



## 30BQ100 SCHOTTKY RECTIFIER

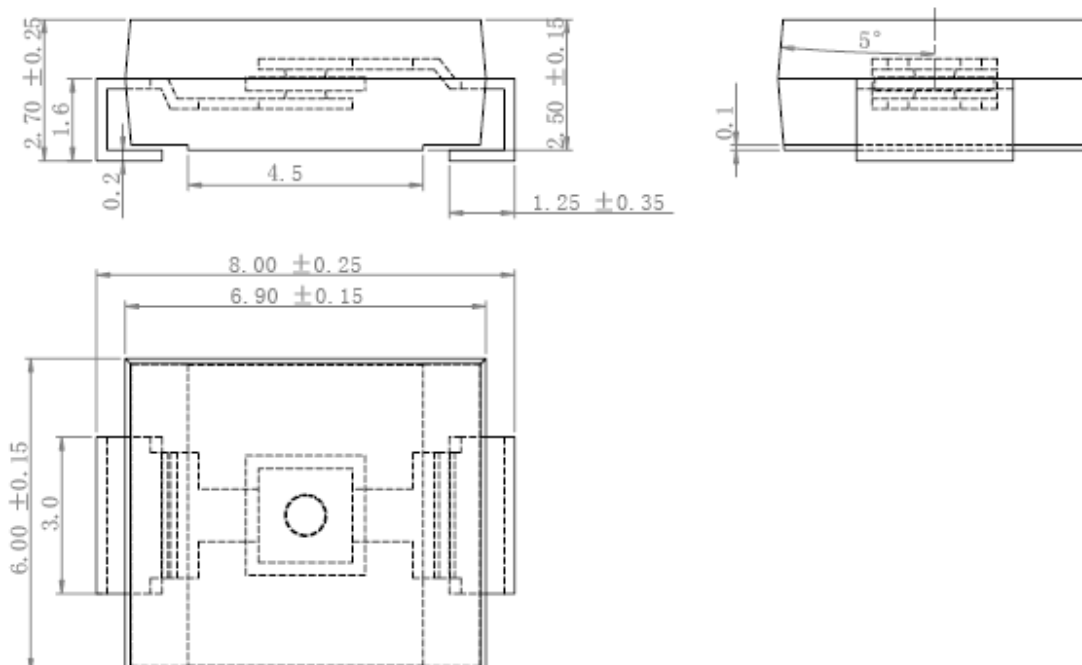
### Applications:

- Disk Drives
- Switching power supply
- Redundant power subsystems
- Converters
- Free-Wheeling diodes
- Reverse battery protection
- Battery Charging

### Features:

- Small foot print, surface mountable
- 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

### Mechanical Dimensions (In mm / Inches):



**SMC**

Technical Data  
Data Sheet N0676, Rev. -

*Green Products*

**Marking Diagram:**



Where XXXXX is YYWWL

SC3J = Part Name  
YY = Year  
WW = Week  
L = Lot Number

**Cautions:** Molding resin  
Epoxy resin UL:94V-0

**Ordering Information:**

Device	Package	Shipping
30BQ100	SMC (Pb-Free)	3000pcs / reel

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.

**Maximum Ratings:**

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	$V_{RWM}$	-	100	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C=148^{\circ}C$ , rectangular wave form	3.0	A
Max. Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3 ms, half Sine pulse	120	A



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**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop*	$V_{F1}$	@ 3 A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.79	V
		@ 6 A, Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.90	
	$V_{F2}$	@ 3 A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.62	V
		@ 6 A, Pulse, $T_J = 125\text{ }^\circ\text{C}$	0.70	
Max. Reverse Current *	$I_{R1}$	@ $V_R = \text{Rated } V_R$ , Pulse, $T_J = 25\text{ }^\circ\text{C}$	0.5	mA
	$I_{R2}$	@ $V_R = \text{Rated } V_R$ , Pulse, $T_J = 125\text{ }^\circ\text{C}$	5	mA
Max. Junction Capacitance	$C_T$	@ $V_R = 5\text{V}$ , $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$	115	PF
Typical Series Inductance	$L_S$	Measured lead to lead 5 mm from package body	3.0	nH
Max. Voltage Rate of Change	dv/dt	-	10,000	V/ $\mu\text{s}$

