

XBS306S17R-G

Schottky Barrier Diode, 3A, 60V Type

FEATURES

| | |
|---------------------------------|----------------------|
| Forward Voltage | : $V_F=0.59V$ (TYP.) |
| Forward Current | : $I_{F(AVE)}=3A$ |
| Repetitive Peak Reverse Voltage | : $V_{RM}=60V$ |

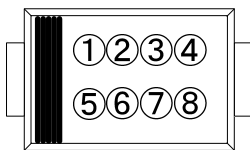
ABSOLUTE MAXIMUM RATINGS

$T_a=25^\circ C$

| PARAMETER | SYMBOL | RATINGS | UNIT |
|--|--------------|----------|------------|
| Repetitive Peak Reverse Voltage | V_{RM} | 60 | V |
| Reverse Voltage (DC) | V_R | 60 | V |
| Forward Current (Average) | $I_{F(AVE)}$ | 3 | A |
| Non Continuous Forward Surge Current ^{*1} | I_{FSM} | 50 | A |
| Junction Temperature | T_j | 125 | $^\circ C$ |
| Storage Temperature Range | T_{stg} | -55~+150 | $^\circ C$ |

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

MARKING RULE

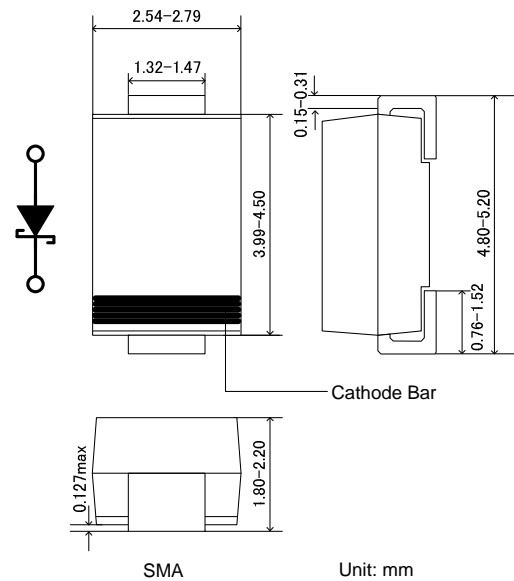


①②③④⑤⑥: 306S17(Product Number)
⑦⑧ : Assembly Lot Number

APPLICATIONS

- Rectification
- Protection against reverse connection of battery

PACKAGING INFORMATION



PRODUCT NAME

| PRODUCT NAME | DEVICE ORIENTATION |
|---------------|-------------------------------|
| XBS306S17 R-G | SMA (Halogen & Antimony free) |
| XBS306S17 R | SMA |

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

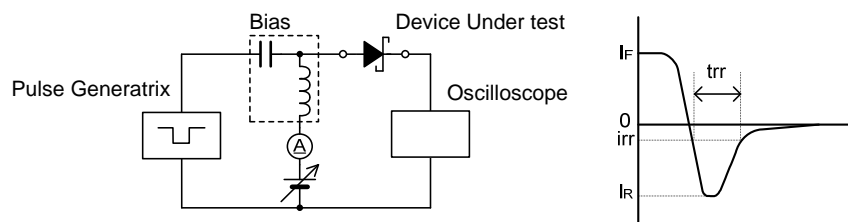
* The device orientation is fixed in its embossed tape pocket.

ELECTRICAL CHARACTERISTICS

$T_a=25^\circ C$

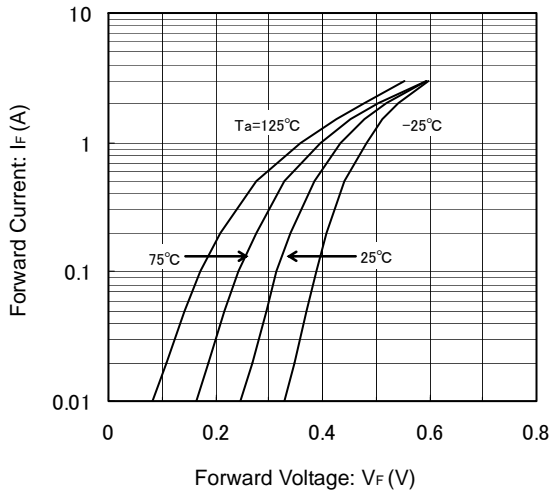
| PARAMETER | SYMBOL | TEST CONDITIONS | LIMITS | | | UNIT |
|-------------------------------------|----------|----------------------------|--------|-------|------|---------|
| | | | MIN. | TYP. | MAX. | |
| Forward Voltage | V_{F1} | $I_F=200\mu A$ | - | 0.145 | - | V |
| | V_{F2} | $I_F=3A$ | - | 0.59 | 0.66 | V |
| Reverse Current | I_{R1} | $V_R=30V$ | - | 3 | - | μA |
| | I_{R2} | $V_R=60V$ | - | 9 | 300 | μA |
| Inter-Terminal Capacity | C_t | $V_R=1V, f=1MHz$ | - | 195 | - | pF |
| Reverse Recovery Time ^{*2} | t_{rr} | $I_F=I_R=10mA, i_{rr}=1mA$ | - | 55 | - | ns |

