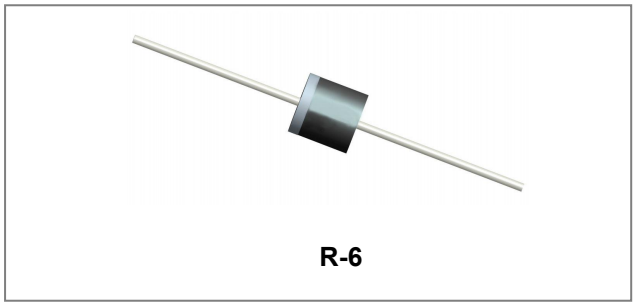
Technical Data
Data Sheet N0129, Rev. C

15SQ SERIES
SCHOTTKY BARRIER RECTIFIER



R-6

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	V
			15SQ045	45	
			15SQ050	50	
			15SQ060	60	
			15SQ100	100	
Average Rectified Forward Current	$I_{F(AV)}$	R- load, Ta=50℃	15		A
Surge(Non-repetitive) Forward Current	I_{FSM}	8.3ms single half sine-wave	15SQ030	300	A
			15SQ045		
			15SQ050		
			15SQ060		
			15SQ100	340	

Electrical Characteristics:

Characteristics	Symbol	Conditions			Typ.	Max.	Units
Peak Forward Voltage*	V_{FM}	I_{FM}=15.0A,Ta=25℃		15SQ030	0.52	0.55	V
				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}	Ta=25℃	-	0.05	0.5	mA
	I_{RRM2}		Ta=100℃	-	-	25	
Thermal Resistance	$R_{\theta J-c}$	Between junction and case		-	3.0	-	℃/W
	$R_{\theta J-L}$	Between junction and lead		-	2.0	-	

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

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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	 $V_R \leqslant 80\%V_{RRM}$ $V_R \leqslant 50\%V_{RRM}$	 -55 to +150 -55 to +180 -55 to +200	°C
Max. Storage Temperature	T_{stg}	-	-55 to +150	°C
Approximate Weight	wt	-	2.24	g

