



10BQ015 SCHOTTKY RECTIFIER

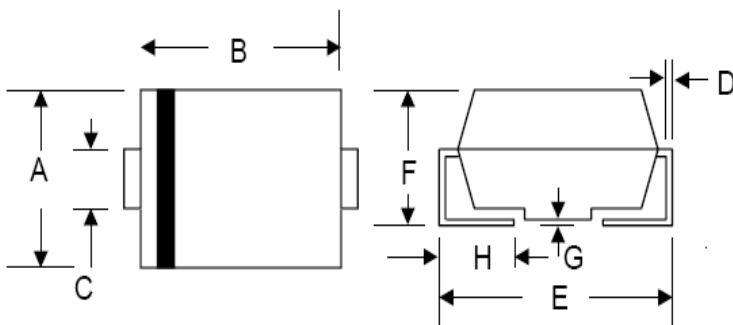
Applications:

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

Features:

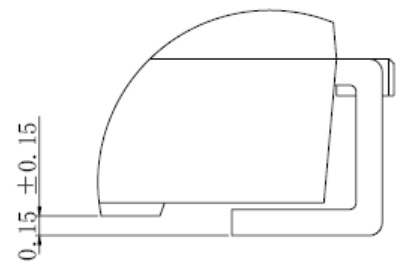
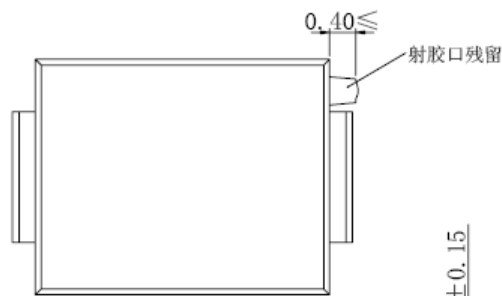
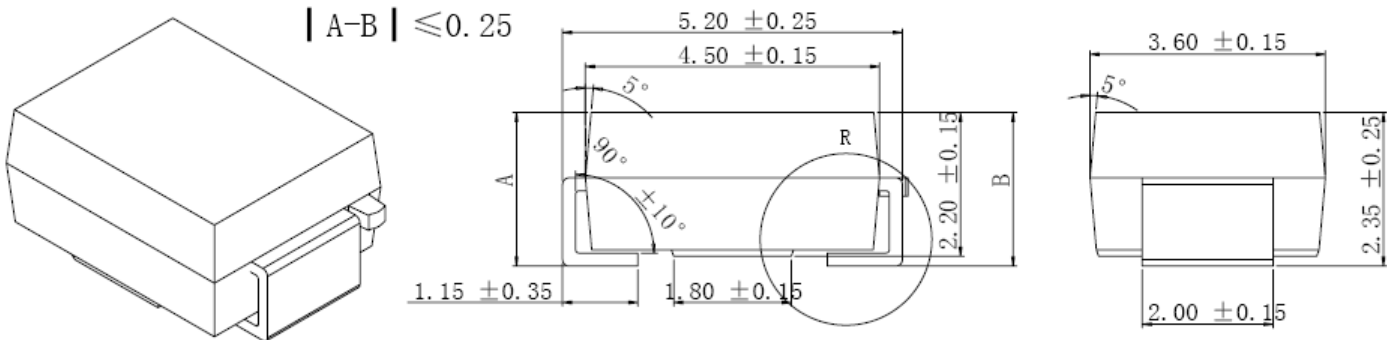
- Small foot print, surface moutable
- Low forward voltage drop
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

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)

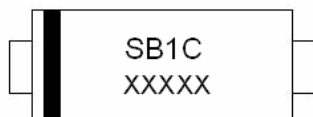
SMB



Technical Data
Data Sheet N0642, Rev. -

Green Products

Marking Diagram:



Where XXXXX is YYWWL

SB1C = Part Name
YY = Year
WW = Week
L = Lot Number

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

Ordering Information:

| Device | Package | Shipping |
|---------|------------------|----------------|
| 10BQ015 | 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} | - | 15(DC) 25(Working) | V |
| Max. Average Forward Current | $I_{F(AV)}$ | 50% duty cycle @ $T_C=84^\circ\text{C}$, rectangular wave form | 1.0 | A |
| Max. Peak One Cycle Non-Repetitive Surge Current | I_{FSM} | 8.3 ms, half Sine pulse | 48 | A |



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Electrical Characteristics:

| Characteristics | Symbol | Condition | Max. | Units |
|--------------------------------|----------|---|--------|------------------|
| Max. Forward Voltage Drop* | V_{F1} | @ 1 A, Pulse, $T_J = 25\text{ }^\circ\text{C}$ | 0.35 | V |
| | V_{F2} | @ 1 A, Pulse, $T_J = 125\text{ }^\circ\text{C}$ | 0.32 | V |
| Max. Reverse Current * | I_{R1} | @ $V_R = \text{Rated } V_R$, Pulse, $T_J = 25\text{ }^\circ\text{C}$ | 1 | mA |
| | I_{R2} | @ $V_R = \text{Rated } V_R$, Pulse, $T_J = 125\text{ }^\circ\text{C}$ | 12 | mA |
| Max. Junction Capacitance | C_T | @ $V_R = 5\text{V}$, $T_C = 25\text{ }^\circ\text{C}$ $f_{SIG} = 1\text{MHz}$ | 390 | PF |
| Typical Series Inductance | L_S | Measured lead to lead 5 mm from package body | 2.0 | nH |
| Max. Voltage Rate of Change | dv/dt | - | 10,000 | V/ μs |

