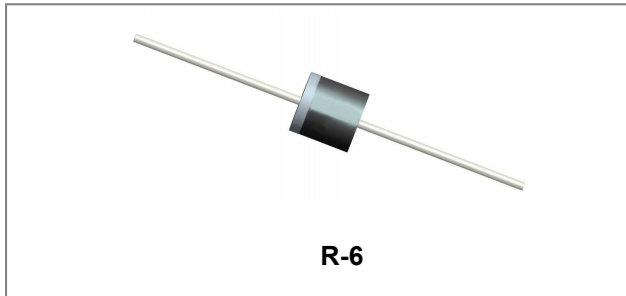


15SQ SERIES SCHOTTKY BARRIER RECTIFIER



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:

Characteristics	Symbol	Conditions	Value	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	-	15SQ030	30
			15SQ045	45
			15SQ050	50
			15SQ060	60
			15SQ100	100
Average Rectified Forward Current	$I_{F(AV)}$	R- load, $T_a=50^\circ\text{C}$	15	A
Surge(Non-repetitive) Forward Current	I_{FSM}	8.3ms single half sine-wave	15SQ030	300
			15SQ045	
			15SQ050	
			15SQ060	
			15SQ100	340

Electrical Characteristics:

Characteristics	Symbol	Conditions	Typ.	Max.	Units
Peak Forward Voltage*	V_{FM}	$I_{FM}=15.0\text{A}, T_a=25^\circ\text{C}$	15SQ030	0.52	0.55
			15SQ045	0.52	0.55
			15SQ050	0.58	0.68
			15SQ060	0.58	0.68
			15SQ100	0.78	0.83
Peak Reverse Current*	I_{RRM1}	$V_{RM}=V_{RRM}$	-	-	$T_a=25^\circ\text{C}$
	I_{RRM2}				$T_a=100^\circ\text{C}$
Thermal Resistance	$R_{\theta J-C}$	Between junction and case	-	3.0	$^\circ\text{C/W}$
	$R_{\theta J-L}$	Between junction and lead	-	2.0	

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

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - sales@smc-diodes.com •

Thermal-Mechanical Specifications:

Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature at reduced reverse voltage at reduced reverse voltage in DC forward mode	T_J	$V_R \leq 80\%V_{RRM}$ $V_R \leq 50\%V_{RRM}$	-55 to +150 -55 to +180 -55 to +200	$^{\circ}\text{C}$
Max. Storage Temperature	T_{stg}	-	-55 to +150	$^{\circ}\text{C}$
Approximate Weight	wt	-	2.24	g

