

# XBS104V14R-G

TOIREX

ETR1610-002

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

## ABSOLUTE MAXIMUM RATINGS

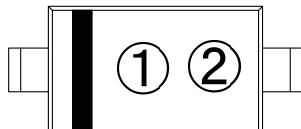
$T_a=25^\circ C$

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 <sup>*1</sup>	$I_{FSM}$	20	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.

\* 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

## PRODUCT NAME

PRODUCT NAME	DEVICE ORIENTATION
XBS104V14R-G	SOD-123A(Halogen & Antimony free)
XBS104V14R	SOD-123A

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

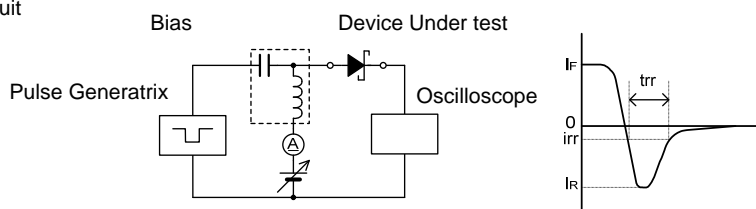
\* The device orientation is fixed in its embossed tape pocket.

## ELECTRICAL CHARACTERISTICS

$T_a=25^\circ C$

PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNIT
			MIN.	TYP.	MAX.	
Forward Voltage	$V_{F1}$	$I_F=100mA$	-	0.23	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 <sup>*2</sup>	$t_{rr}$	$I_F=I_R=10mA$ , $i_{rr}=1mA$	-	41	-	ns

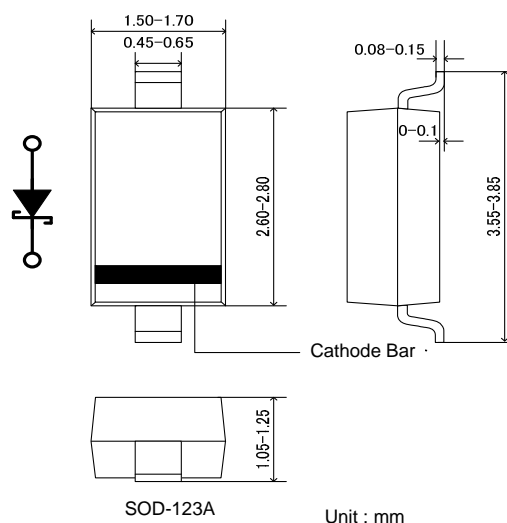
\*2 :  $t_{rr}$  measurement circuit



## APPLICATIONS

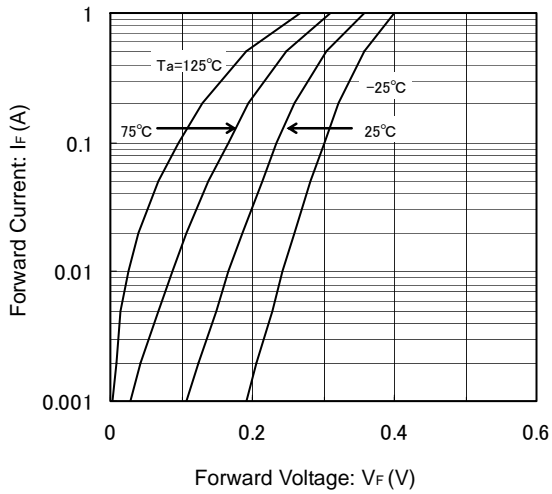
- Rectification
- Protection against reverse connection of battery

