

# XBS203V17R-G

## Schottky Barrier Diode, 2A, 30V Type

### FEATURES

- Forward Voltage :  $V_F=0.35V$  (TYP.)
- Forward Current :  $I_{F(AVE)}=2A$
- Repetitive Peak Reverse Voltage :  $V_{RM}=30V$

### APPLICATIONS

- Rectification
- Protection against reverse connection of battery

### ABSOLUTE MAXIMUM RATINGS

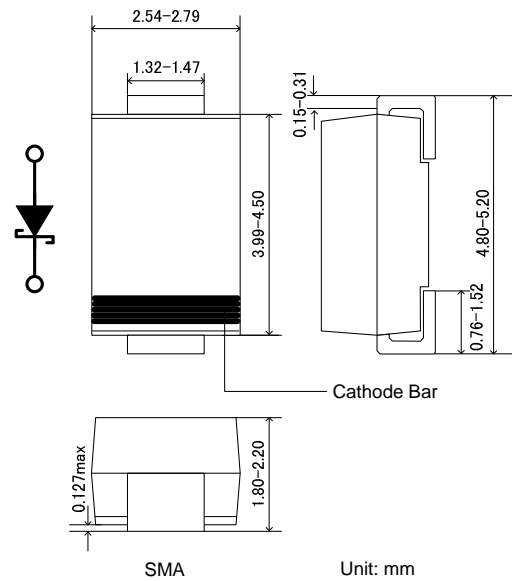
Ta=25°C

| PARAMETER  | SYMBOL       | RATINGS  | UNIT |
|--|--------------|----------|------|
| Repetitive Peak Reverse Voltage                    | $V_{RM}$     | 30       | V    |
| Reverse Voltage (DC)                               | $V_R$        | 30       | V    |
| Forward Current (Average)                          | $I_{F(AVE)}$ | 2        | A    |
| Non Continuous Forward Surge Current <sup>*1</sup> | $I_{FSM}$    | 50       | A    |
| Junction Temperature                               | $T_j$        | 125      | °C   |
| Storage Temperature Range                          | $T_{stg}$    | -55~+150 | °C   |

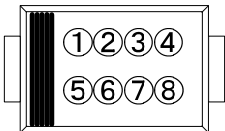
\*1 : Non continuous high amplitude 60Hz half-sine wave.

\* When the IC is operated continuously under high load conditions such as high temperature, high current and high voltage, it may have the case that reliability reduces drastically even if under the absolute maximum ratings. Adequate "Derating" should be taken into consideration while designing.

### PACKAGING INFORMATION



### MARKING RULE



①②③④⑤⑥: 203V17 (Product Number)  
⑦⑧ : Assembly Lot Number

### PRODUCT NAME

| PRODUCT NAME | DEVICE ORIENTATION            |
|--------------|-------------------------------|
| XBS203V17R-G | SMA (Halogen & Antimony free) |
| XBS203V17R   | SMA                           |

\* The "G" suffix indicates that the products are Halogen and Antimony free as well as being fully RoHS compliant.

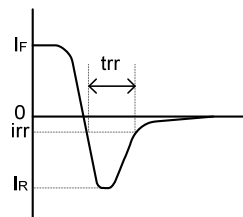
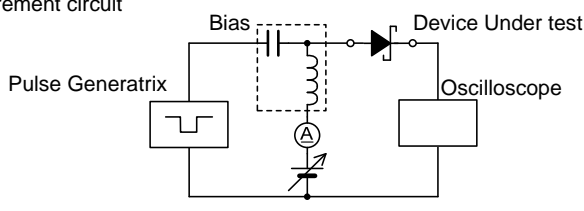
\* The device orientation is fixed in its embossed tape pocket.

### ELECTRICAL CHARACTERISTICS

Ta=25°C

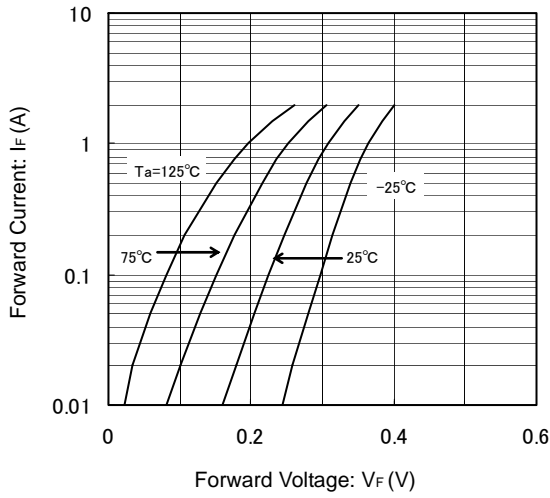
| PARAMETER                           | SYMBOL   | TEST CONDITIONS          | LIMITS |       |       | UNIT |
|-------------------------------------|----------|--------------------------|--------|-------|-------|------|
|                                     |          |                          | MIN.   | TYP.  | MAX.  |      |
| Forward Voltage                     | $V_{F1}$ | $I_F=0.5A$               | -      | 0.28  | 0.365 | V    |
|                                     | $V_{F2}$ | $I_F=1A$                 | -      | 0.305 | 0.375 | V    |
|                                     | $V_{F3}$ | $I_F=2A$                 | -      | 0.35  | 0.39  | V    |
| Reverse Current                     | $I_R$    | $V_R=30V$                | -      | 0.35  | 3     | mA   |
| Inter-Terminal Capacity             | $C_t$    | $V_R=1V, f=1MHz$         | -      | 280   | -     | pF   |
| Reverse Recovery Time <sup>*2</sup> | $t_{rr}$ | $I_F=I_R=10mA, irr=1mA,$ | -      | 70    | -     | ns   |