Ratings and Characteristics Curves

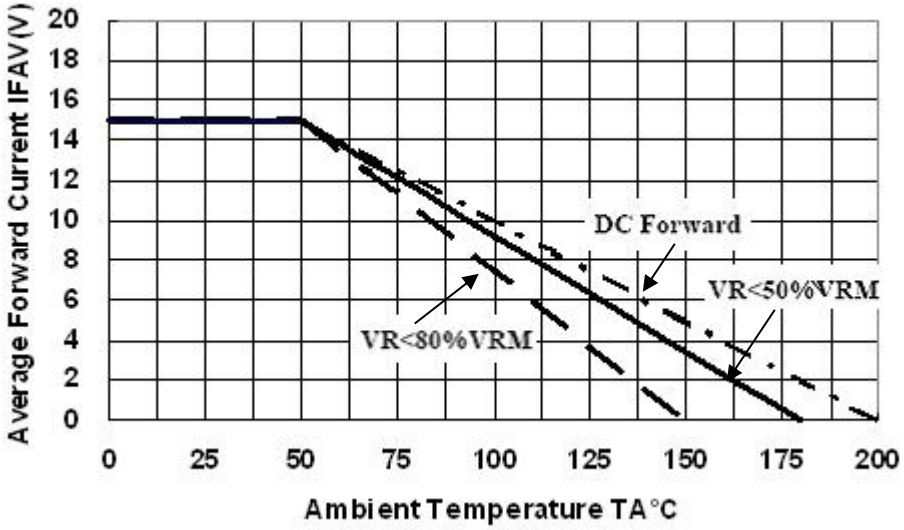

Fig.1 Current Derating

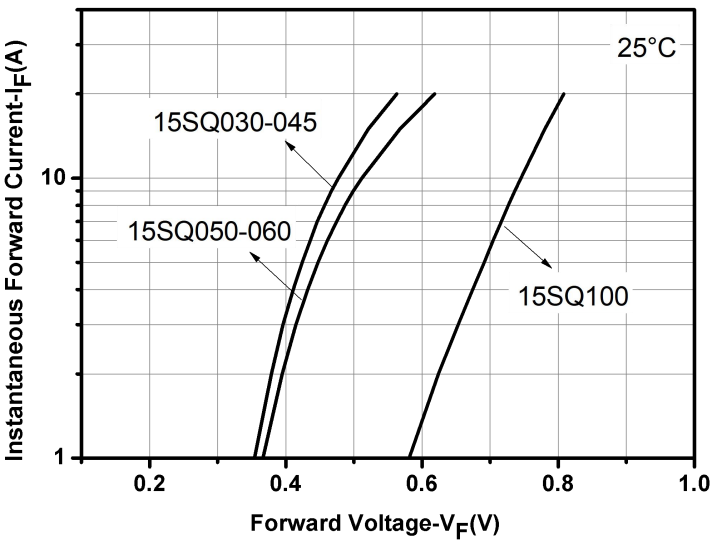

Fig.2 Typical Forward Characteristics

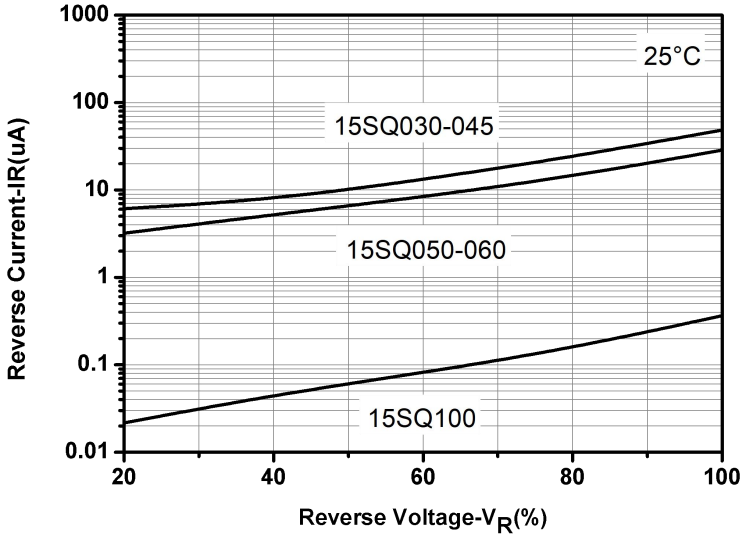

Fig.3 Typical Reverse Characteristics

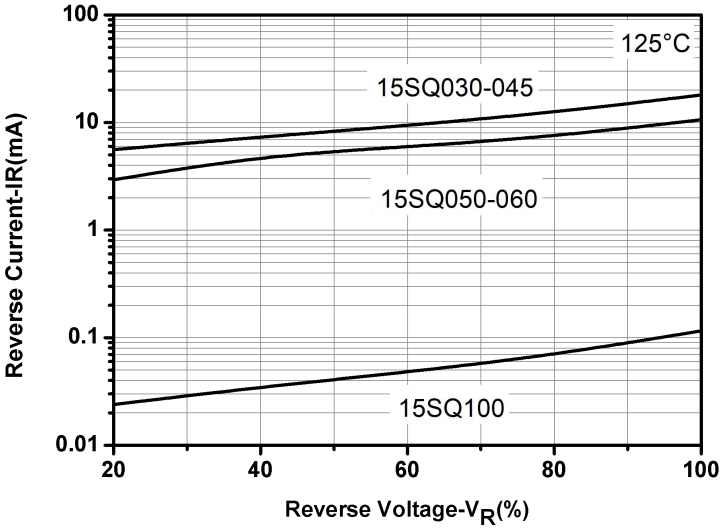

Fig.4 Typical Reverse Characteristics

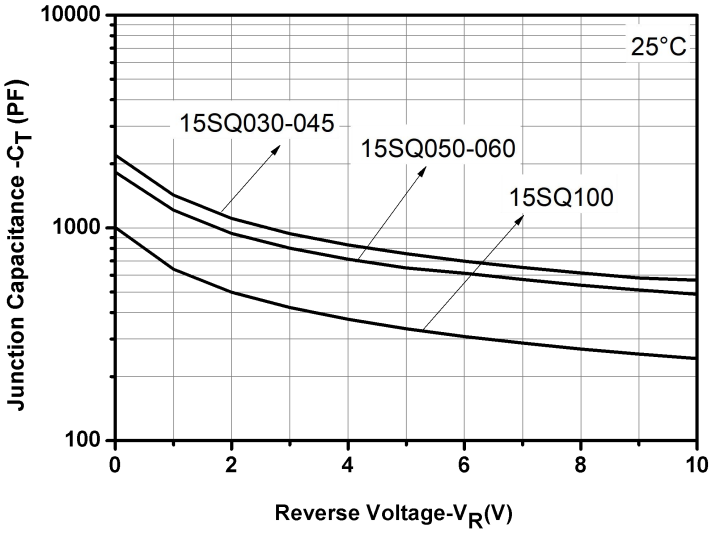

Fig.5 Typical Junction Capacitance

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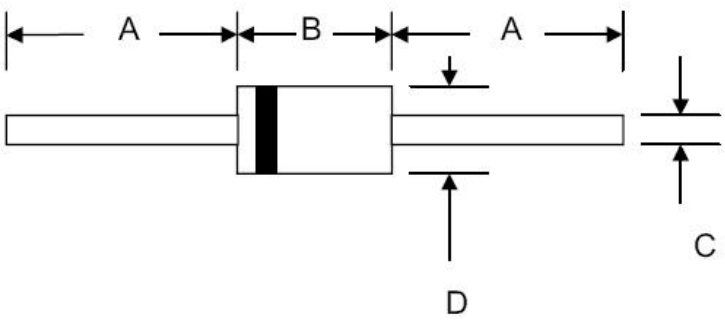
Mechanical Dimensions R-6



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

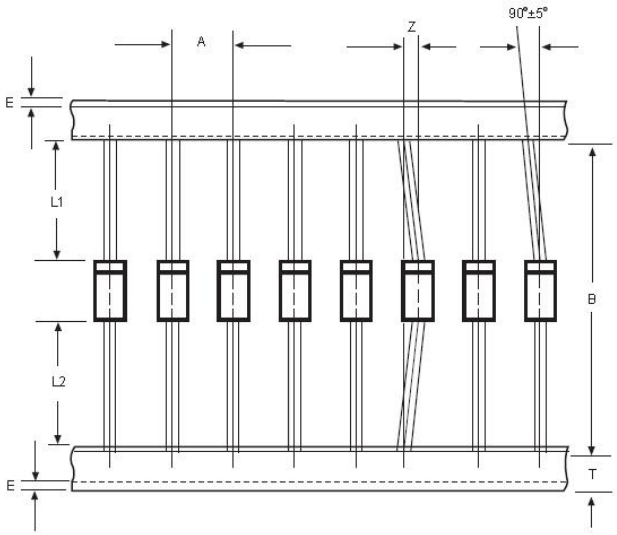
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram

Where XXXXX is YYWWL

15	= Forward Current (15A)
S	= Package Type
Q	= Device Type
030	= Reverse Voltage (30V)
SSG	= SSG
YY	= Year
WW	= Week
L	= Lot Number

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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