Ratings and Characteristics Curves

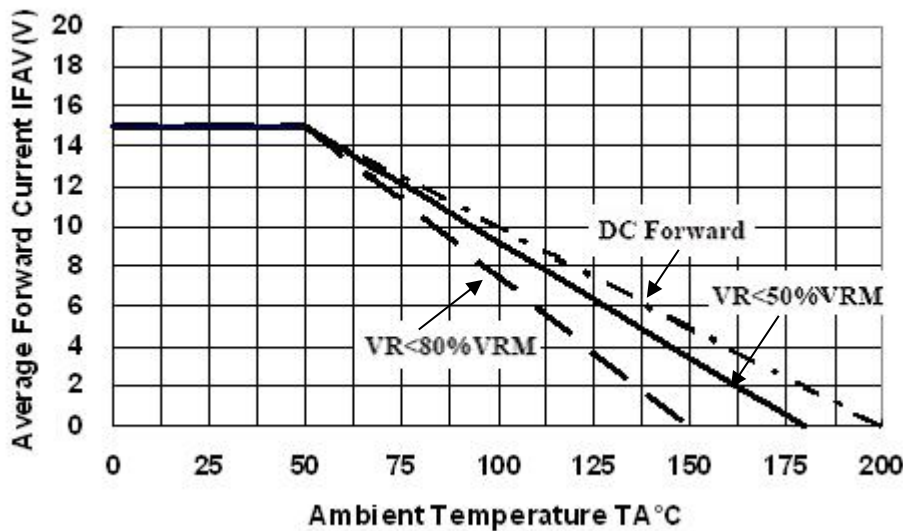


Fig.1 Current Derating

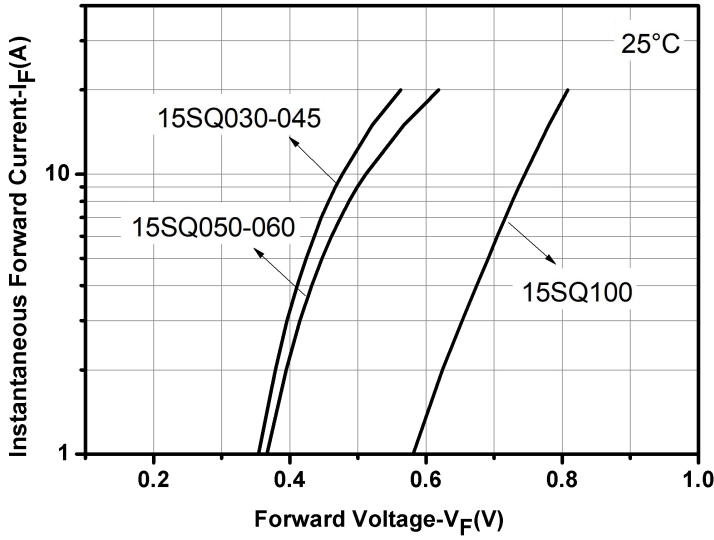


Fig.2 Typical Forward Characteristics

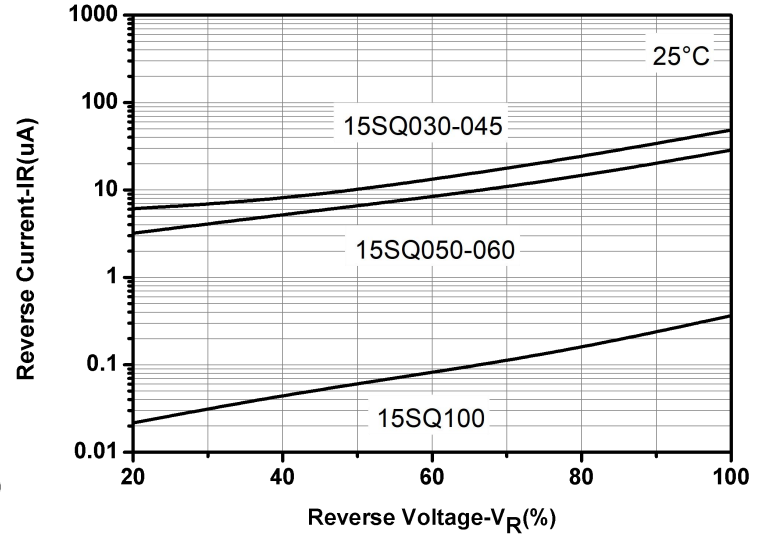


Fig.3 Typical Reverse Characteristics

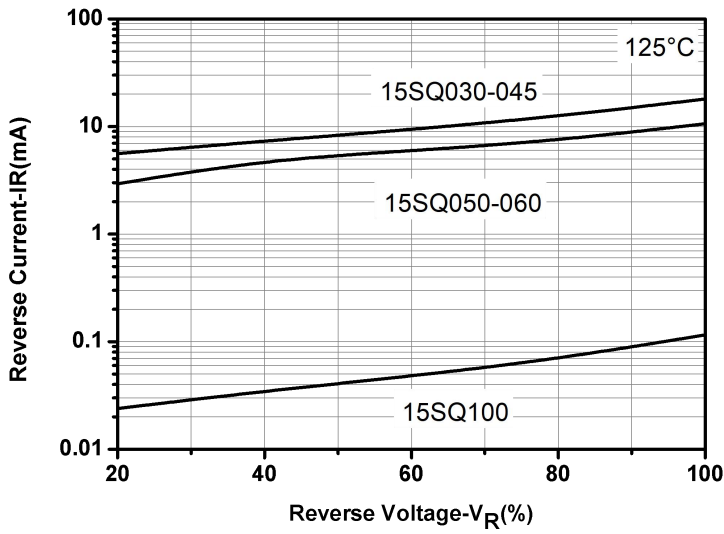


Fig.4 Typical Reverse Characteristics

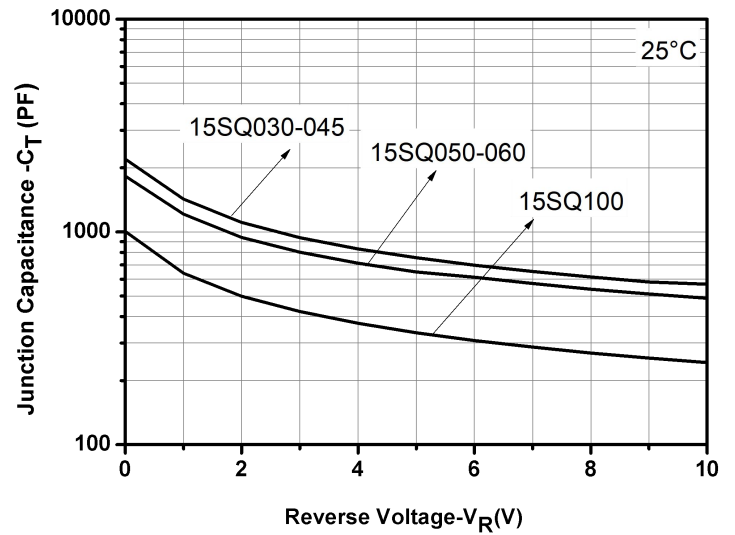
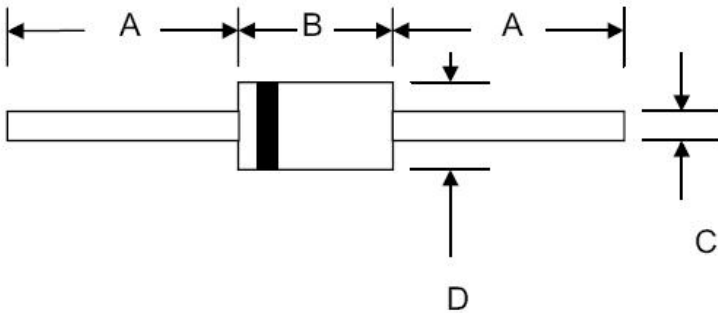


Fig.5 Typical Junction Capacitance

Mechanical Dimensions R-6



