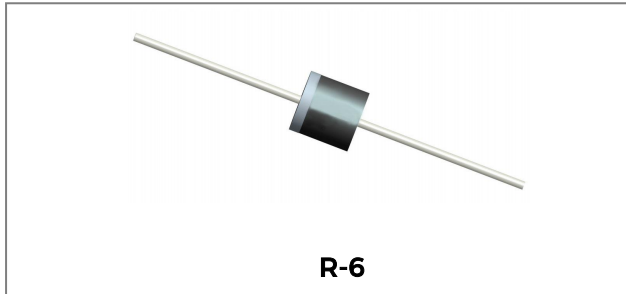


8SQ045 SCHOTTKY BARRIER RECTIFIER



Features

- Super-high speed & low noise switching
- Low voltage drop
- Terminals finish: Tin Lead-free plated
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Mechanical Data

- DC-DC converters
- AC adapter
- High frequency rectification circuit
- Bypass diodes

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

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage	V_{RRM}	-	45	V
Working Peak Reverse Voltage	V_{RWM}			
DC Blocking Voltage	V_R			
Average Rectified Forward Current	$I_{F(AV)}$	$T_L = 116^\circ\text{C}$, In DC	8	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	8.3 ms, half Sine pulse	200	A

Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V_{F1}	@ 8 A, Pulse, $T_j = 25^\circ\text{C}$	0.50	0.53	V
	V_{F2}	@ 8 A, Pulse, $T_j = 125^\circ\text{C}$	-	0.44	V
Reverse Current*	I_{R1}	@ $V_R = \text{rated } V_R, T_j = 25^\circ\text{C}$	0.03	1.0	mA
	I_{R2}	@ $V_R = \text{rated } V_R, T_j = 125^\circ\text{C}$	15	60.0	mA
Junction Capacitance	C_T	@ $V_R = 5\text{V}, T_c = 25^\circ\text{C}$ $f_{SIC} = 1\text{MHz}$	500	900	pF

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

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	T_J	-	-55 to +150	$^{\circ}\text{C}$
Storage Temperature	T_{stg}	-	-55 to +150	$^{\circ}\text{C}$
Typical Thermal Resistance, Case to Heat Sink	$R_{\theta JA}$	-	18	$^{\circ}\text{C}/\text{W}$
Typical Thermal Resistance, Junction to lead	$R_{\theta JL}$	-	8	$^{\circ}\text{C}/\text{W}$
Approximate Weight	wt	-	2.24	g
Case Style	R-6			

