## TOIREX

# **XBS203V19R-G**

ETR16035-001

## Schottky Barrier Diode, 2A, 30V Type

### **■**FEATURES

Forward Voltage : V<sub>F</sub>=0.35V (TYP.)

Forward Current :  $I_{F(AV)}$ =2A Repetitive Peak Reverse Voltage :  $V_{RM}$ =30V

### ■ ABSOLUTE MAXIMUM RATINGS

Ta=25°0

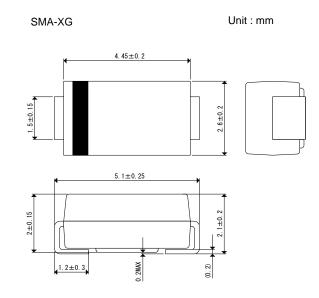
PARAMETER	SYMBOL	RATINGS	UNITS
Repetitive Peak Reverse Voltage	$V_{RM}$	30	V
Reverse Voltage	$V_R$	30	V
Forward Current (Average)	I <sub>F(AV)</sub>	2	Α
Non Continuous Forward Surge Current <sup>(*1)</sup>	I <sub>FSM</sub> 50		Α
Junction Temperature	Tj	125	°C
Storage Temperature Range	Tstg	-55 <b>~</b> +150	°C

<sup>(\*1)</sup> Non continuous high amplitude 60Hz half-sine wave.

## **■**APPLICATIONS

- Rectification
- Protection against reverse connection of battery

### ■ PACKAGING INFORMATION



## **■**MARKING RULE



①23456: 203V19(Product Number)

78 : Assembly Lot Number

## **■**PRODUCT NAME

PRODUCT NAME PACKAGE		ORDER UNIT
XBS203V19R-G(*1)	SMA-XG	2.000/Reel

<sup>(\*1)</sup> The "-G" suffix denotes Halogen and Antimony free as well as being fully EU RoHS compliant.

### ■ ELECTRICAL CHARACTERISTICS

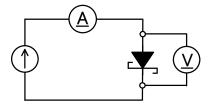
Ta=25°C

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS	CIRCUIT
Forward Voltage	VF1	I <sub>F</sub> =0.5A	-	0.28	0.365	V	1
	VF2	I <sub>F</sub> =1A		0.305	0.375	V	1
	VF3	I <sub>F</sub> =2A		0.35	0.39	V	1
Reverse Current	lr	V <sub>R</sub> =30V	-	0.35	3	mA	2
Inter-Terminal Capacity	Ct	V <sub>R</sub> =1V , f=1MHz	-	280	-	pF	3
Reverse Recovery Time	trr	$I_F=I_R=10mA$ , $irr=1mA$	-	70	-	ns	4

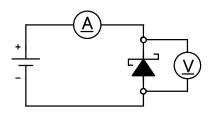
## XBS203V19R-G

### **■**TEST CIRCUITS

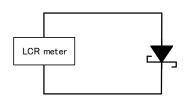
### $Circuit \bigcirc$



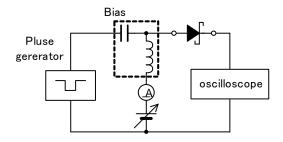
Circuit 2

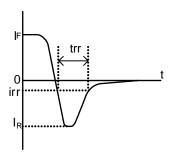


### Circuit3



### Circuit 4



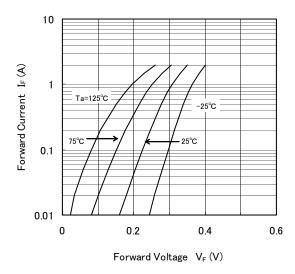


## ■NOTES ON USE

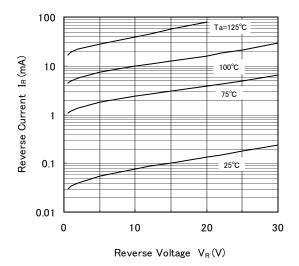
- 1) Please use this IC within the absolute maximum ratings.
- 2) Even within the ratings, in case of high load use continuously such as high temperature, high voltage, high current and thermal stress may cause reliability degradation of the IC. Adequate "Derating" should be taken into consideration while designing.
- 3) Torex places an importance on improving our products and their reliability. We request that users incorporate fail-safe designs and post-aging protection treatment when using Torex products in their systems.

## **■**TYPICAL PERFORMANCE CHARACTERISTICS

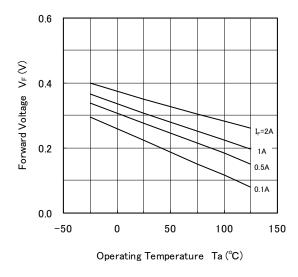
### (1) Forward Current vs. Forward Voltage



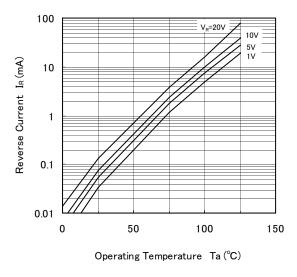
#### (2) Reverse Current vs. Reverse Voltage



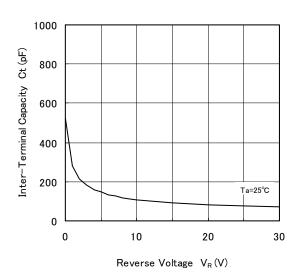
(3) Forward Voltage vs. Operating Temperature



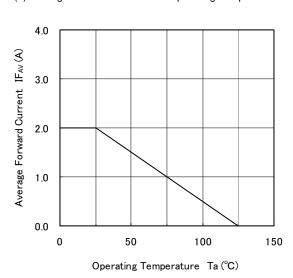
(4) Reverse Current vs. Operating Temperature



(5) Inter-Terminal Capacity vs. Reverse Voltage



(6) Average Forward Current vs. Operating Temperature



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