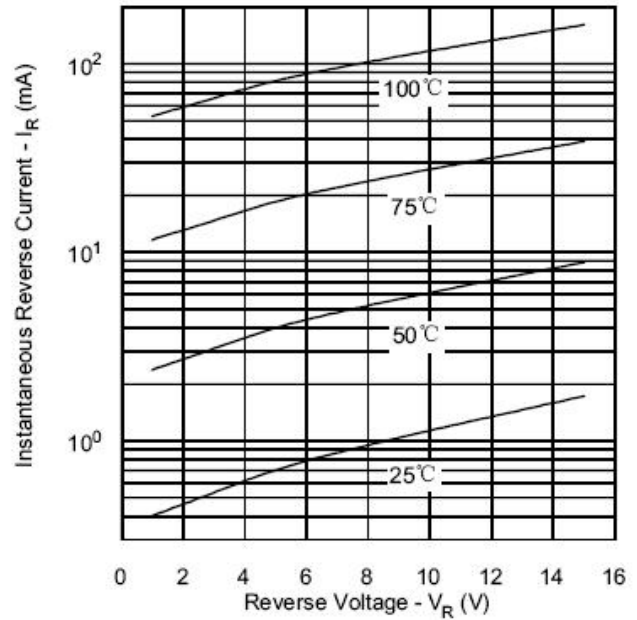
Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +125	°C
Storage Temperature	T_{stg}	-	-55 to +150	°C
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	DC operation	8	°C/W
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	DC operation	44	°C/W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

Ratings and Characteristics Curves

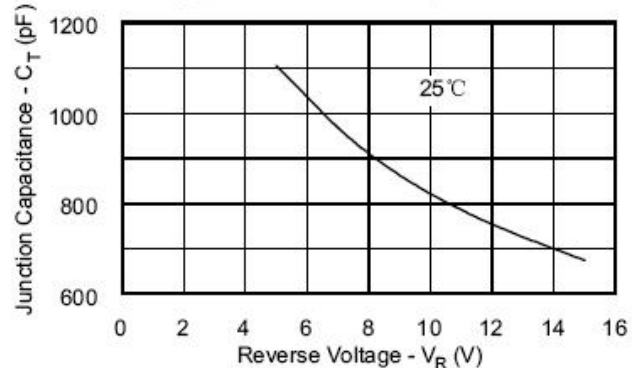
Typical Forward Characteristics



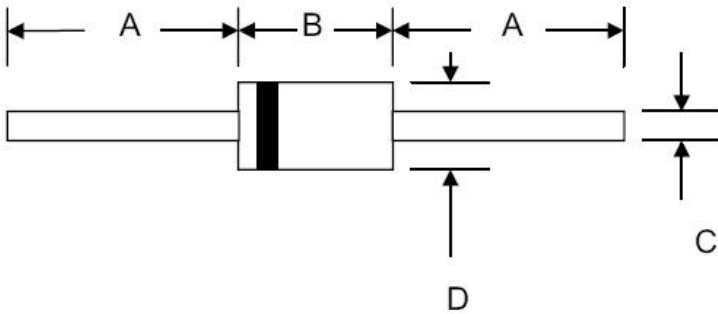
Typical Reverse Characteristics



Typical Junction Capacitance



Mechanical Dimensions DO-201AD



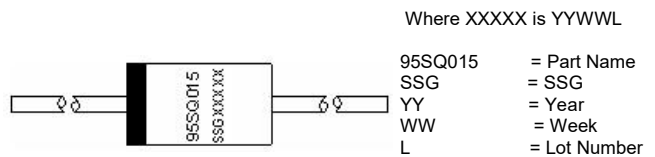
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	8.50	9.50	0.335	0.374
C	1.2	1.3	0.048	0.052
D	5.0	5.6	0.197	0.220

Ordering Information

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

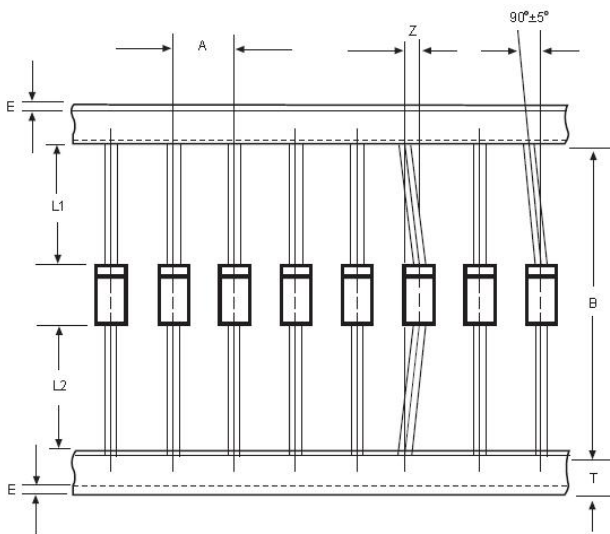
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram



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



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