\*2 :  $t_{rr}$  measurement circuit

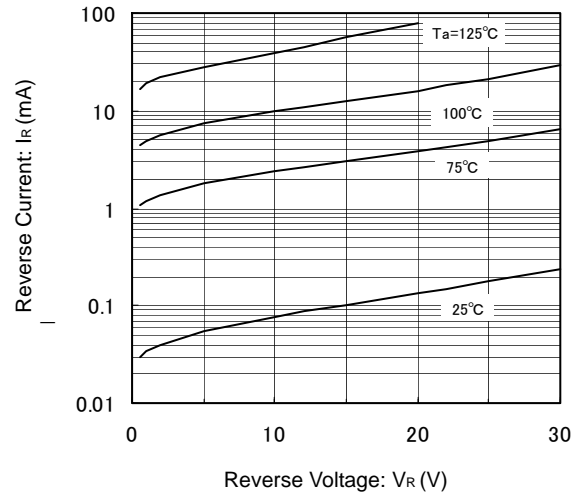


## TYPICAL PERFORMANCE CHARACTERISTICS

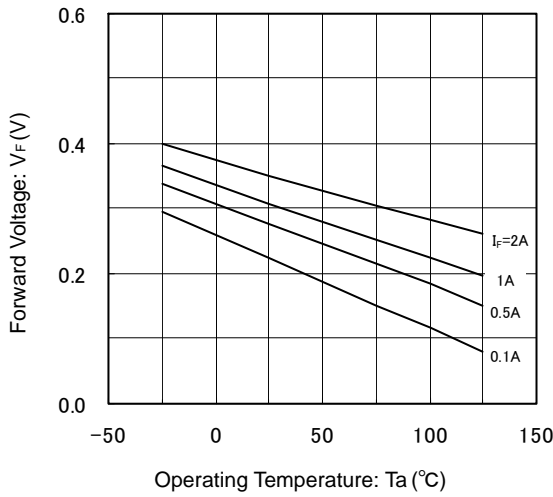
(1) Forward Current vs. Forward Voltage



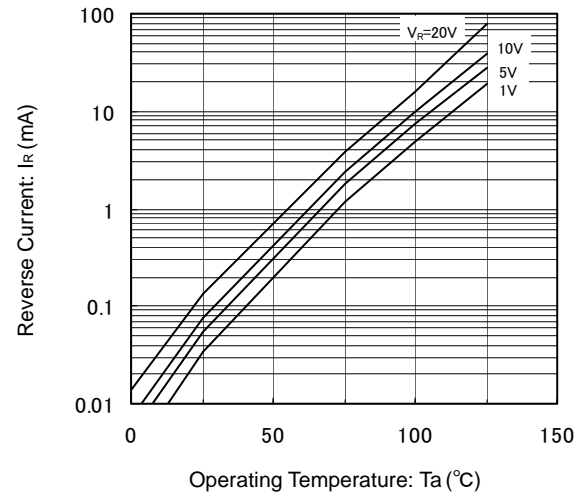
(2) Reverse Current vs. Reverse Voltage



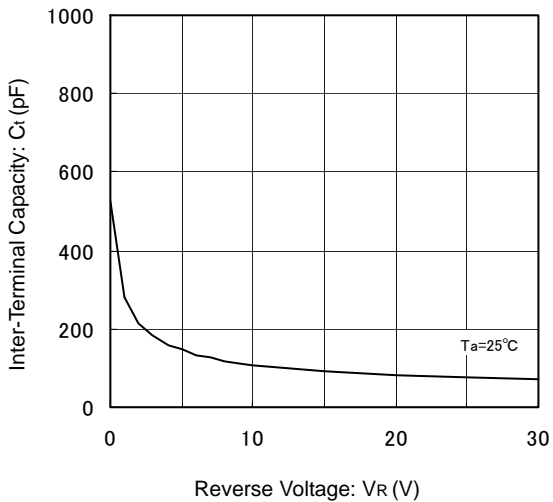
(3) Forward Voltage vs. Operating Temperature



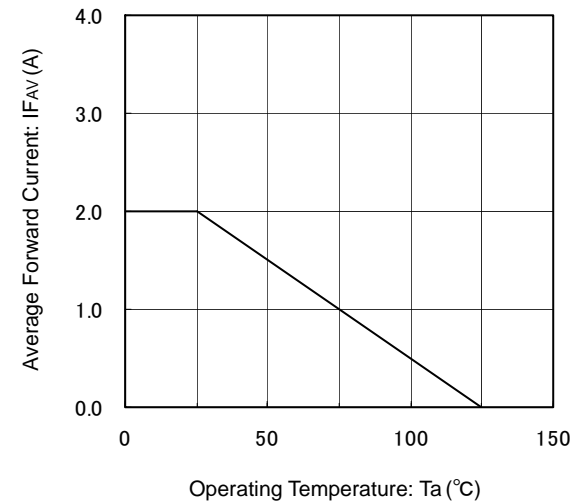
(4) Reverse Current vs. Operating Temperature



(5) Inter-Terminal Capacity vs. Reverse Voltage



(6) Average Forward Current vs. Operating Temperature



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