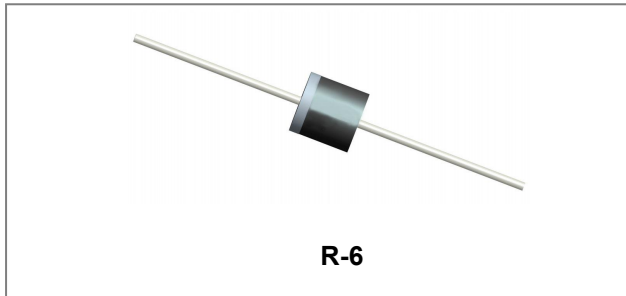


## 15SQ SERIES SCHOTTKY BARRIER RECTIFIER



### Features

- Super-high speed & low noise switching
- Low voltage drop
- 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	0.48	0.55
			15SQ045	0.48	0.55
			15SQ050	0.58	0.68
			15SQ060	0.58	0.68
			15SQ100	0.78	0.83
Peak Reverse Current*	$I_{RRM1}$	$V_{RM}=V_{RRM}$	-	-	0.5
	$I_{RRM2}$				25
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	

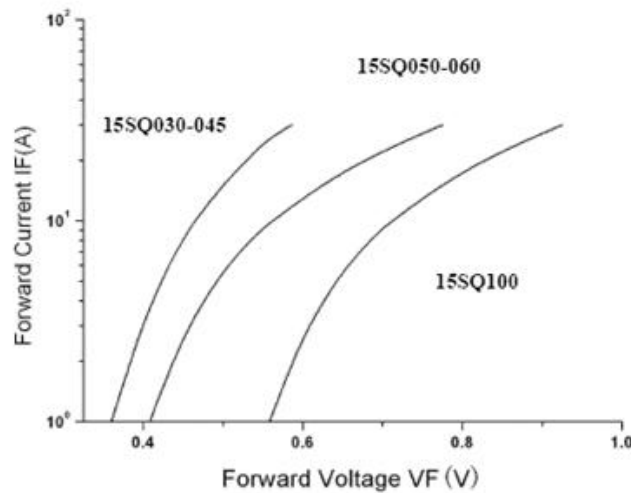
\* Pulse width < 300  $\mu\text{s}$ , duty cycle < 2%

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

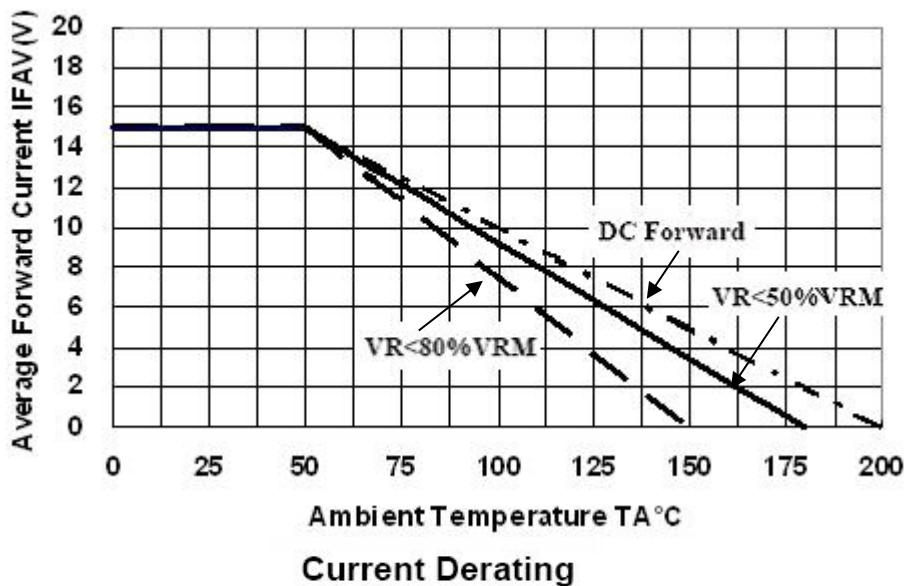
**Thermal-Mechanical Specifications:**

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	$^{\circ}C$
Max. Storage Temperature	$T_{stg}$	-	-55 to +150	$^{\circ}C$
Approximate Weight	wt	-	2.24	g

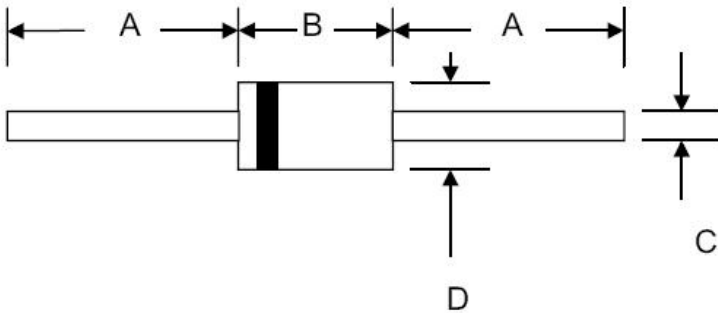
**Ratings and Characteristics Curves**



**Typical Forward Characteristics**



**Mechanical Dimensions R-6**



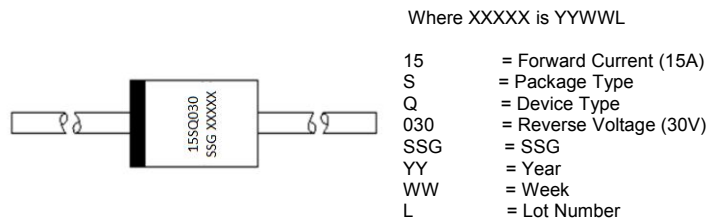
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	8.60	9.10	0.340	0.360
C	1.2	1.3	0.048	0.052
D	8.60	9.10	0.340	0.360

**Ordering Information**

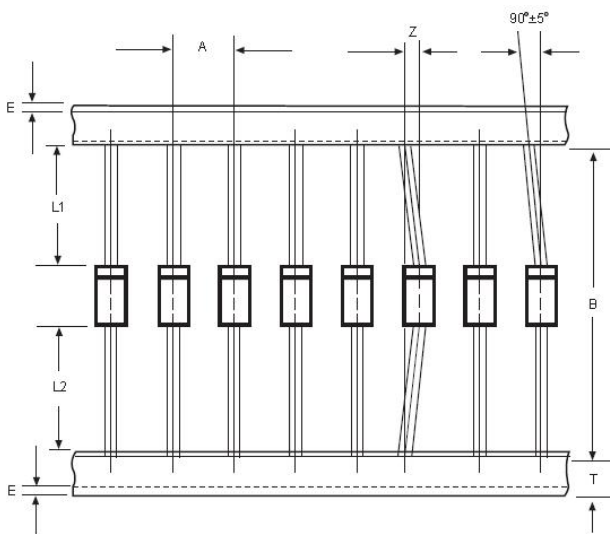
Device	Package	Shipping
15SQ030 15SQ045 15SQ050 15SQ060 15SQ100	R-6 (Pb-Free)	500pcs / reel

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

**Marking Diagram**



**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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