

XBZ12A120CR-G

ETR39008-002

Zener Diode

FEATURES

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

APPLICATIONS

- ESD Protection
- Voltage Regulation

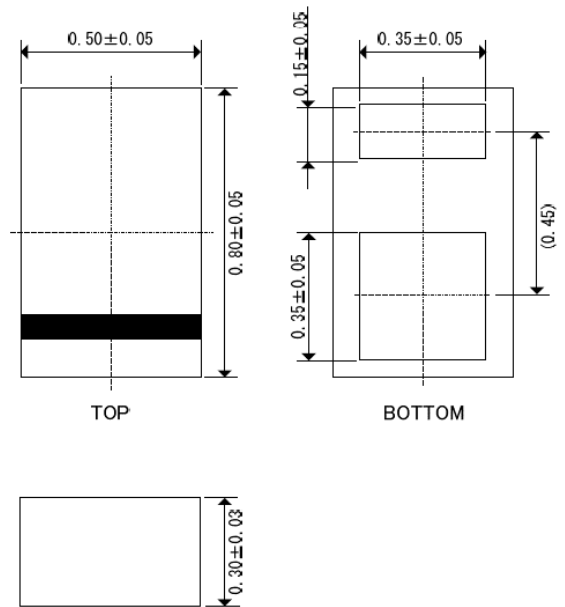
PRODUCT NAME

| 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

PACKAGING INFORMATION

● USP-2B02



Unit: mm

PIN CONFIGURATION



ABSOLUTE MAXIMUM RATINGS

Ta=25°C

| PARAMETER | SYMBOL | RATINGS | UNITS |
|----------------------------|--------|----------------------|-------|
| Power Dissipation | Pd | 137.5 ^(*) | mW |
| Junction Temperature | Tj | 150 | °C |
| Storage Temperature | Tstg | -55 to +150 | °C |
| IEC61000-4-2 (ESD) Air | VESD_A | ±15 | kV |
| IEC61000-4-2 (ESD) Contact | VESD_C | ±8 | kV |

(*) PCB mounted

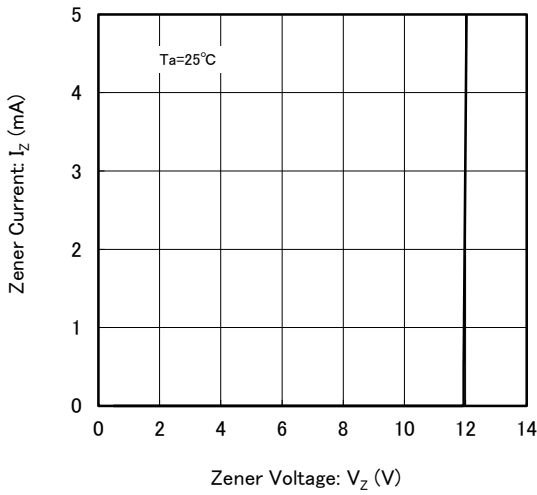
ELECTRICAL CHARACTERISTICS

Ta=25°C

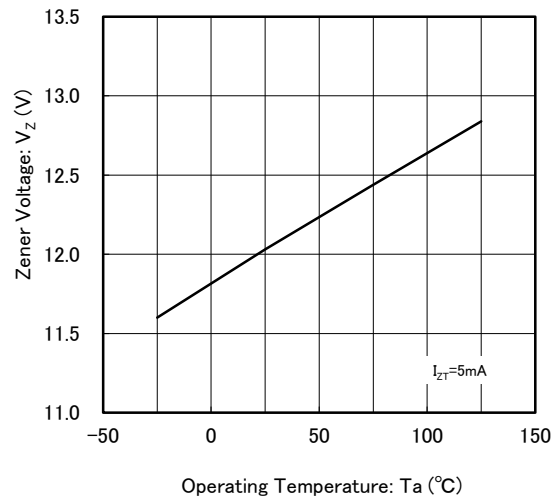
| PARAMETER | SYMBOL | TEST CONDITIONS | MIN. | TYP. | MAX. | UNITS |
|-----------------|------------------|----------------------|------|------|------|-------|
| Forward Voltage | V _F | I _F =10mA | - | - | 1.0 | V |
| Zener Voltage | V _Z | I _{ZT} =5mA | 11.4 | 12 | 12.6 | V |
| Zener Impedance | 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

