

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

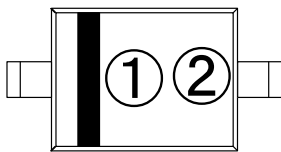
ABSOLUTE MAXIMUM RATINGS

$T_a=25^\circ C$

PARAMETER	SYMBOL	RATINGS	UNIT
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	$^\circ C$
Storage Temperature Range	T_{stg}	-55~+150	$^\circ C$

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

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.

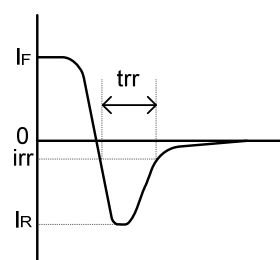
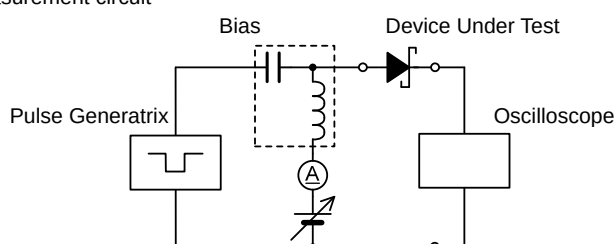
* The device orientation is fixed in its embossed tape pocket.

ELECTRICAL CHARACTERISTICS

$T_a=25^\circ C$

PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN.	TYP.	MAX.	
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}	$I_F=I_R=10mA, i_{rr}=1mA$	-	8	-	ns

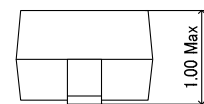
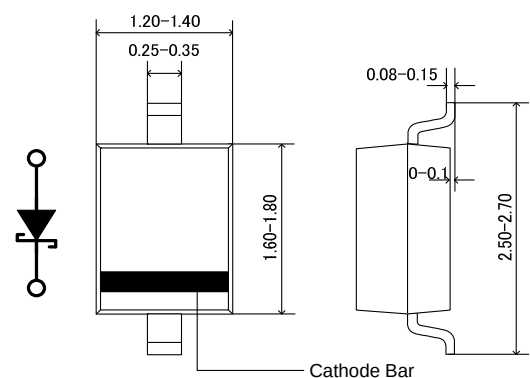
*2 : t_{rr} measurement circuit



