



**THE DATASHEET OF  
10BQ030TR**





## 10BQ030 SCHOTTKY RECTIFIER

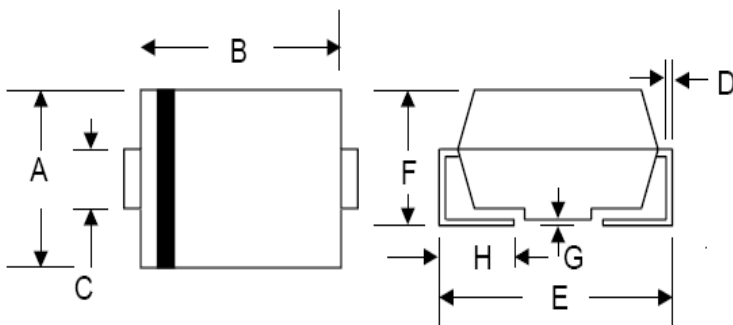
### Applications:

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

### Features:

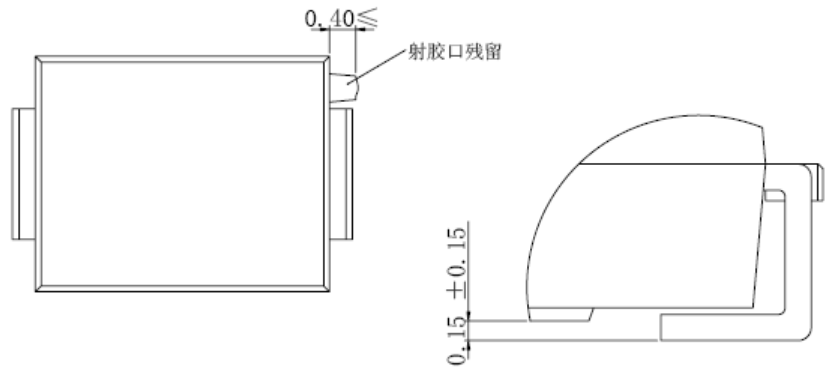
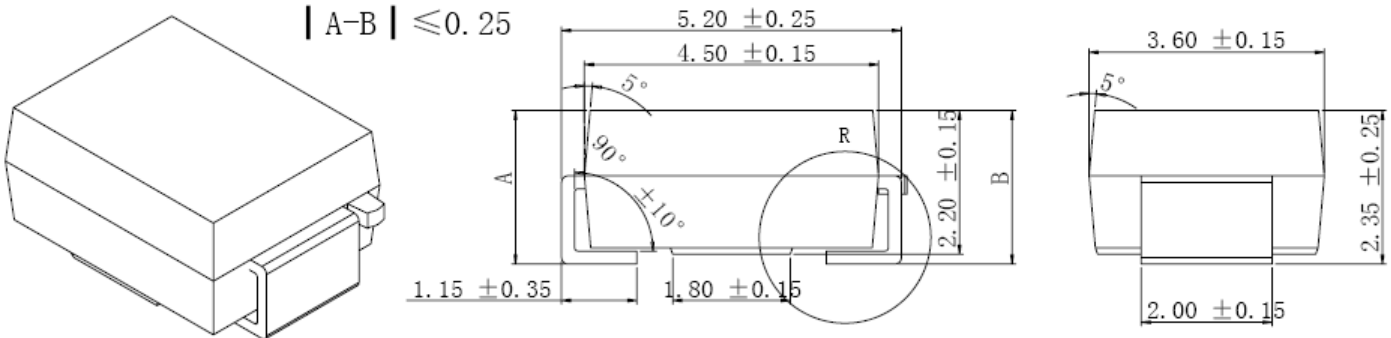
- Small foot print, surface moutable
- Low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Mechanical Dimensions: In mm



SMB/DO-214AA				
Dim	Min	Max	Min	Max
A	3.30	3.94	0.130	0.155
B	4.06	4.70	0.160	0.185
C	1.91	2.11	0.075	0.083
D	0.152	0.305	0.006	0.012
E	5.08	5.59	0.2	0.220
F	2.13	2.44	0.084	0.096
G	0.051	0.203	0.002	0.008
H	0.76	1.27	0.029	0.05
		in mm		In inch

### OPTION 1



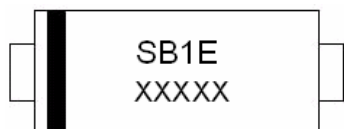
**OPTION 2(JK)**

**SMB**

Technical Data  
Data Sheet N0643, Rev. -

*Green Products*

**Marking Diagram:**



Where XXXXX is YYWWL

SB1E = Part Name  
YY = Year  
WW = Week  
L = Lot Number

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

**Ordering Information:**

Device	Package	Shipping
10BQ030	SMB (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	$V_{RWM}$	-	30	V
Max. Average Forward Current	$I_{F(AV)}$	50% duty cycle @ $T_C=100^{\circ}C$ , rectangular wave form	1.0	A
Max. Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3 ms, half Sine pulse	108	A



