XBZ12A120CR-G

TOREX

ETR39008-001a

Zener Diode

■FEATURES

Ultra Small Package
Environmentally Friendly : EU RoHS Compliant, Pb Free

■APPLICATIONS

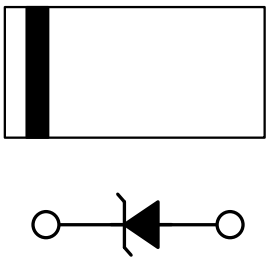
●ESD Protection
●Voltage Regulation

■PRODUCT NAME

PRODUCT NAME	PACKAGE	ORDER UNIT
XBZ12A120CR-G *	USP-2B02	10,000pcs/Reel

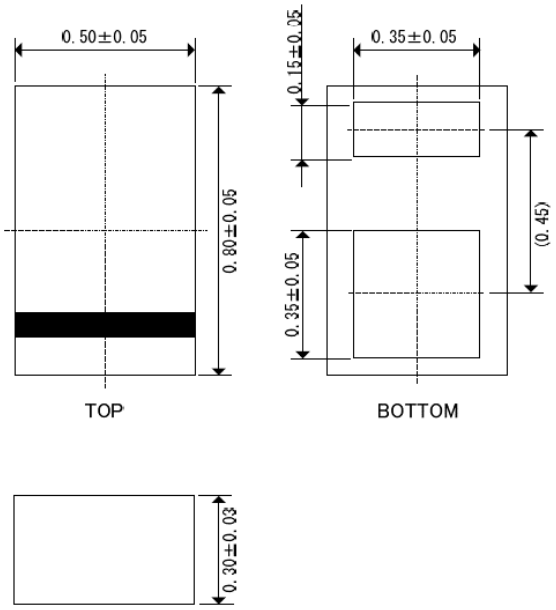
* The “-G” suffix denotes Halogen and Antimony free as well as being fully RoHS compliant

■PIN CONFIGURATION



■ PACKAGING INFORMATION

●USP-2B02



Unit: mm

■ ABSOLUTE MAXIMUM RATINGS

Ta=25℃

PARAMETER	SYMBOL	RATINGS	UNITS
Power Dissipation	Pd	137.5 (*1)	mW
Junction Temperature	Tj	150	℃
Storage Temperature	Tstg	-55 to +150	℃
IEC61000-4-2 (ESD) Air	V_{ESD_A}	±15	kV
IEC61000-4-2 (ESD) Contact	V_{ESD_C}	±8	kV

(*1) PCB mounted

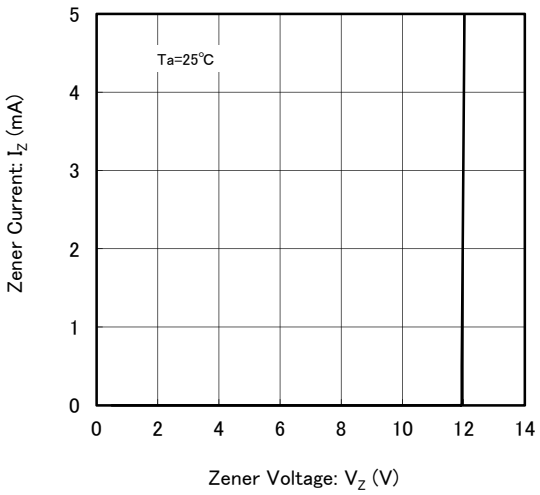
■ELECTRICAL CHARACTERISTICS

Ta=25℃

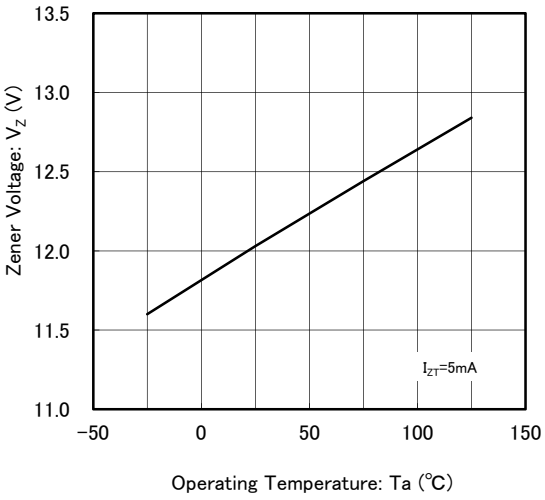
PARAMETER	SYMBOL	TEST CONDITIONS	MIN.	TYP.	MAX.	UNITS
Forward Voltage	V_F	I_F=10mA	-	-	1.0	V
Zener Voltage	V_Z	I_{ZT}=5mA	11.4	12	12.6	V
Zener Impedance	Z_{ZT1}	I_{ZT}=5mA	-	-	25	Ω
	Z_{ZT2}	I_{ZT}=1mA	-	-	150	Ω
Reverse Current	I_R	V_R=9.1V	-	-	0.1	μA

