

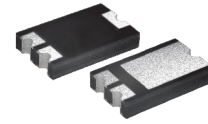
CDBZ31060-HF

Reverse Voltage: 60 Volts

Forward Current: 10 Amp

RoHS Device

Halogen free



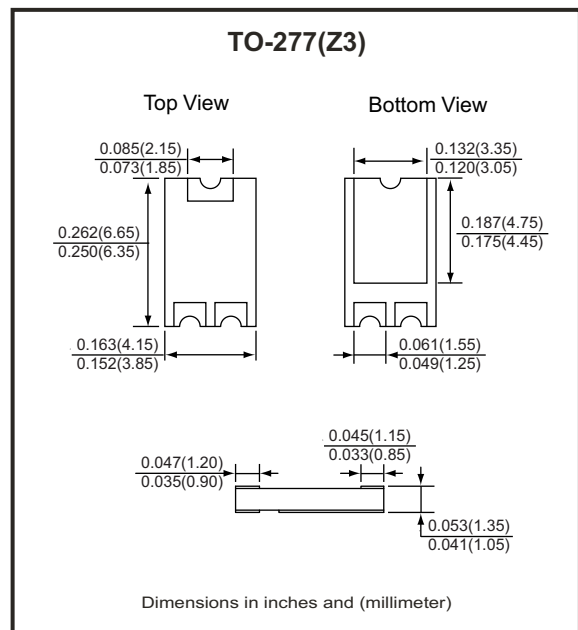
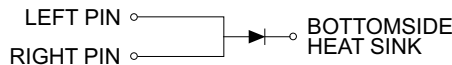
Features

- Lead less chip form, no lead damage.
- Low power loss, High efficiency.
- High current capability, low VF.
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0 .

Mechanical data

- Case: Packed with FRP substrate and epoxy underfilled.
- Terminals: Pure Tin plated (Lead-Free), solderable per MIL-STD-750, method 2026.
- Weight: 0.08 grams (approx).

Circuit Diagram



Maximum Ratings (at TA=25°C unless otherwise noted)

| Parameter | Symbol | Rating | Unit |
|--|----------|-------------|------|
| Repetitive peak reverse voltage | VRRM | 60 | V |
| Average forward current | IF(AV) | 10 | A |
| Peak forward surge current (8.3ms single half sine-wave) | IFSM | 180 | A |
| Operating and storage temperature range | TJ, TSTG | -55 to +150 | °C |

Electrical Characteristics (at TA=25°C unless otherwise noted)

| Parameter | Symbol | Conditions | Min. | Typ. | Max. | Unit |
|---------------------------------|--------|---|--------|-----------|------------|------|
| Forward voltage (NOTE 1) | VF | IF = 10 A | - | 0.67 | 0.75 | V |
| Repetitive peak reverse current | IRRM | VR = Max. VRRM TA= 25°C TA= 125°C | - - | 0.01 - | 0.10 15 | mA |
| Thermal resistance | RθJA | Junction to ambient (NOTE 2) | - | 60 | - | °C/W |
| | RθJL | Junction to lead (NOTE 2) | - | 22 | - | °C/W |
| | RθJC | Junction to case (NOTE 2) | - | 20 | - | °C/W |

NOTES : (1) Pulse test width PW=300usec , 1% duty cycle.
(2) Mounted on P.C.B. with 14 x 14mm copper pad areas.

Company reserves the right to improve product design , functions and reliability without notice.

RATING AND CHARACTERISTIC CURVES (CDBZ31060-HF)