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**Green Products**

**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Max. Forward Voltage Drop*	V <sub>F1</sub>	@ 1 A, Pulse, T <sub>J</sub> = 25 °C	0.42	V
		@ 2 A, Pulse, T <sub>J</sub> = 25 °C	0.47	
	V <sub>F2</sub>	@ 1 A, Pulse, T <sub>J</sub> = 125 °C	0.32	V
		@ 2 A, Pulse, T <sub>J</sub> = 125 °C	0.37	
Max. Reverse Current *	I <sub>R1</sub>	@V <sub>R</sub> = Rated V <sub>R</sub> , Pulse, T <sub>J</sub> = 25 °C	1	mA
	I <sub>R2</sub>	@V <sub>R</sub> = Rated V <sub>R</sub> , Pulse, T <sub>J</sub> = 125 °C	15	mA
Max. Junction Capacitance	C <sub>T</sub>	@V <sub>R</sub> = 5V, T <sub>C</sub> = 25 °C f <sub>SIG</sub> = 1MHz	200	PF
Typical Series Inductance	L <sub>S</sub>	Measured lead to lead 5 mm from package body	2.0	nH
Max. Voltage Rate of Change	dv/dt	-	10,000	V/μs

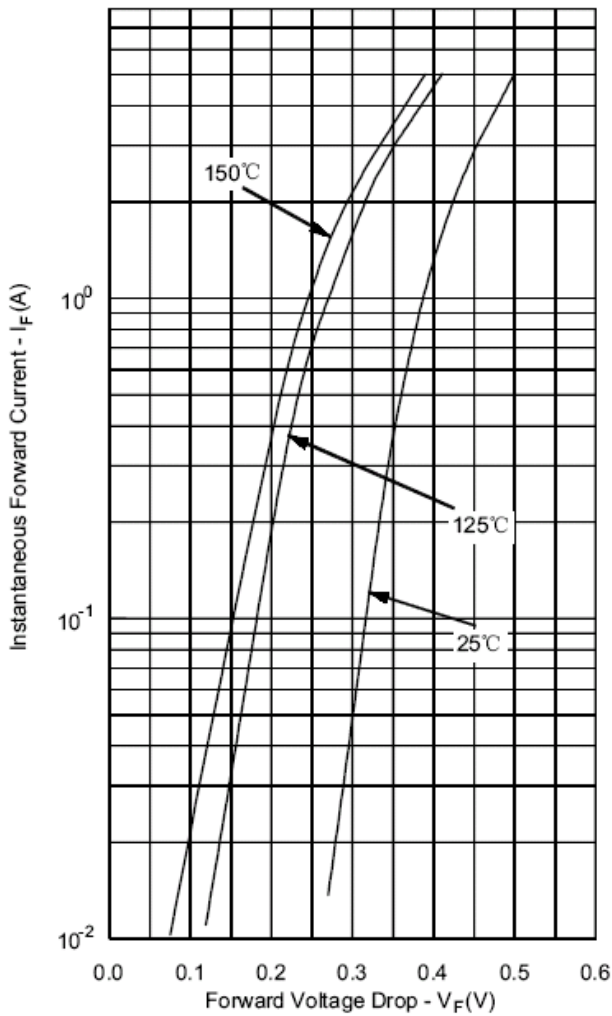
\* Pulse Width < 300μs, Duty Cycle < 2%

**Thermal-Mechanical Specifications:**

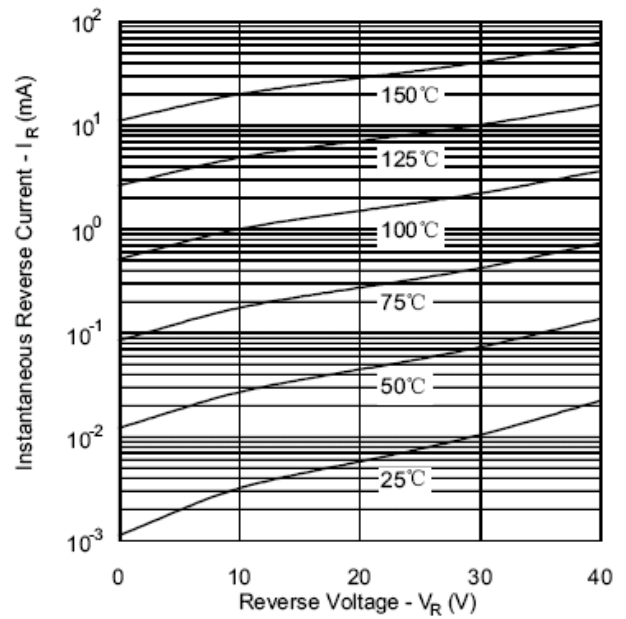
Characteristics	Symbol	Condition	Specification	Units
Max. Junction Temperature	T <sub>J</sub>	-	-55 to +150	°C
Max. Storage Temperature	T <sub>stg</sub>	-	-55 to +150	°C
Maximum Thermal Resistance Junction to Lead	R <sub>θJL</sub>	DC operation	25	°C/W
Approximate Weight	wt	-	0.68	g
Case Style	SMB			



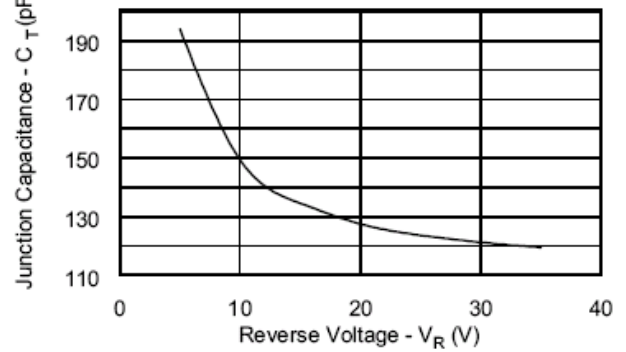
**Typical Forward Characteristics**



**Typical Reverse Characteristics**



**Typical Junction Capacitance**







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