XBR12A Series

ETR37002-002

Single-Phase Bridge Rectifier

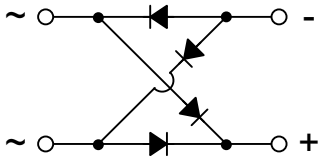
■FEATURES

Forward Current : $I_{F(AV)}$=1.5A
Repetitive Peak Reverse Voltage : V_{RM}=600V ~ 1000V
Environmentally Friendly : EU RoHS Compliant

■APPLICATIONS

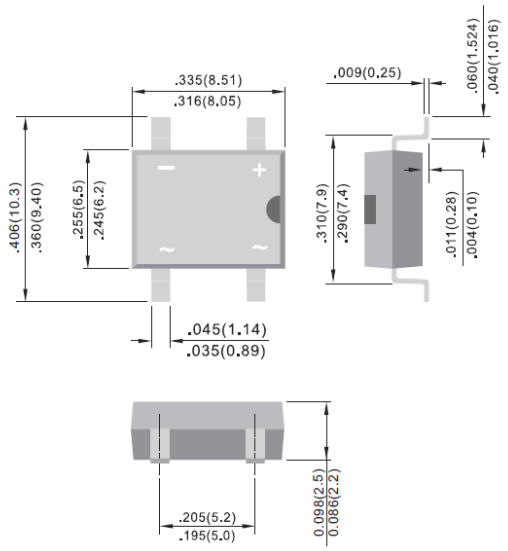
- ●LED Lighting
- ●Power supply module
- ●AC Adapter, Battery charger
- ●Home appliances

■PIN CONFIGURATION



■ PACKAGING INFORMATION

●SDIP Unit : inch (mm)



■ABSOLUTE MAXIMUM RATINGS

Ta=25℃

PARAMETER	SYMBOL	XBR12			UNITS
		A6	A8	A10	
Repetitive Peak Reverse Voltage	V_{RM}	600	800	1000	V
RMS Voltage	V_{RMS}	420	560	700	V
Reverse Voltage (DC)	V_R	600	800	1000	V
Forward Current (Average) at Ta=40℃ (*1)	$I_{F(AV)}$	1.5			A
Non Continuous Forward Surge Current (8.3ms single half-sine wave)	I_{FSM}	50			A
Rating for fusing (t<8.3ms)	I^2t	10			A^2・s
Junction Temperature	Tj	150			℃
Storage Temperature	Tstg	-55 to +150			℃

(*1) 60Hz sine wave, Resistance load, PCB mounted

■ELECTRICAL CHARACTERISTICS

Ta=25℃

PARAMETER	SYMBOL	TEST CONDITIONS	LIMITS			UNITS
			MIN.	TYP.	MAX.	
Forward Voltage	V_F	I_F=1A, Pulse measurement, per diode	-	-	1.1	V
Reverse Current	I_R	V_R=V_{RM}, Pulse measurement, per diode	-	-	5.0	μA
Junction Capacitance	C_J	V_R=4V, f=1MHz, per diode	-	25	-	pF

■PRODUCT NAME

PRODUCT NAME	PACKAGE	ORDER UNIT	MARKING CODE
XBR12A6-G *	SDIP	3,000 / 2 Reels	DI156S
XBR12A8-G *	SDIP	3,000 / 2 Reels	DI158S
XBR12A10-G *	SDIP	3,000 / 2 Reels	DI1510S

* The “-G” suffix denotes Halogen and Antimony free as well as being fully EU RoHS compliant.
* However, the product uses high-melting-point solder paste and lead glass, both of which are not compliant with EU RoHS.