■TYPICAL PERFORMANCE CHARACTERISTICS

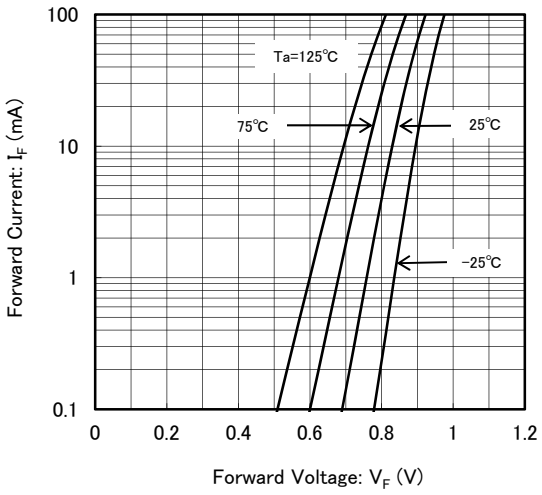
(1) Zener Current vs. Zener Voltage



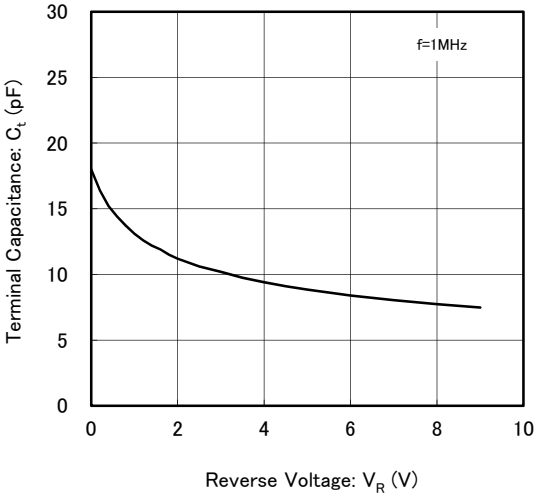
(2) Zener Voltage vs. Operating Temperature



(3) Forward Current vs. Forward Voltage



(4) Terminal Capacitance vs. Reverse Voltage



■NOTES ON USE

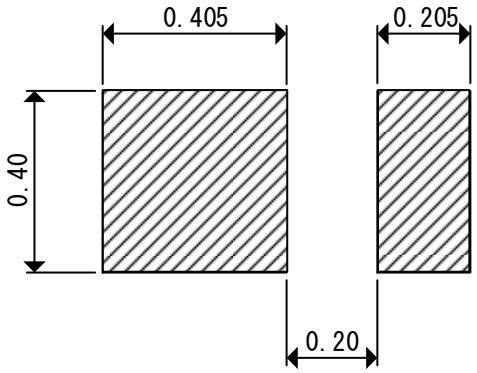
1. Please use this IC within the absolute maximum ratings.
Even within the ratings, in case of high load use continuously such as high temperature, high voltage, high current and thermal stress may
cause reliability degradation of the IC.

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.

■REFERENCE PATTERN LAYOUT

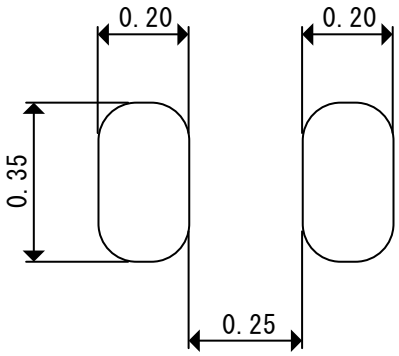
●USP-2B02 Recommended Pattern Layout

(Reference)



●USP-2B02 Recommended Metal Mask Design

(Reference)

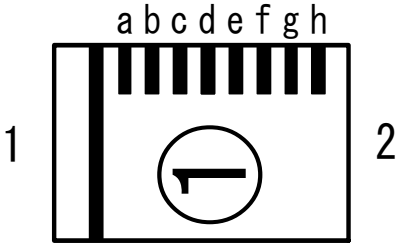


■MARKING RULE

① represents products

MARK	PRODUCT
4	XBZ12A120CR-G

USP-2B02



Lot Number a,b,c,d,f,e,g,h Manufacturing date

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.

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.

9.

TOREX SEMICONDUCTOR LTD.