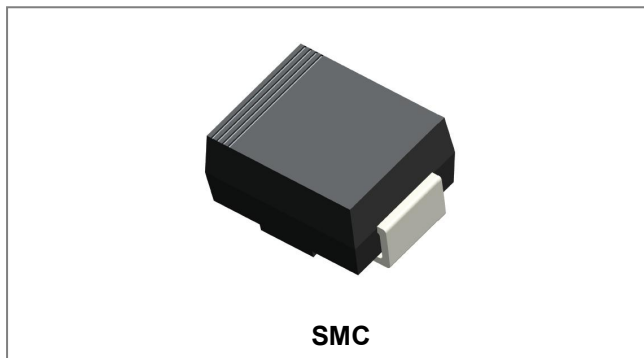


## 30BQ200 SCHOTTKY RECTIFIER



### Features

- Small foot print, surface mountable
- Low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- 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



### Applications

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

### Maximum Ratings@T<sub>A</sub>=25°C unless otherwise specified

Characteristics	Symbol	Condition	Max.	Units
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	-	200	V
Average Rectified Forward Current	I <sub>F(AV)</sub>	50% duty cycle @T <sub>L</sub> =148°C, rectangular wave form	3.0	A
		50% duty cycle @T <sub>L</sub> =138°C, rectangular wave form	4.0	
Peak One Cycle Non-Repetitive Surge Current	I <sub>FSM</sub>	8.3 ms, half Sine pulse	55	A

### Electrical Characteristics:

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V <sub>F1</sub>	@ 3 A, Pulse, T <sub>J</sub> = 25 °C	0.84	0.92	V
	V <sub>F2</sub>	@ 3 A, Pulse, T <sub>J</sub> = 125 °C	0.69	0.76	V
Reverse Current*	I <sub>R1</sub>	@V <sub>R</sub> = Rated V <sub>R</sub> , Pulse, T <sub>J</sub> = 25 °C	0.0008	1	mA
	I <sub>R2</sub>	@V <sub>R</sub> = Rated V <sub>R</sub> , Pulse, T <sub>J</sub> = 125 °C	0.3	3	mA
Junction Capacitance	C <sub>T</sub>	@V <sub>R</sub> = 5V, T <sub>C</sub> = 25 °C f <sub>SIG</sub> = 1MHz	55	60	pF
Series Inductance	L <sub>S</sub>	Measured lead to lead 5 mm from package body	3.0	-	nH
Voltage Rate of Change	dv/dt	-	-	10,000	V/μs

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

**Thermal-Mechanical Specifications:**

Characteristics	Symbol	Condition	Specification	Units
Junction Temperature	$T_J$	-	-55 to +175	°C
Storage Temperature	$T_{stg}$	-	-55 to +175	°C
Typical Thermal Resistance Junction to Lead	$R_{\theta JL}$	-	12	°C/W
Typical Thermal Resistance Junction to Case	$R_{\theta JA}$	DC operation	46	°C/W
Approximate Weight	wt	-	0.21	g
Case Style	SMC			

