# **XBS303V19R-G**



ETR16022-001

### Schottky Barrier Diode, 3A, 30V Type

### **■**FEATURES

Forward Voltage :  $V_F=0.355V$  (TYP.)

Forward Current :  $I_{F(AVE)}=3A$ Repetitive Peak Reverse Voltage :  $V_{BM}=30V$ 

### **■**APPLICATIONS

- Rectification
- Protection against reverse connection of battery

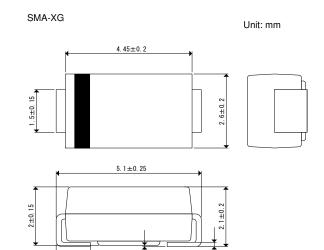
## ■ABSOLUTE MAXIMUM RATINGS

Ta-25°C

PARAMETER	SYMBOL	RATINGS	UNITS	
Repetitive Peak Reverse Voltage	VRM	30	V	
Reverse Voltage	VR	30	V	
Forward Current (Average)	IF(AVE)	3	Α	
Non Continuous	IFSM	60	Α	
Forward Surge Current*1	IF5M	00	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.

### **■ PACKAGING INFORMATION**



### ■MARKING RULE



①23456: 303V19(Product Number)

: Assembly Lot Number

## **■**PRODUCT NAME

PRODUCT NAME	PACKAGE	ORDER UNIT
XBS303V19R-G <sup>(*1)</sup>	SMA-XG	2,000/Reel

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

### **■**ELECTRICAL CHARACTERISTICS

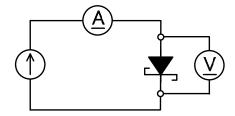
Ta=25°C

PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS	CIRCUIT
Forward Voltage	VF1	I <sub>F</sub> =0.5A	-	0.265	0.34	V	1
	VF2	I <sub>F</sub> =1A	-	0.295	0.36	V	1
	VF3	I <sub>F</sub> =3A	-	0.355	0.39	٧	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	-	385	-	pF	3
Reverse Recovery Time	trr	I <sub>F</sub> =I <sub>R</sub> =10mA , irr=1mA	-	90	-	ns	4

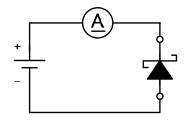
## XBS303V19R-G

### **■TEST CIRCUITS**

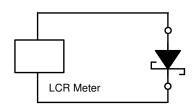
### $\langle \text{ Circuit } \bigcirc \rangle$



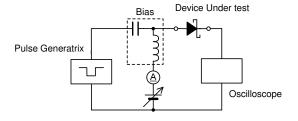
### < Circuit 2 >

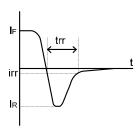


### < Circuit 3 >



### < Circuit 4 >



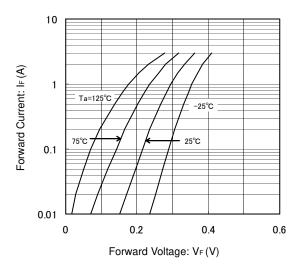


## ■NOTES ON USE

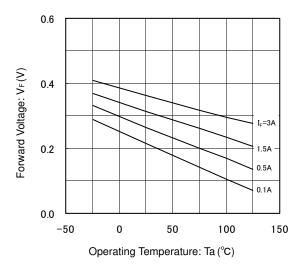
- 1) Please use this IC within the absolute maximum ratings.
- 2) Even within the ratings, in case of high load use continuously such as high temperature, high voltage, high current and thermal stress may cause reliability degradation of the IC. Adequate "Derating" should be taken into consideration 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**

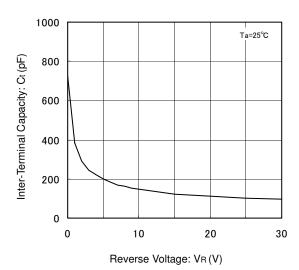
(1) Forward Current vs. Forward Voltage



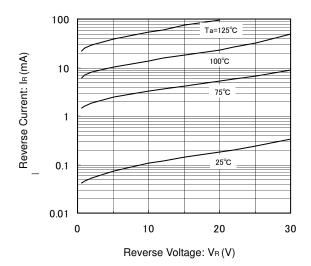
(3) Forward Voltage vs. Operating Temperature



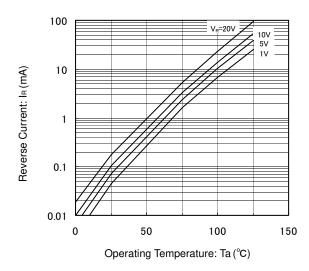
(5) Inter-Terminal Capacity vs. Reverse Voltage



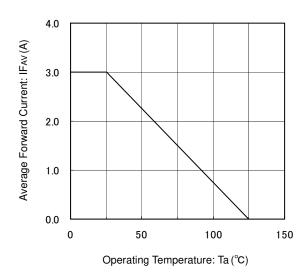
(2) Reverse Current vs. Reverse Voltage



(4) Reverse Current vs. Operating Temperature



(6) Average Forward Current vs. Operating Temperature



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