## PACKAGING INFORMATION

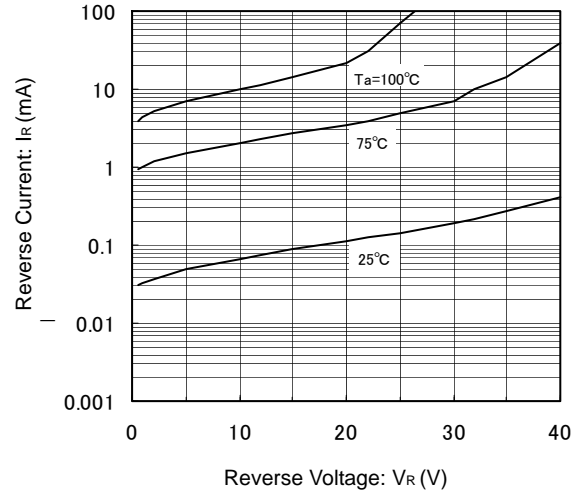


## TYPICAL PERFORMANCE CHARACTERISTICS

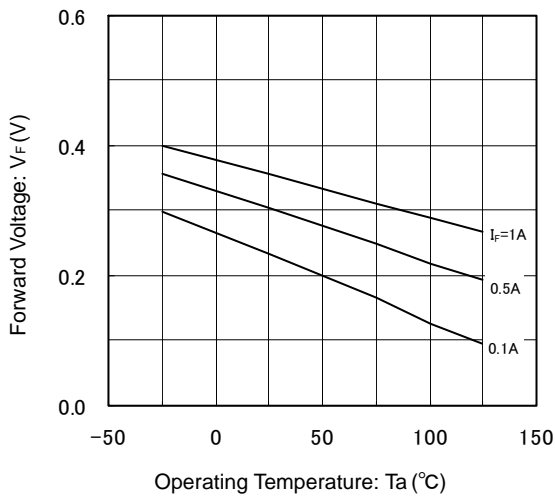
(1) Forward Current vs. Forward Voltage



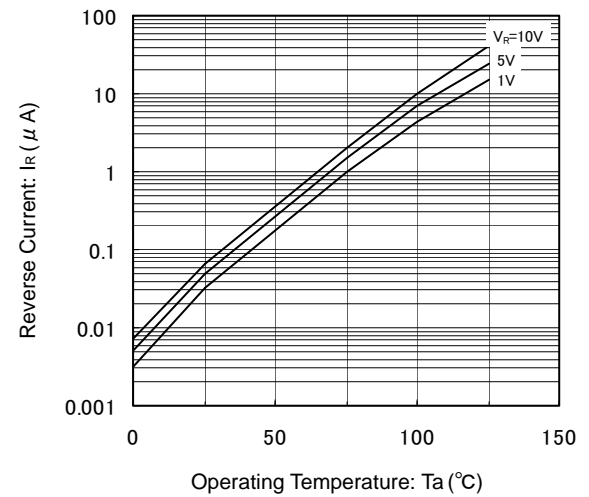
(2) Reverse Current vs. Reverse Voltage



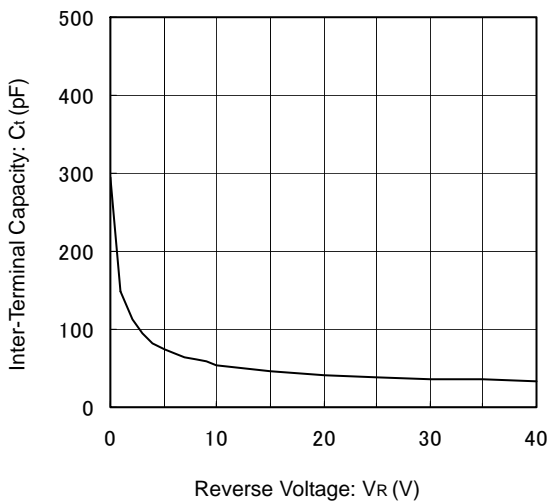
(3) Forward Voltage vs. Operating Temperature



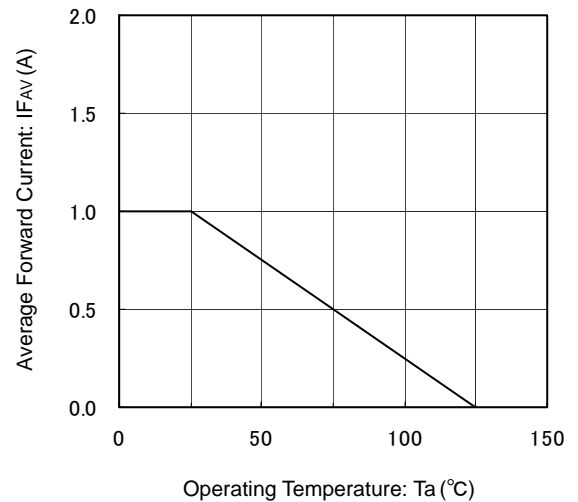
(4) Reverse Current vs. Operating Temperature



(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.**