

XBS053V13R-G

ETR16006-004

Schottky Barrier Diode, 500mA, 30V Type

FEATURES

| | |
|---------------------------------|------------------------------|
| Forward Voltage | : $V_F=0.40V$ (TYP.) |
| Forward Current | : $I_{F(AV)}=500mA$ |
| Repetitive Peak Reverse Voltage | : $V_{RM}=30V$ |
| Environmentally Friendly | : EU RoHS Compliant, Pb Free |

ABSOLUTE MAXIMUM RATINGS

Ta=25°C

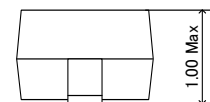
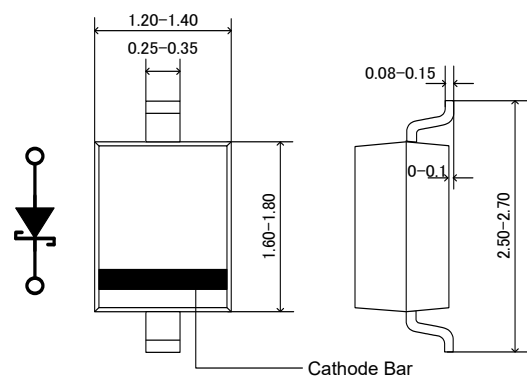
| PARAMETER | SYMBOL | RATINGS | UNITS |
|----------------------------------------|-------------|----------|-------|
| Repetitive Peak Voltage | V_{RM} | 30 | V |
| Reverse Voltage (DC) | V_R | 20 | V |
| Forward Current (Average) | $I_{F(AV)}$ | 500 | mA |
| Non Continuous Forward Surge Current*1 | I_{FSM} | 5 | A |
| Junction Temperature | T_J | 125 | °C |
| Storage Temperature Range | T_{stg} | -55~+150 | °C |

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

APPLICATIONS

- Rectification
- Protection against reverse connection of battery

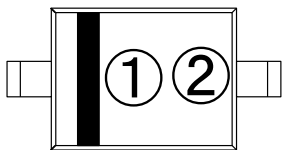
PACKAGING INFORMATION



SOD-323A

Unit : mm

MARKING RULE



- ①: 0 (Product Number)
②: Assembly Lot Number

PRODUCT NAME

| PRODUCT NAME | DEVICE ORIENTATION |
|--------------|-----------------------------------|
| XBS053V13R | SOD-323A |
| XBS053V13R-G | SOD-323A(Halogen & Antimony free) |

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

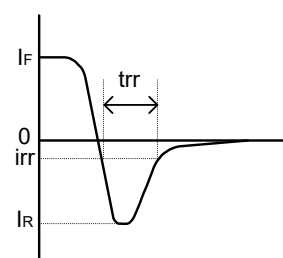
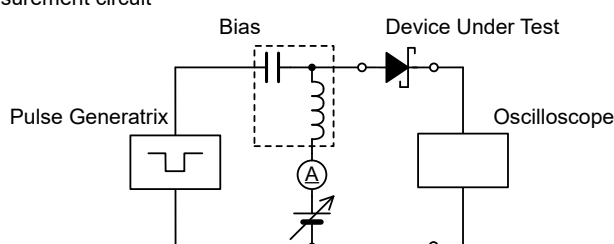
* The device orientation is fixed in its embossed tape pocket.

ELECTRICAL CHARACTERISTICS

Ta=25°C

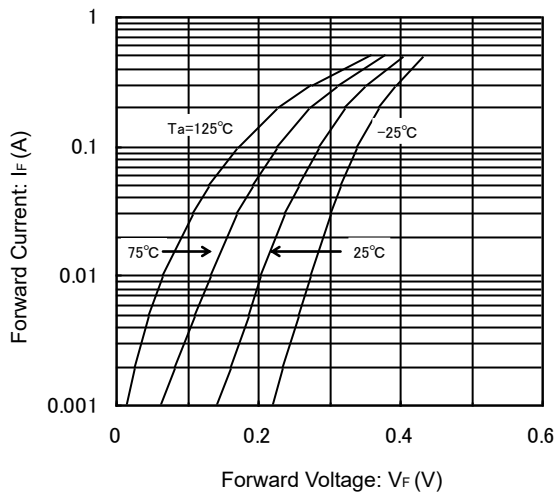
| PARAMETER | SYMBOL | CONDITIONS | MIN. | TYP. | MAX. | UNITS |
|-------------------------|----------|-------------------------|------|------|------|---------|
| Forward Voltage | V_{F1} | $I_F=100mA$ | - | 0.28 | - | V |
| | V_{F2} | $I_F=500mA$ | - | 0.40 | 0.47 | V |
| Reverse Current | I_R | $V_R=20V$ | - | - | 100 | μA |
| Inter-Terminal Capacity | C_t | $V_R=10V, f=1MHz$ | - | 12 | - | pF |
| Reverse Recovery Time*2 | t_{rr} | $I_F=I_R=10mA, irr=1mA$ | - | 8 | - | ns |

