



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# XBS304S19R-G

Schottky Barrier Diode, 3A, 40V Type

## FEATURES

Forward Voltage	: $V_F=0.465V$ (TYP.)
Forward Current	: $I_{F(AVE)}=3A$
Repetitive Peak Reverse Voltage	: $V_{RM}=40V$

## APPLICATIONS

- Rectification
- Protection against reverse connection of battery

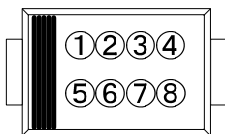
## ABSOLUTE MAXIMUM RATINGS

$T_a=25^\circ C$

PARAMETER	SYMBOL	RATINGS	UNITS
Repetitive Peak Reverse Voltage	$V_{RM}$	40	V
Reverse Voltage	$V_R$	40	V
Forward Current (Average)	$I_{F(AVE)}$	3	A
Non Continuous Forward Surge Current <sup>*1</sup>	$I_{FSM}$	60	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

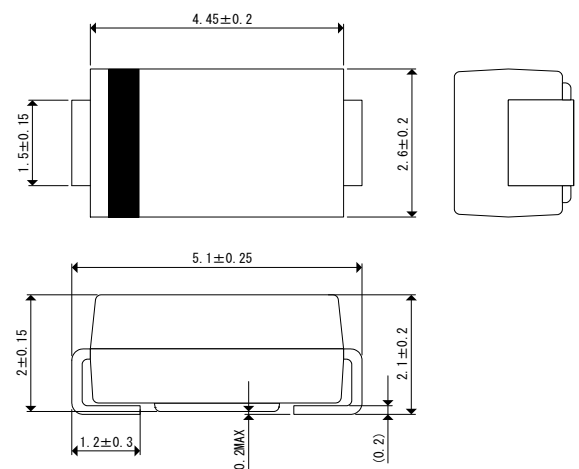


①②③④⑤⑥: 304S19(Product Number)  
⑦⑧ : Assembly Lot Number

## PACKAGING INFORMATION

SMA-XG

Unit: mm



## PRODUCT NAME

PRODUCT NAME	PACKAGE	ORDER UNIT
XBS304S19R-G <sup>(*)</sup>	SMA-XG	2,000/Reel

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

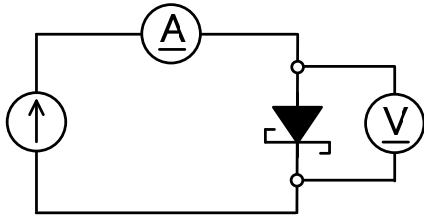
## ELECTRICAL CHARACTERISTICS

$T_a=25^\circ C$

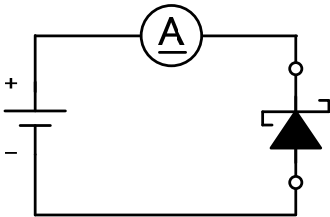
PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS	CIRCUIT
Forward Voltage	$V_F$	$I_F=3A$	-	0.465	0.510	V	①
Reverse Current	$I_{R1}$	$V_R=20V$	-	5	-	$\mu A$	②
	$I_{R2}$	$V_R=40V$	-	15	300	$\mu A$	②
Inter-Terminal Capacity	$C_t$	$V_R=1V, f=1MHz$	-	180	-	pF	③
Reverse Recovery Time	$t_{rr}$	$I_F=I_R=10mA, irr=1mA$	-	82	-	ns	④