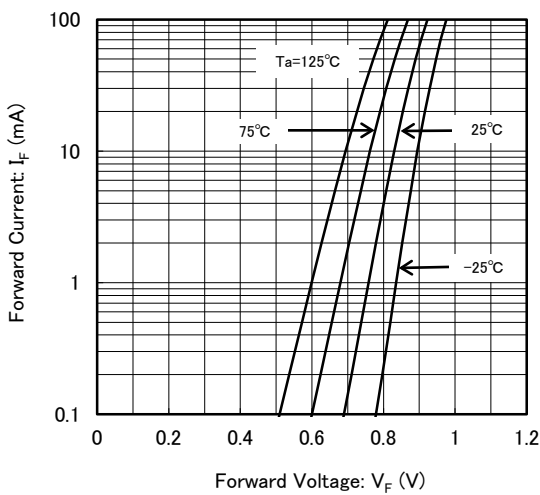
(1) Zener Current vs. Zener Voltage



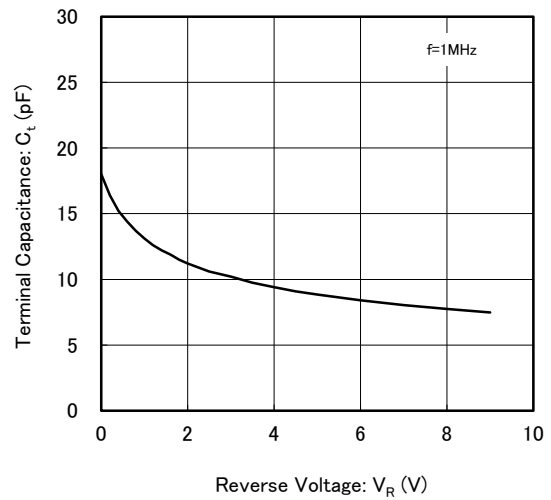
(2) Zener Voltage vs. Operating Temperature



(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.

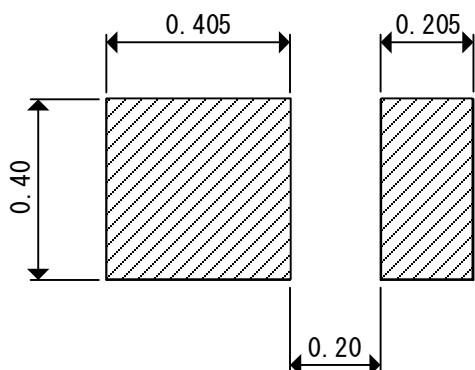
Even within the ratings, in case of high load use continuously such as high temperature, high voltage, high current and thermal stress may cause reliability degradation of the IC.

2. Torex places an importance on improving our products and their reliability.

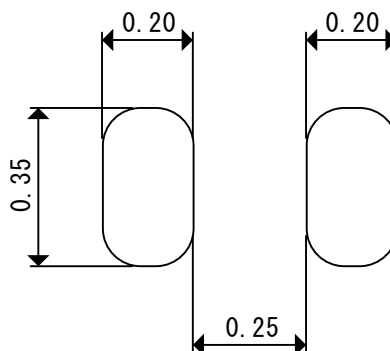
We request that users incorporate fail-safe designs and post-aging protection treatment when using Torex products in their systems.

■ REFERENCE PATTERN LAYOUT

● USP-2B02 Recommended Pattern Layout
(Reference)



● USP-2B02 Recommended Metal Mask Design
(Reference)

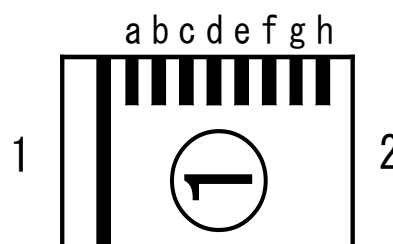


■ MARKING RULE

① represents products

| MARK | PRODUCT |
|------|---------------|
| 4 | XBZ12A120CR-G |

USP-2B02



Lot Number a,b,c,d Year of manufacture and years.

| 製造西曆年 | a | b | c | d |
|--------|---|---|---|---|
| xxx0 年 | - | - | - | □ |
| xxx1 年 | - | - | □ | - |
| xxx2 年 | - | - | □ | □ |
| xxx3 年 | - | □ | - | - |
| xxx4 年 | - | □ | - | □ |
| xxx5 年 | - | □ | □ | - |
| xxx6 年 | - | □ | □ | □ |
| xxx7 年 | □ | - | - | - |
| xxx8 年 | □ | - | - | □ |
| xxx9 年 | □ | - | □ | - |

Lot Number e,f,g,h Production month.

| 製造月 | e | f | g | h |
|------|---|---|---|---|
| 1 月 | - | - | - | □ |
| 2 月 | - | - | □ | - |
| 3 月 | - | - | □ | □ |
| 4 月 | - | □ | - | - |
| 5 月 | - | □ | - | □ |
| 6 月 | - | □ | □ | - |
| 7 月 | - | □ | □ | □ |
| 8 月 | □ | - | - | - |
| 9 月 | - | - | - | □ |
| 10 月 | - | - | □ | - |
| 11 月 | - | - | □ | □ |
| 12 月 | - | □ | - | - |

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