*2 : t_{rr} measurement circuit

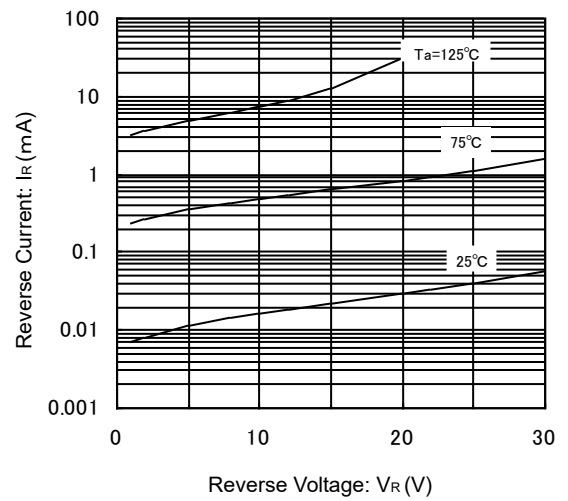


TYPICAL PERFORMANCE CHARACTERISTICS

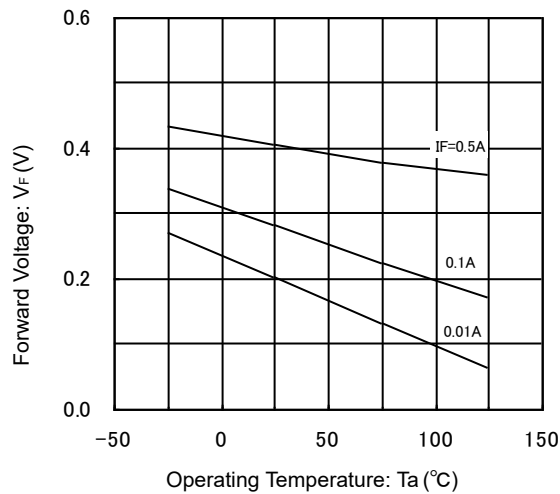
(1) Forward Current vs. Forward Voltage



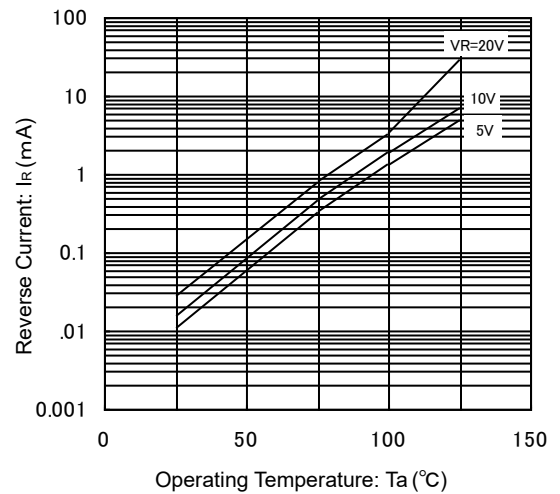
(2) Reverse Current vs. Reverse Voltage



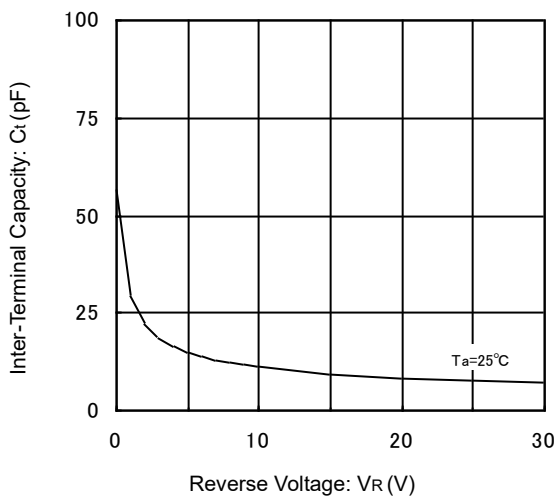
(3) Forward Voltage vs. Operating Temperature



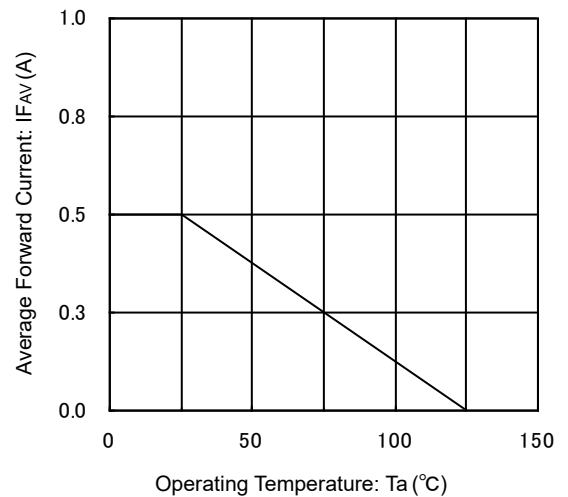
(4) Reverse Current vs. Operating Temperature



(5) Inter-Terminal Capacity vs. Reverse Voltage



(6) Average Forward Current vs. Operating Temperature



■PACKAGING INFORMATION

For the latest package information go to, www.torexsemi.com/technical-support/packages

| PACKAGE | OUTLINE / LAND PATTERN | THERMAL CHARACTERISTICS |
|----------|------------------------------|-------------------------|
| SOD-323A | SOT-323A PKG | |

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