

XBS104V14R-G

ETR16010-003

Schottky Barrier Diode, 1A, 40V Type

FEATURES

Forward Voltage	: $V_F=0.365V$ (TYP.)
Forward Current	: $I_{F(AV)}=1A$
Repetitive Peak Reverse Voltage	: $V_{RM}=40V$
Environmentally Friendly	: EU RoHS Compliant, Pb Free

APPLICATIONS

- Rectification
- Protection against reverse connection of battery

ABSOLUTE MAXIMUM RATINGS

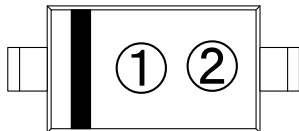
Ta=25°C

PARAMETER	SYMBOL	RATINGS	UNIT
Repetitive Peak Reverse Voltage	V_{RM}	40	V
Reverse Voltage (DC)	V_R	40	V
Forward Current (Average)	$I_{F(AV)}$	1	A
Non Continuous Forward Surge Current ^{*1}	I_{FSM}	20	A
Junction Temperature	T_J	125	°C
Storage Temperature Range	T_{stg}	-55 ~ 150	°C

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

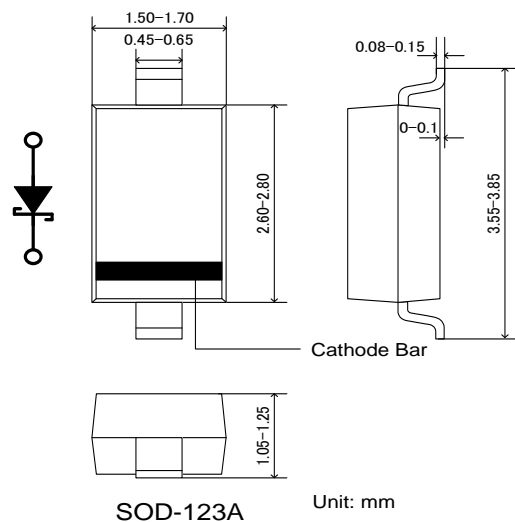
* When the IC is operated continuously under high load conditions such as high temperature, high current and high voltage, it may have the case that reliability reduces drastically even if under the absolute maximum ratings. Adequate "Derating" should be taken into consideration while designing.

MARKING RULE



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

PACKAGING INFORMATION



SOD-123A

Unit: mm

PRODUCT NAME

PRODUCT NAME	PACKAGE
XBS104V14R-G	SOD-123A

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

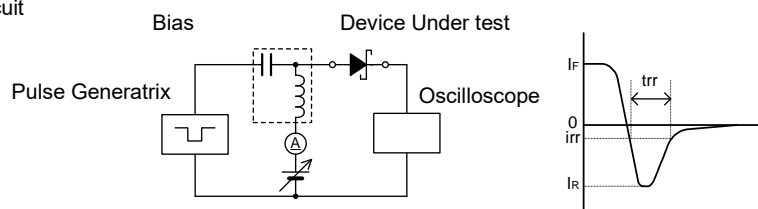
* The device orientation is fixed in its embossed tape pocket.

ELECTRICAL CHARACTERISTICS

Ta=25°C

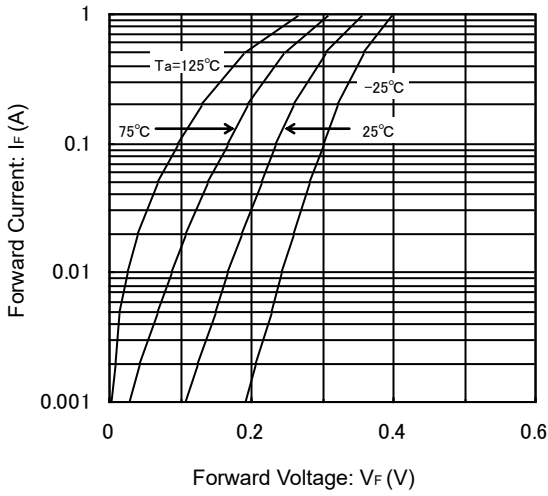
PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN.	TYP.	MAX.	
Forward Voltage	V_{F1}	$I_F=100mA$	-	0.23	0.315	V
	V_{F2}	$I_F=500mA$	-	0.30	0.385	V
	V_{F3}	$I_F=1A$	-	0.365	0.41	V
Reverse Current	I_R	$V_R=40V$	-	0.25	2	mA
Inter-Terminal Capacity	C_t	$V_R=1V, f=1MHz$	-	150	-	pF
Reverse Recovery Time ^{*2}	t_{rr}	$I_F=I_R=10mA, I_{rr}=1mA$	-	41	-	ns