*2 : t_{rr} measurement circuit

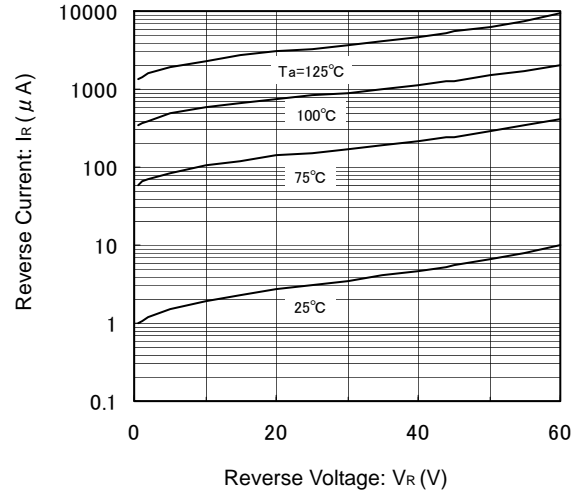


TYPICAL PERFORMANCE CHARACTERISTICS

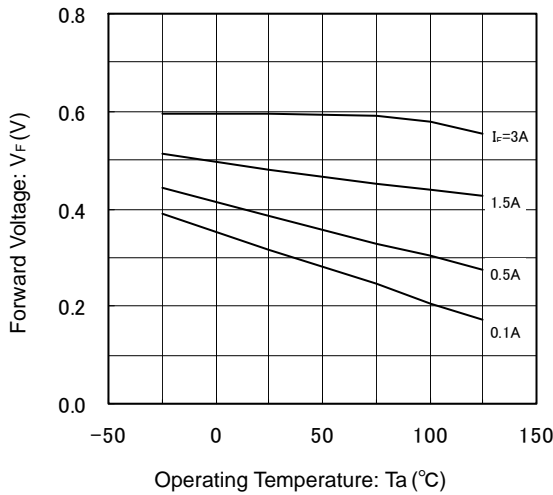
(1) Forward Current vs. Forward Voltage



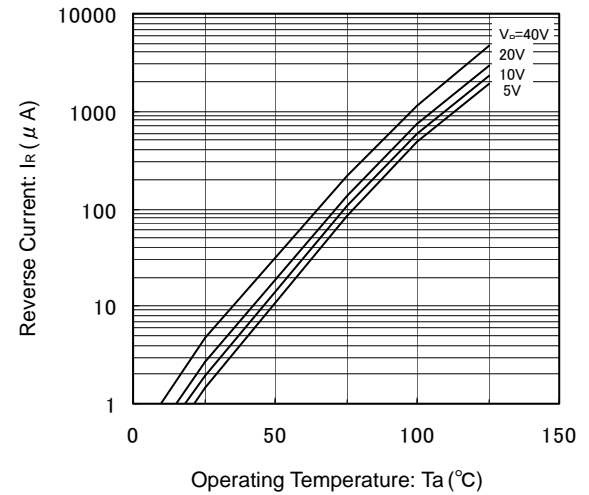
(2) Reverse Current vs. Reverse Voltage



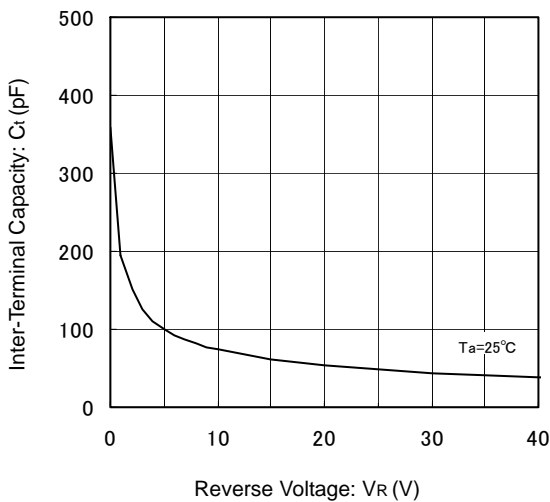
(3) Forward Voltage vs. Operating Temperature



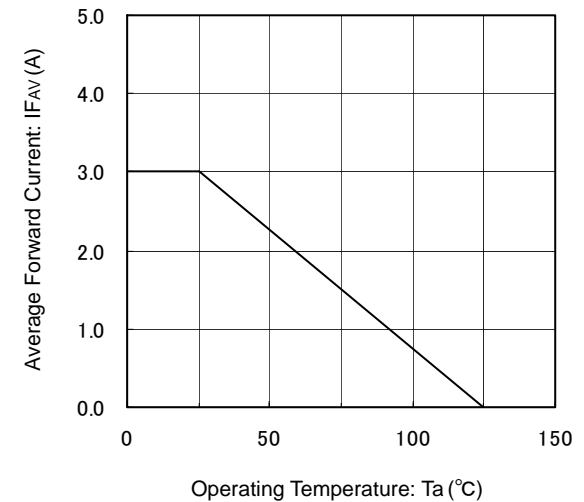
(4) Reverse Current vs. Operating Temperature



(5) Inter-Terminal Capacity vs. Reverse Voltage



(6) Average Forward Current vs. Operating Temperature



1. The products and product specifications contained herein are subject to change without notice to improve performance characteristics. Consult us, or our representatives before use, to confirm that the information in this datasheet is up to date.
2. We assume no responsibility for any infringement of patents, patent rights, or other rights arising from the use of any information and circuitry in this datasheet.
3. Please ensure suitable shipping controls (including fail-safe designs and aging protection) are in force for equipment employing products listed in this datasheet.
4. The products in this datasheet are not developed, designed, or approved for use with such equipment whose failure or malfunction can be reasonably expected to directly endanger the life of, or cause significant injury to, the user.
(e.g. Atomic energy; aerospace; transport; combustion and associated safety equipment thereof.)
5. Please use the products listed in this datasheet within the specified ranges.
Should you wish to use the products under conditions exceeding the specifications, please consult us or our representatives.
6. We assume no responsibility for damage or loss due to abnormal use.
7. All rights reserved. No part of this datasheet may be copied or reproduced without the prior permission of TOREX SEMICONDUCTOR LTD.

TOREX SEMICONDUCTOR LTD.