

Schottky Barrier Diode

■ FEATURES

Forward Voltage	: $V_F=0.60V$ (TYP.)
Forward Current	: $I_{F(AV)}=5A$
Repetitive Peak Reverse Voltage	: $V_{RM}=60V$

■ APPLICATIONS

- Rectification
- Protection against reverse connection of battery

■ ABSOLUTE MAXIMUM RATINGS

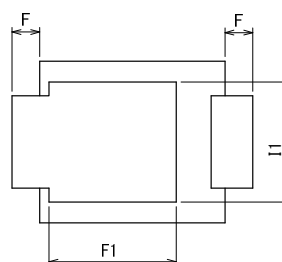
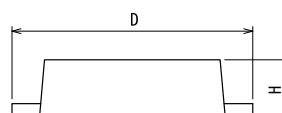
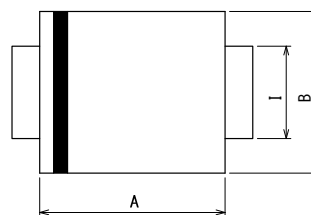
Ta=25°C

PARAMETER	SYMBOL	RATINGS	UNITS
Repetitive Peak Voltage	V_{RM}	60	V
Reverse Voltage	V_R	60	V
Forward Current (Average)	$I_{F(AV)}$	5	A
Peak Forward Surge Current ^(*)	I_{FSM}	150	A
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-50~+150	°C

(*) Non continuous high amplitude 60Hz half-sine wave.

■ PACKAGING INFORMATION

Unit: mm



Symbol	Min	Typ	Max
A	3.80	4.00	4.20
B	3.30	3.50	3.70
D	5.00	5.20	5.40
F	0.45	0.60	0.75
F1	2.55	2.75	2.95
H	1.10	1.20	1.30
I	1.85	2.00	2.15
I1	2.40	2.60	2.80

■ PRODUCT NAME

PRODUCT NAME	PACKAGE	ORDER UNIT
XBS506V1AR-G ^(*)	SMBT	4,000pcs / Reel

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

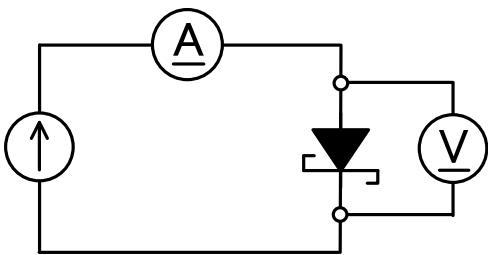
ELECTRICAL CHARACTERISTICS

Ta=25°C

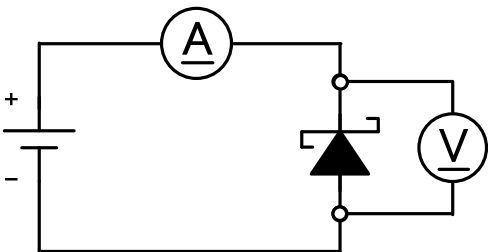
PARAMETER	SYMBOL	CONDITIONS	MIN.	TYP.	MAX.	UNITS	CIRCUIT
Forward Voltage	V_F	$I_F=5A$	-	0.60	0.68	V	①
Reverse Current	I_R	$V_R=60V$	-	0.015	0.05	mA	②

TEST CIRCUITS

Circuit ①



Circuit ②

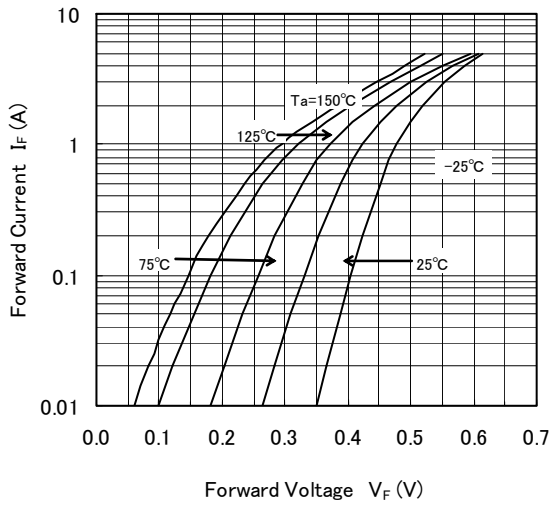


NOTES ON USE

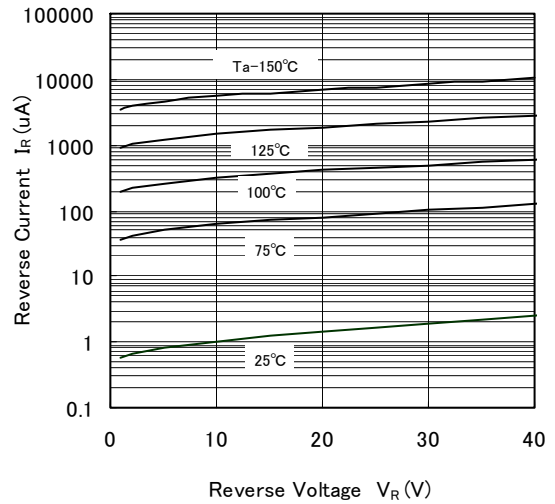
- 1) Please use this IC within the absolute maximum ratings.
- 2) Even within the ratings, in case of high load use continuously such as high temperature, high voltage, high current and thermal stress may cause reliability degradation of the IC. Adequate "Derating" should be taken into consideration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