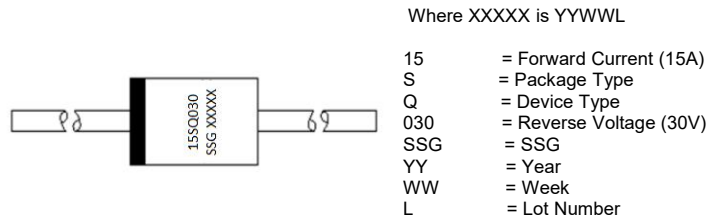
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	8.60	9.10	0.340	0.360
C	1.2	1.3	0.048	0.052
D	8.60	9.10	0.340	0.360

Ordering Information

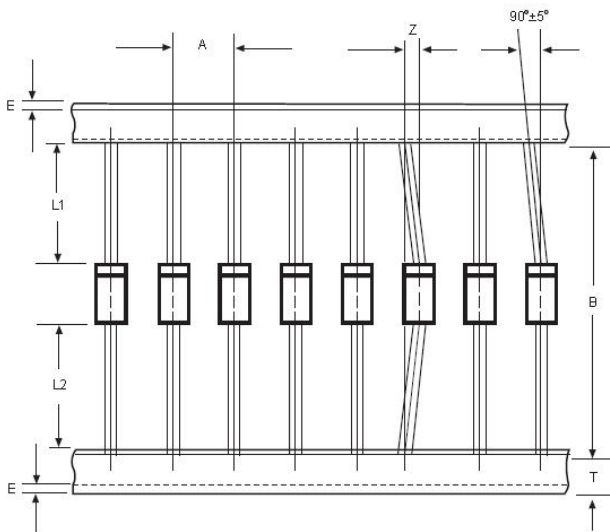
Device	Package	Shipping
15SQ030	R-6 (Pb-Free)	500pcs / reel
15SQ045		
15SQ050		
15SQ060		
15SQ100		

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

Marking Diagram



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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