Ratings and Characteristics Curves

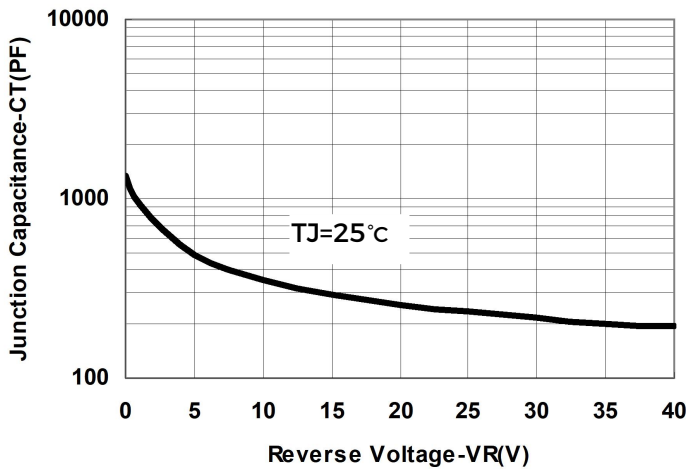


Fig.1-Typical Junction Capacitance

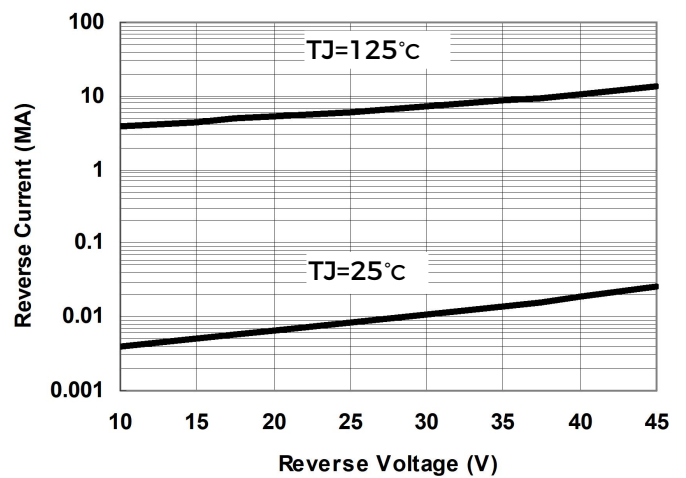


Fig.2-Typical Values Of Reverse Current

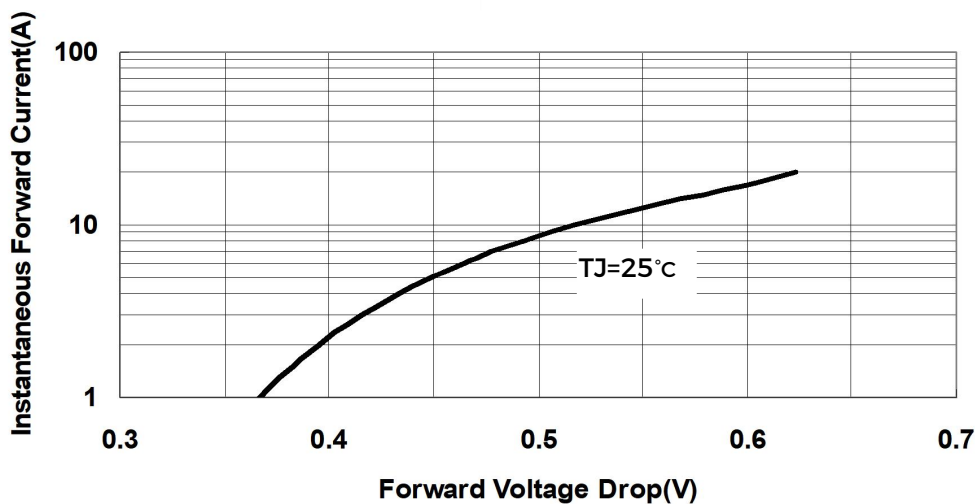
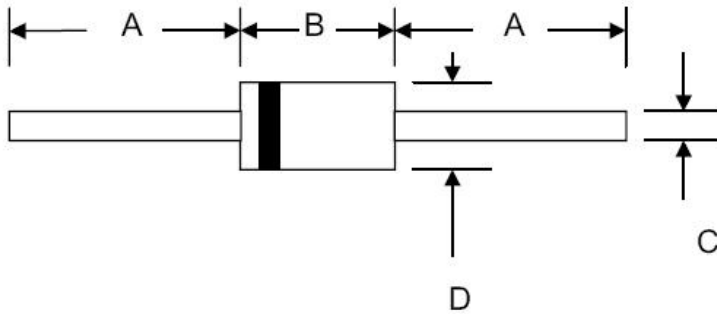


Fig.3-Typical Instantaneous Forward Voltage Characteristics

Mechanical Dimensions R-6



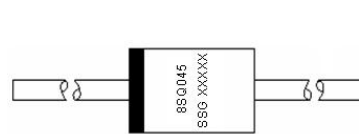
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	8.60	9.10	0.340	0.360
C	1.2	1.3	0.048	0.052
D	8.60	9.10	0.340	0.360

Ordering Information

Device	Package	Shipping
8SQ045	R-6(Pb-Free)	500pcs / reel

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

Marking Diagram

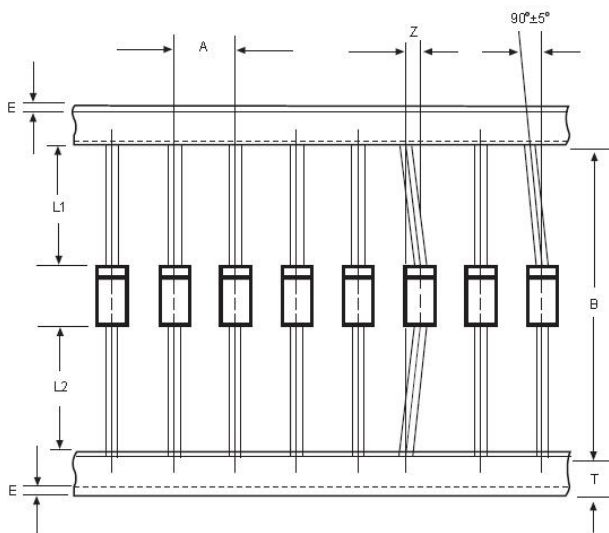


Where XXXXX is YYWWL

- 8 = Forward Current (8A)
- S = Package Type
- Q = Device Type
- 045 = Reverse Voltage (45V)
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

Cautions: Molding resin
Epoxy resin UL94V-0

Carrier Tape Specification R-6



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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