**Ratings and Characteristics Curves**

Figure 1 Typical Forward Characteristics

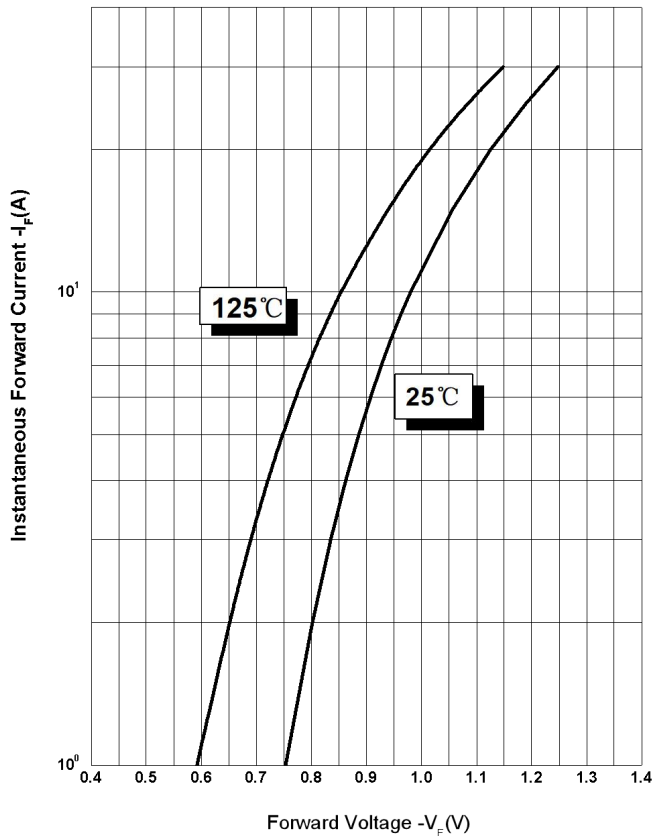


Figure 2 Typical Reverse Characteristics

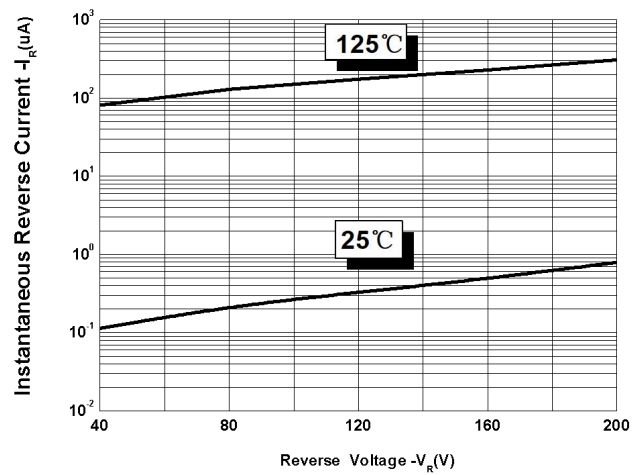
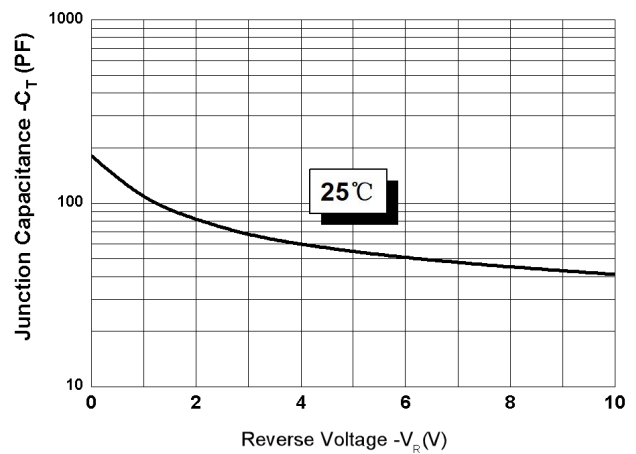
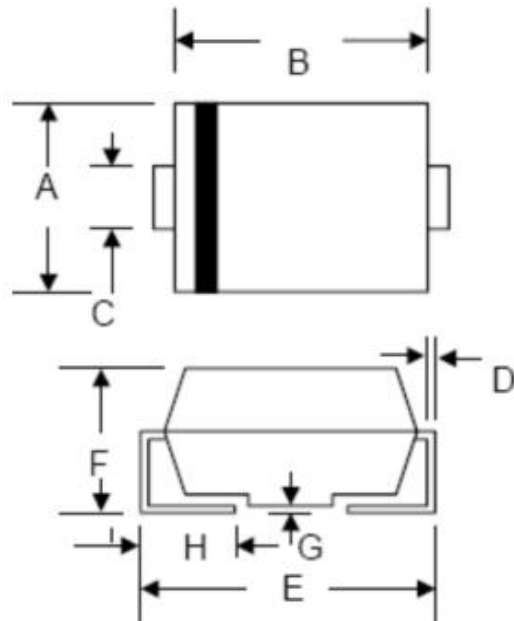


Figure 3 Typical Junction Capacitance



**Mechanical Dimensions SMC**



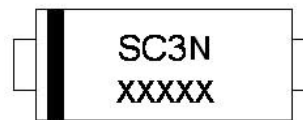
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	5.59	6.22	0.220	0.245
B	6.60	7.11	0.260	0.280
C	2.75	3.25	0.108	0.128
D	0.152	0.305	0.006	0.012
E	7.75	8.25	0.305	0.325
F	2.00	2.95	0.079	0.116
G	0.051	0.203	0.002	0.008
H	0.76	1.60	0.030	0.063

**Ordering Information**

Device	Package	Shipping
30BQ200	SMC (Pb-Free)	3000pcs / reel
30BQ200TR	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.

**Marking Diagram**

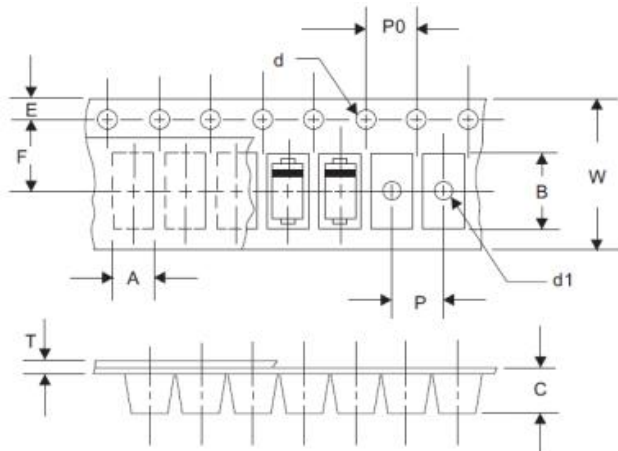


Where XXXXX is YYWWL

SC3N = Part Name  
YY = Year  
WW = Week  
L = Lot Number

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

**Carrier Tape Specification SMC**



SYMBOL	Millimeters	
	Min.	Max.
A	5.95	6.15
B	8.10	8.30
C	2.60	2.80
d	1.40	1.60
E	1.65	1.85
F	7.40	7.60
P	7.90	8.10
P0	3.90	4.10
T	0.20	0.40
W	15.70	16.30

**Technical Data**  
**Data Sheet N0026, Rev. A**



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