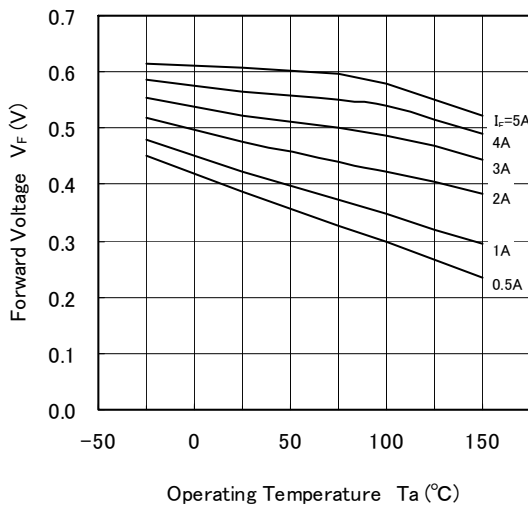
(1) Forward Current vs. Forward Voltage



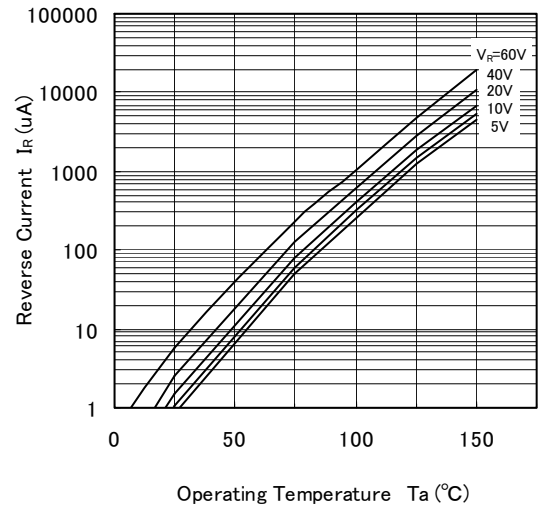
(2) Reverse Current vs. Reverse Voltage



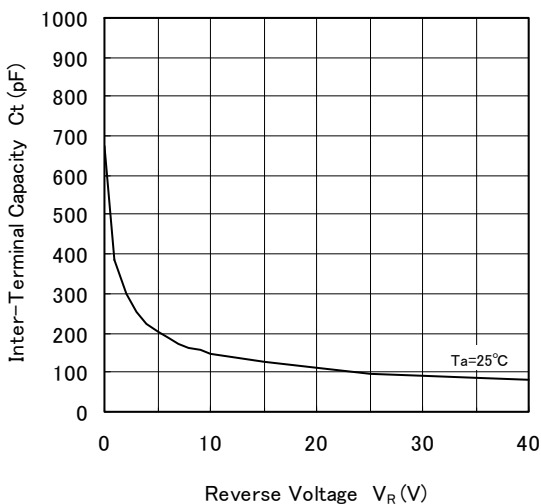
(3) Forward Voltage vs. Operating Temperature



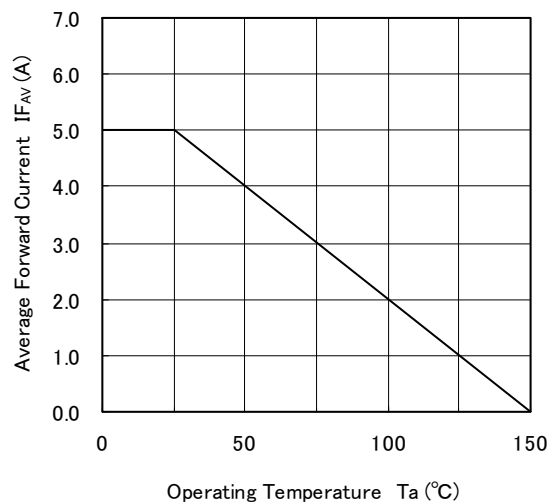
(4) Reverse Current vs. Operating Temperature



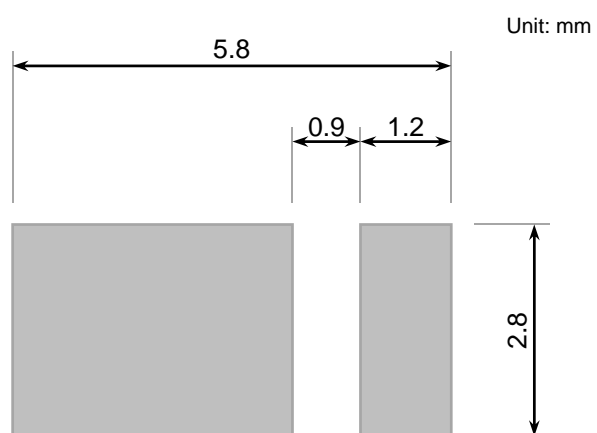
(5) Inter-Terminal Capacity vs. Reverse Voltage



(6) Average Forward Current vs. Operating Temperature



■ REFERENCE PATTERN LAYOUT



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.
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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.
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