Fig.1 - Forward Current Derating Curve

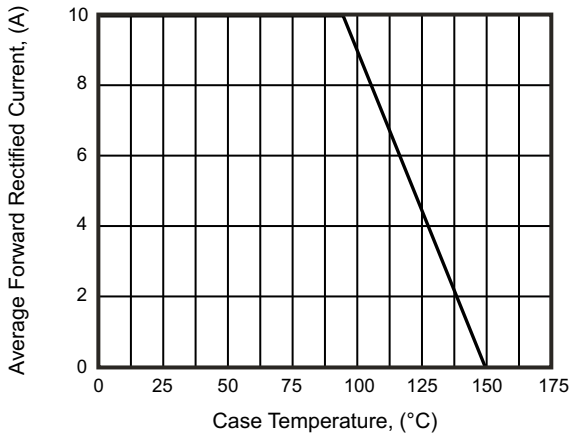


Fig.2 - Maximum Non-Repetitive Peak Forward Surge Current

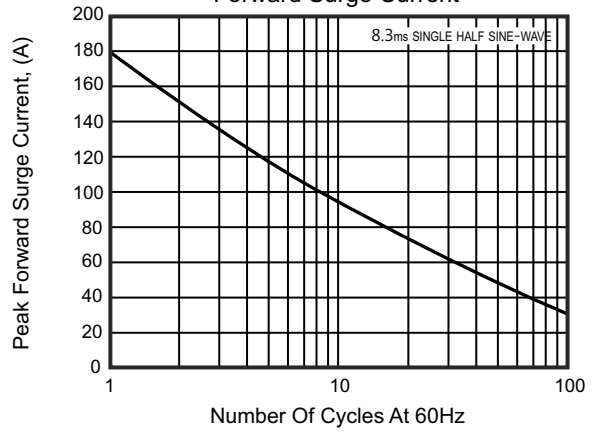


Fig.3 - Typical Instantaneous Forward Characteristics

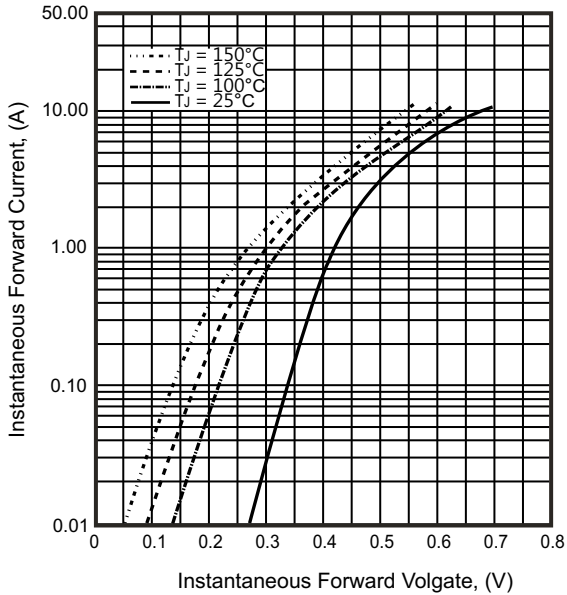
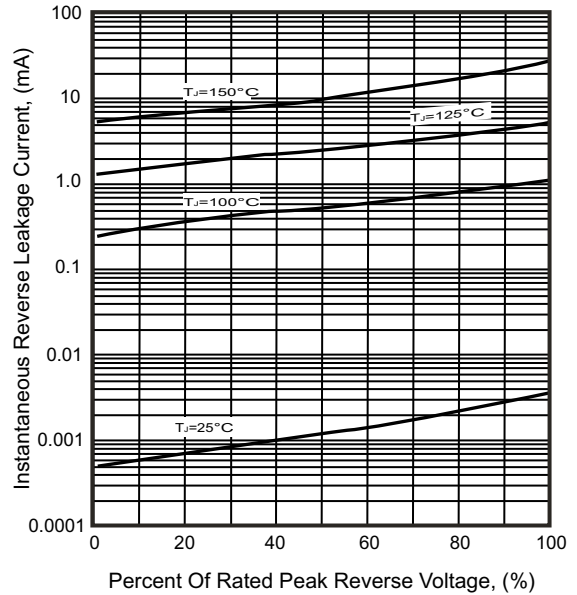
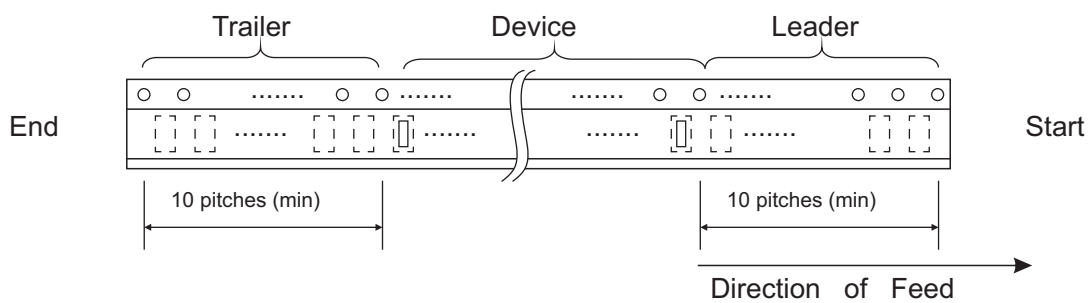
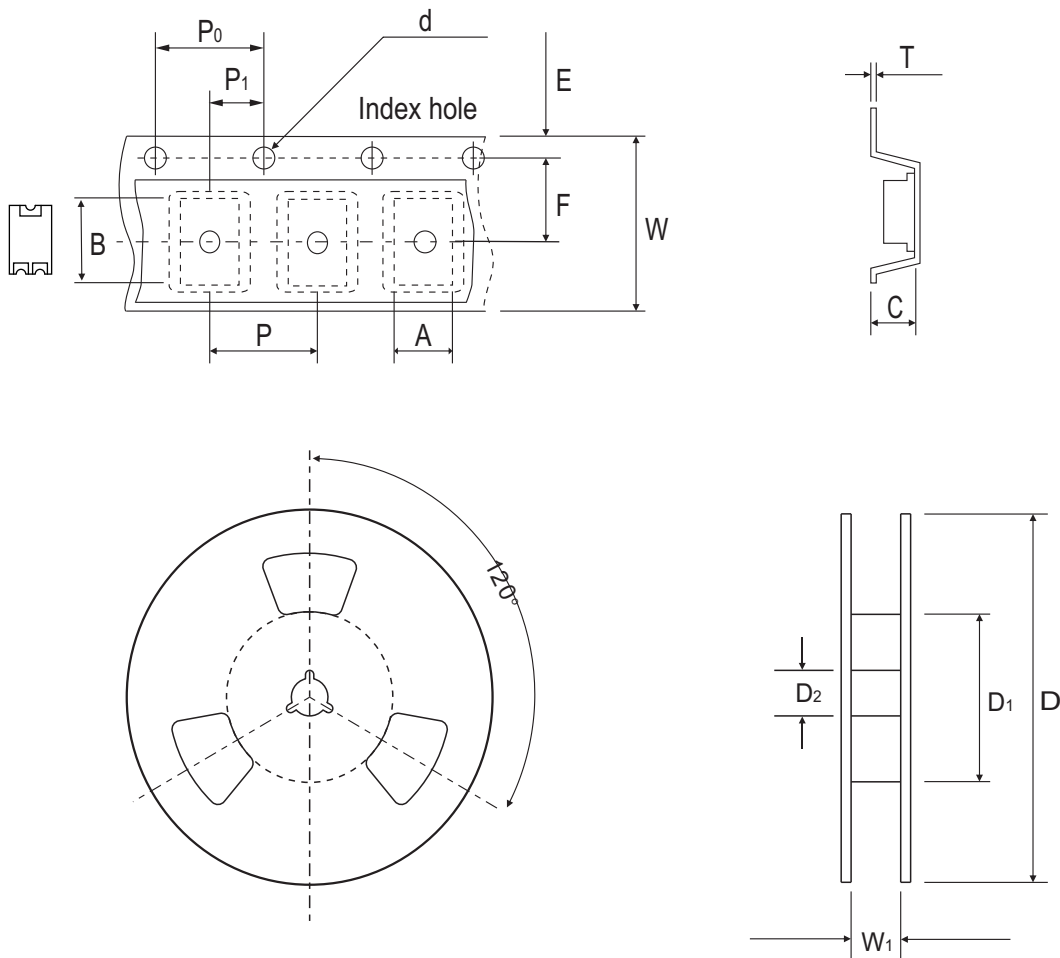