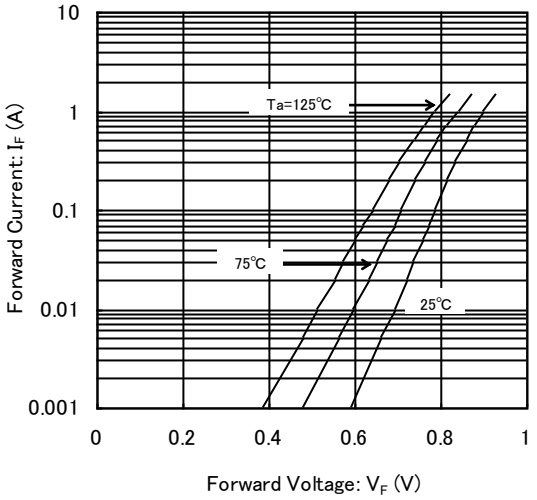
■NOTES ON USE

1. Please use this IC within the absolute maximum ratings.
   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.

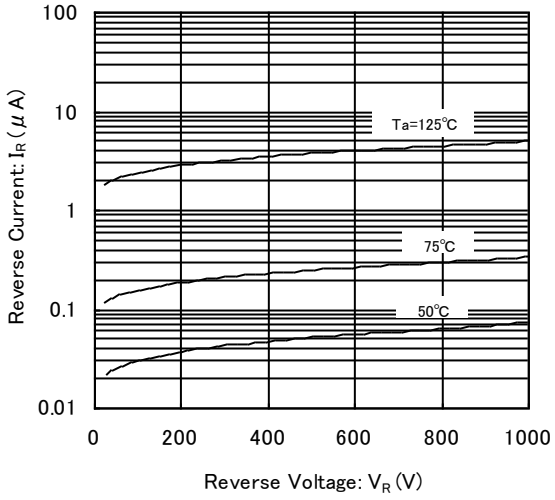
2. Torex places an importance on improving our products and their reliability.
   We request that users incorporate fail-safe designs and post-aging protection treatment when using Torex products in their systems.

■TYPICAL PERFORMANCE CHARACTERISTICS

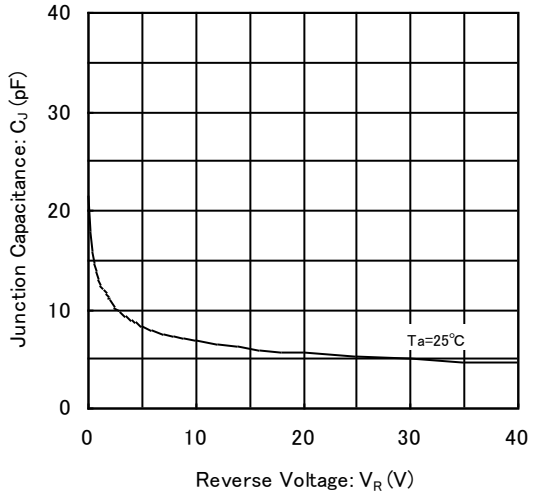
(1) Forward Current vs. Forward Voltage



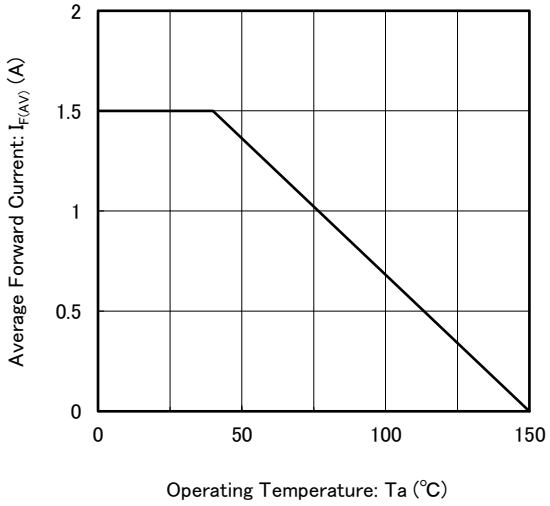
(2) Reverse Current vs. Reverse Voltage



(3) Junction Capacitance vs. Reverse Voltage



(4) Average Forward Current vs. Operating Temperature

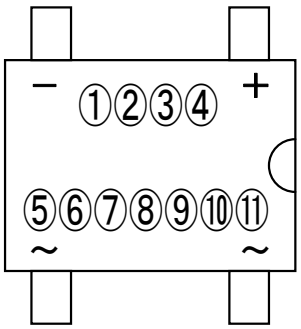


■PACKAGING INFORMATION

For the latest package information go to, www.torexsemi.com/technical-support/packages

PACKAGE	OUTLINE / LAND PATTERN	THERMAL CHARACTERISTICS
SDIP	SDIP PKG	-

■MARKING



①②③④ : Control Number
⑤⑥⑦⑧⑨⑩⑪ : Marking Code

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.

2. The information in this datasheet is intended to illustrate the operation and characteristics of our products. We neither make warranties or representations with respect to the accuracy or completeness of the information contained in this datasheet nor grant any license to any intellectual property rights of ours or any third party concerning with the information in this datasheet.

3. Applicable export control laws and regulations should be complied and the procedures required by such laws and regulations should also be followed, when the product or any information contained in this datasheet is exported.

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.

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