*2 : t_{rr} measurement circuit

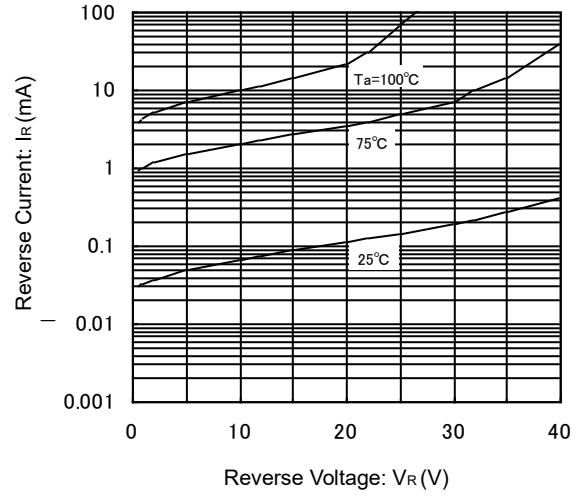


TYPICAL PERFORMANCE CHARACTERISTICS

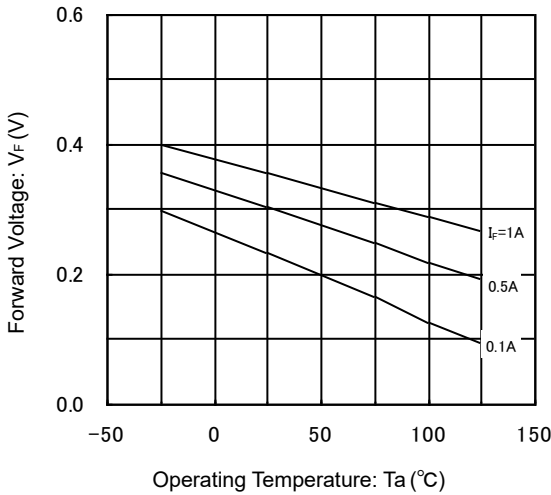
(1) Forward Current vs. Forward Voltage



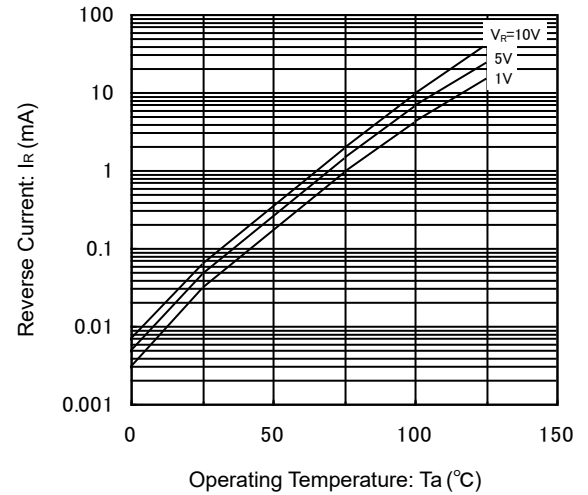
(2) Reverse Current vs. Reverse Voltage



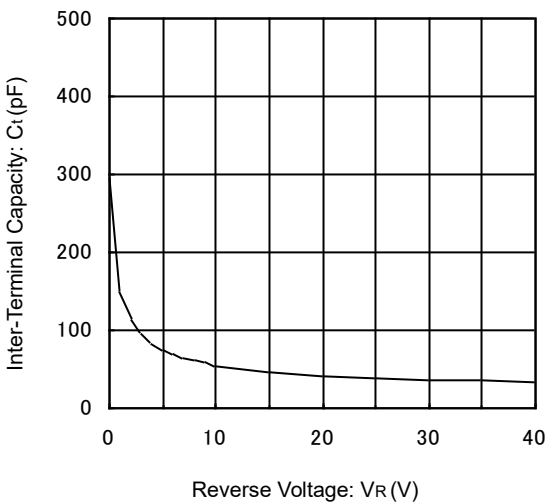
(3) Forward Voltage vs. Operating Temperature



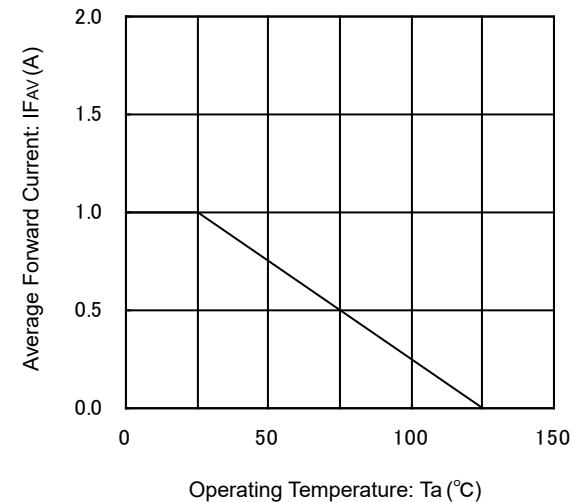
(4) Reverse Current vs. Operating Temperature



(5) Inter-Terminal Capacity vs. Reverse Voltage



(6) Average Forward Current vs. Operating Temperature



1. The product 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. The information in this datasheet is intended to illustrate the operation and characteristics of our products. We neither make warranties or representations with respect to the accuracy or completeness of the information contained in this datasheet nor grant any license to any intellectual property rights of ours or any third party concerning with the information in this datasheet.
3. Applicable export control laws and regulations should be complied and the procedures required by such laws and regulations should also be followed, when the product or any information contained in this datasheet is exported.
4. The product is neither intended nor warranted for use in equipment of systems which require extremely high levels of quality and/or reliability and/or a malfunction or failure which may cause loss of human life, bodily injury, serious property damage including but not limited to devices or equipment used in 1) nuclear facilities, 2) aerospace industry, 3) medical facilities, 4) automobile industry and other transportation industry and 5) safety devices and safety equipment to control combustions and explosions. Do not use the product for the above use unless agreed by us in writing in advance.
5. Although we make continuous efforts to improve the quality and reliability of our products; nevertheless Semiconductors are likely to fail with a certain probability. So in order to prevent personal injury and/or property damage resulting from such failure, customers are required to incorporate adequate safety measures in their designs, such as system fail safes, redundancy and fire prevention features.
6. Our products are not designed to be Radiation-resistant.
7. Please use the product listed in this datasheet within the specified ranges.
8. We assume no responsibility for damage or loss due to abnormal use.
9. All rights reserved. No part of this datasheet may be copied or reproduced unless agreed by Torex Semiconductor Ltd in writing in advance.

TOREX SEMICONDUCTOR LTD.