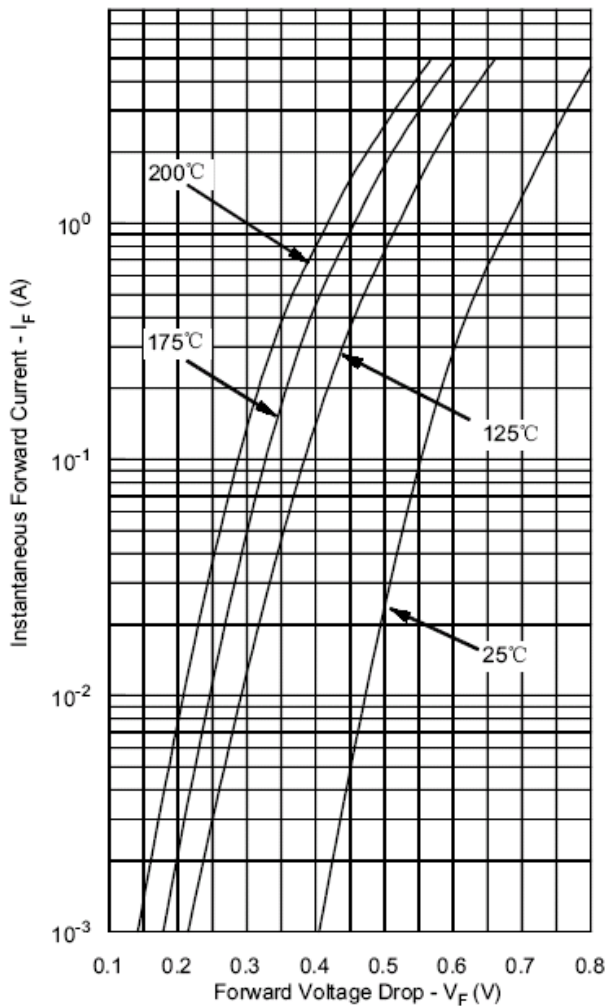
\* Pulse Width < 300 $\mu\text{s}$ , Duty Cycle < 2%

**Thermal-Mechanical Specifications:**

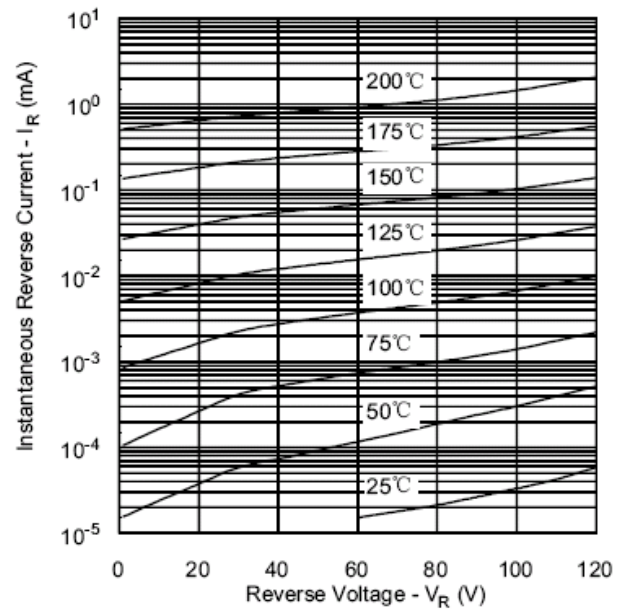
Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	$T_J$	-	-55 to +175	$^\circ\text{C}$
Max. Storage Temperature	$T_{stg}$	-	-55 to +175	$^\circ\text{C}$
Maximum Thermal Resistance Junction to Lead	$R_{\theta JL}$	DC operation	12	$^\circ\text{C/W}$
Maximum Thermal Resistance Junction to Case	$R_{\theta JA}$	DC operation	46	$^\circ\text{C/W}$
Approximate Weight	wt	-	0.65	g
Case Style	SMC			



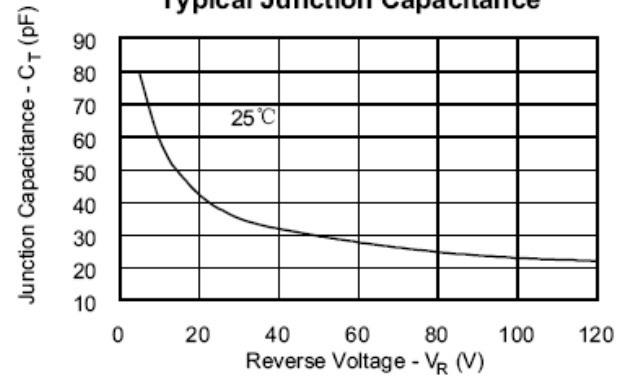
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**





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