APPLICATIONS

- Rectification
- Protection against reverse connection of battery

PACKAGING INFORMATION

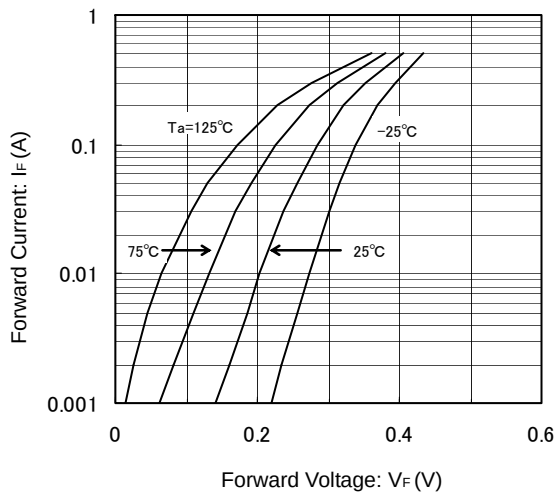


SOD-323A

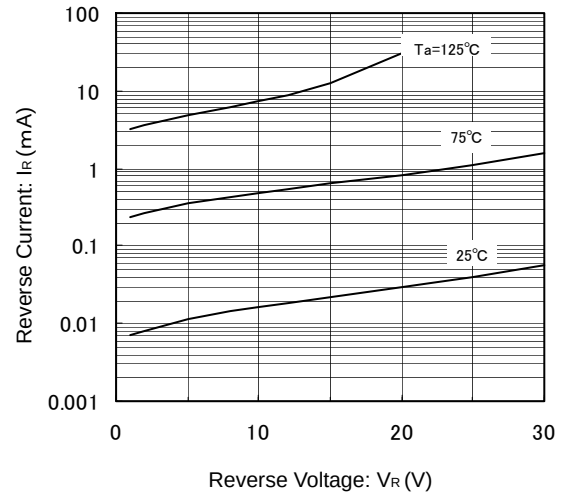
Unit : mm

TYPICAL PERFORMANCE CHARACTERISTICS

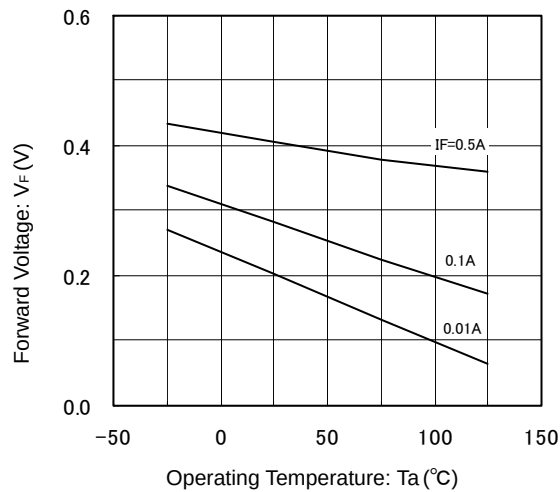
(1) Forward Current vs. Forward Voltage



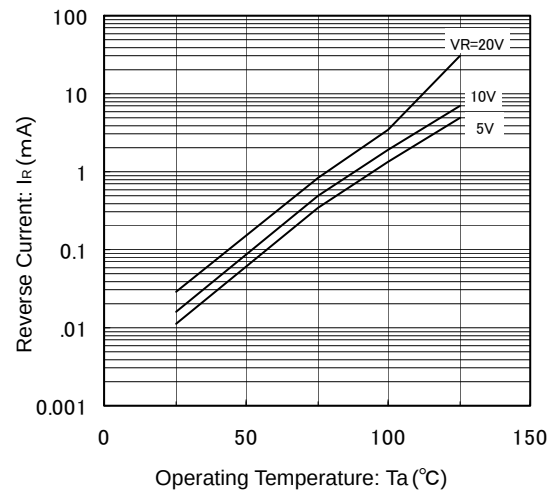
(2) Reverse Current vs. Reverse Voltage



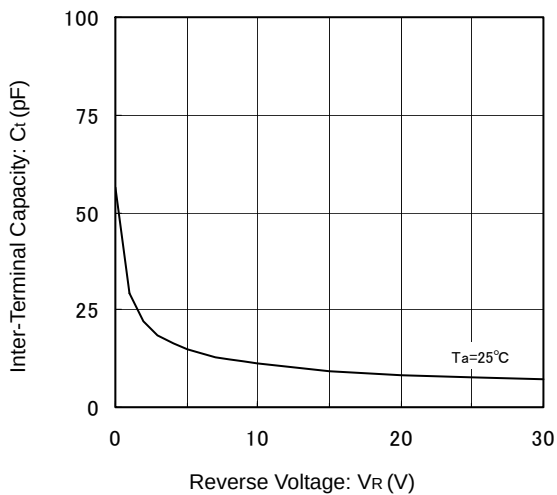
(3) Forward Voltage vs. Operating Temperature



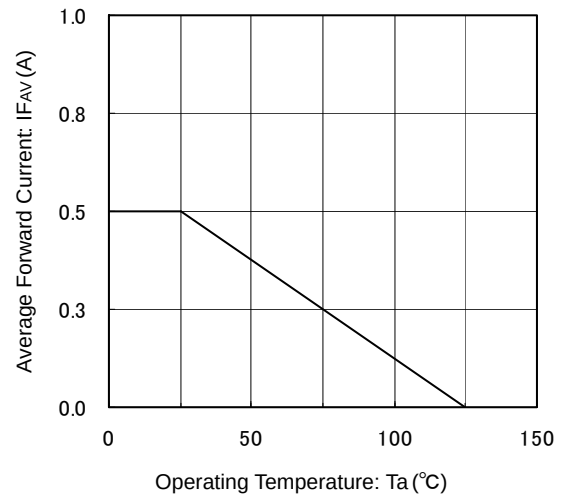
(4) Reverse Current vs. Operating Temperature



(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 of 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.