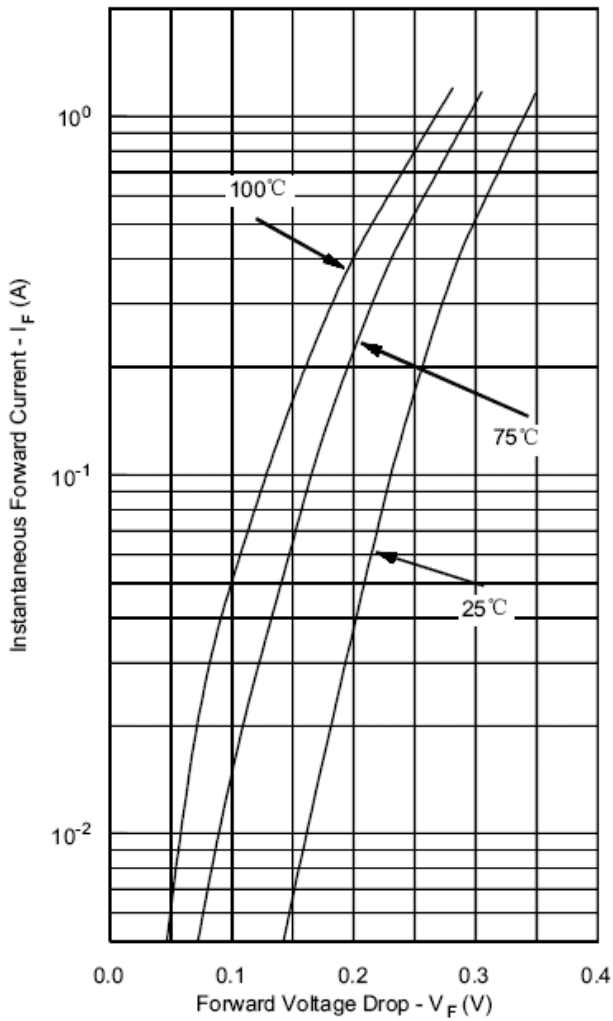
* Pulse Width < 300 μs , Duty Cycle < 2%

Thermal-Mechanical Specifications:

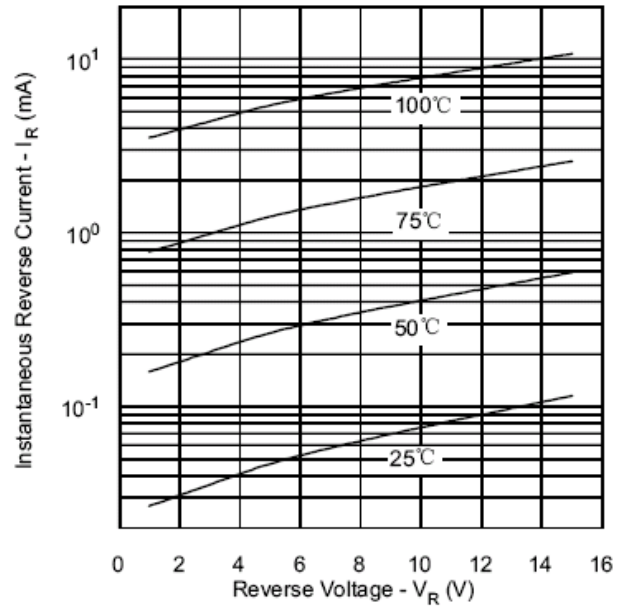
| Characteristics | Symbol | Condition | Specification | Units |
|--|-----------------|--------------|---------------|--------------------|
| Max. Junction Temperature | T_J | - | -55 to +125 | $^\circ\text{C}$ |
| Max. Storage Temperature | T_{stg} | - | -55 to +150 | $^\circ\text{C}$ |
| Maximum Thermal Resistance Junction to Lead | $R_{\theta JL}$ | DC operation | 36 | $^\circ\text{C/W}$ |
| Maximum Thermal Resistance Junction to Case | $R_{\theta JA}$ | DC operation | 80 | $^\circ\text{C/W}$ |
| Approximate Weight | wt | - | 0.68 | g |
| Case Style | SMB | | | |



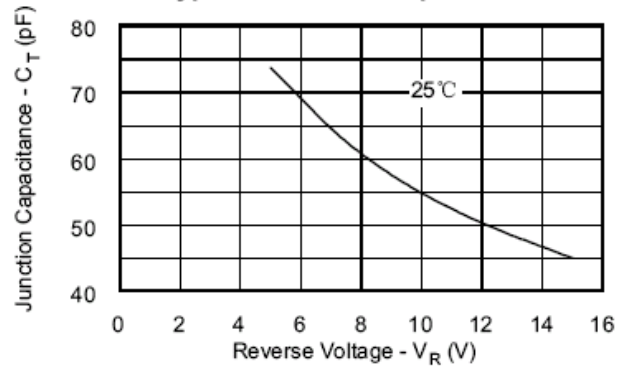
Typical Forward Characteristics



Typical Reverse Characteristics



Typical Junction Capacitance





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