Fig.4 - Typical Reverse Characteristics



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Reel Taping Specification



| TO-277(Z3) | SYMBOL | A | B | C | d | D | D ₁ | D ₂ |
|------------|--------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|
| | (mm) | 4.25 ± 0.10 | 6.80 ± 0.10 | 1.45 ± 0.10 | 1.50 ± 0.10 | 330 ± 2.00 | 50.0 MIN. | 13.0 ± 0.50 |
| | (inch) | 0.167 ± 0.004 | 0.268 ± 0.004 | 0.057 ± 0.004 | 0.059 ± 0.004 | 12.992 ± 0.079 | 1.969 MIN. | 0.512 ± 0.020 |

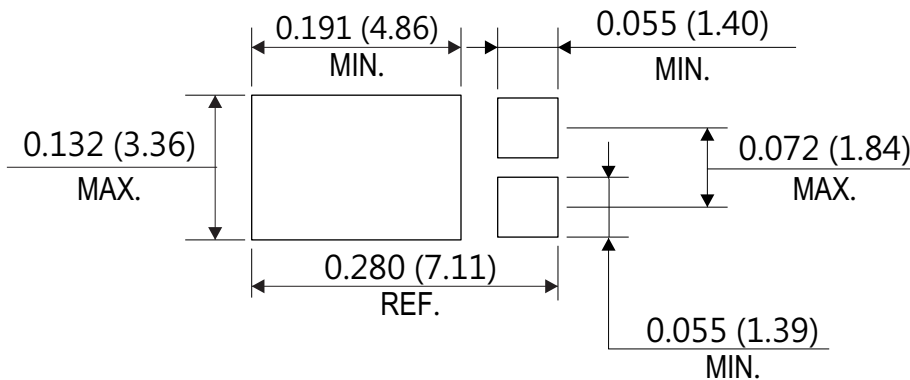
| TO-277(Z3) | SYMBOL | E | F | P | P ₀ | P ₁ | W | W ₁ |
|------------|--------|---------------|---------------|---------------|----------------|----------------|---------------|----------------|
| | (mm) | 1.75 ± 0.10 | 5.50 ± 0.05 | 8.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.10 | 12.00 ± 0.30 | 14.4 MAX. |
| | (inch) | 0.069 ± 0.004 | 0.217 ± 0.002 | 0.315 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.472 ± 0.012 | 0.567 MAX. |

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Marking Code



Suggested PAD Layout



Standard Packaging

| Case Type | REEL PACK | |
|------------|-----------------|---------------------|
| | REEL (pcs) | Reel Size (inch) |
| TO-277(Z3) | 5,000 | 13 |