## TEST CIRCUITS

< Circuit ① >



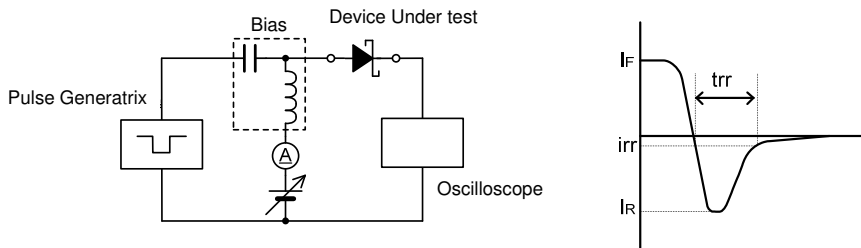
< Circuit ② >



< Circuit ③ >



< Circuit ④ >

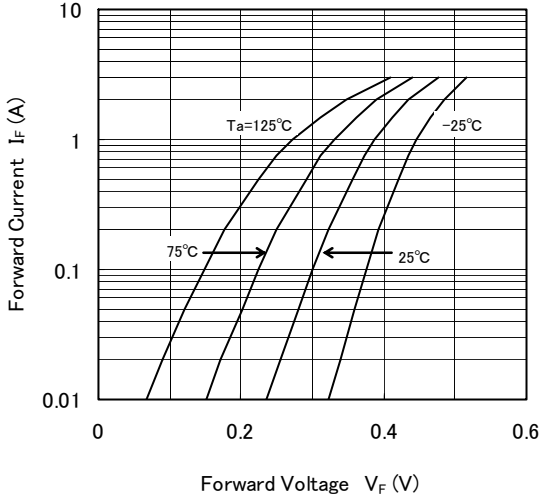


## NOTES ON USE

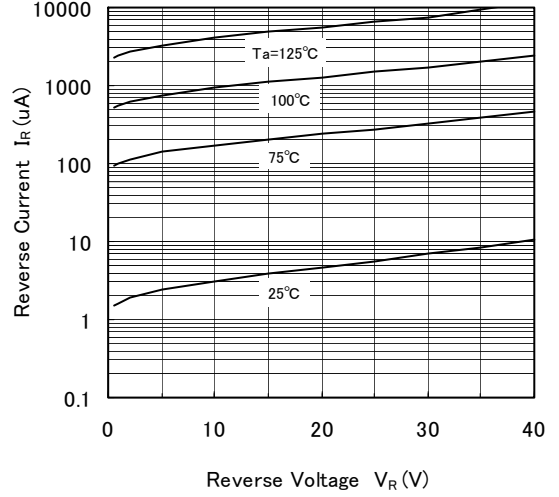
- 1) Please use this IC within the absolute maximum ratings.
- 2) Even within the ratings, in case of high load use continuously such as high temperature, high voltage, high current and thermal stress may cause reliability degradation of the IC. Adequate "Derating" should be taken into consideration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

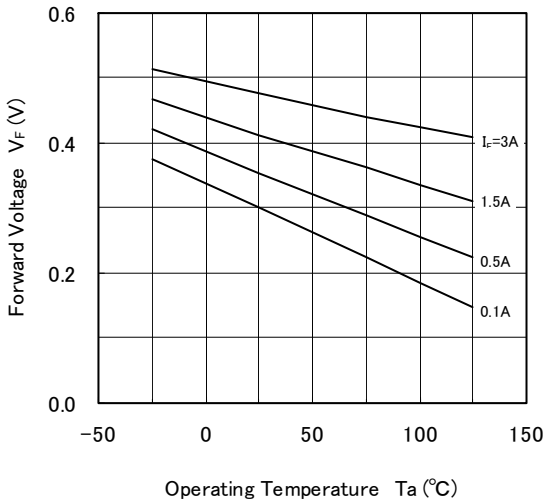
(1) Forward Current vs. Forward Voltage



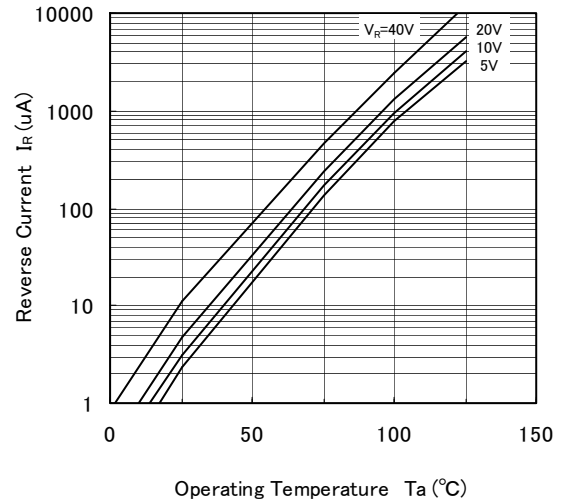
(2) Reverse Current vs. Reverse Voltage



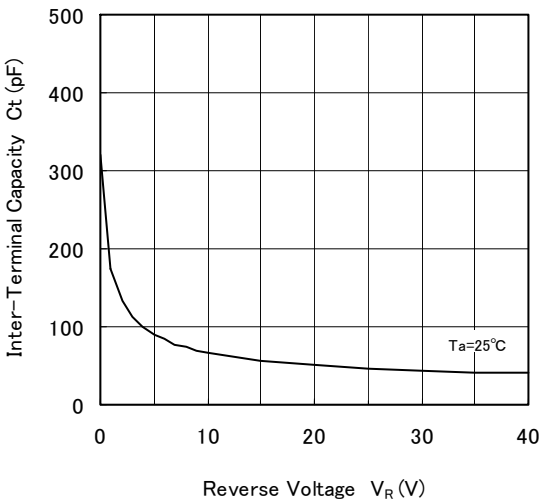
(3) Forward Voltage vs. Operating Temperature



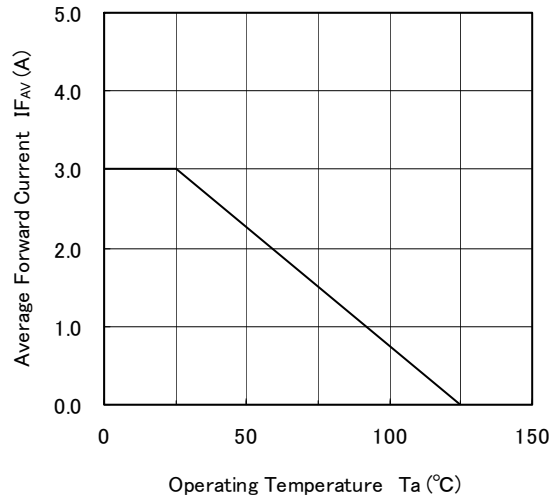
(4) Reverse Current vs. Operating Temperature



(5) Inter-Terminal Capacity vs. Reverse Voltage



(6) Average Forward Current vs. Operating Temperature



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