

Ultra Low VF SMD Schottky Barrier Rectifiers

Comchip
SMD Diode Specialist

CDBZ2140LL-HF

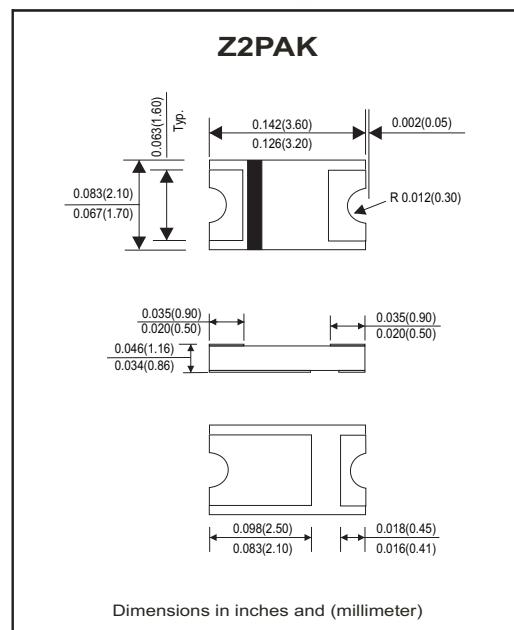
Reverse Voltage: 40 Volts
Forward Current: 1.0 Amp
RoHS Device
Halogen free

Features

- Lead less chip form, no lead damage.
- Low power loss, High efficiency.
- High current capability, low VF.
- Plastic package has UL 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 : 0.012 grams(approx.).



Dimensions in inches and (millimeter)

Circuit Diagram



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

| Parameter | Symbol | Rating | Unit |
|--|--------------------|-------------|------|
| Repetitive peak reverse voltage | V _{RRM} | 40 | V |
| Average forward current | I _{F(AV)} | 1.0 | A |
| Peak forward surge current (8.3ms single half sine-wave) | I _{FSM} | 20 | A |
| Operating junction temperature range | T _J | -55 to +125 | °C |
| Storage temperature range | T _{STG} | -55 to +150 | °C |

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

| Parameter | Symbol | Conditions | Min. | Typ. | Max. | Unit |
|--|------------------|---|------|------|------|------|
| Forward voltage (NOTE 1) | V _F | I _F = 0.1 A | - | 0.24 | - | V |
| | | I _F = 0.5 A | - | 0.31 | - | |
| | | I _F = 1.0 A | - | 0.37 | 0.38 | |
| Repetitive peak reverse current (NOTE 1) | I _{RRM} | V _R = Max. V _{RRM} , TA= 25°C | - | 0.30 | 1.0 | mA |
| Junction capacitance | C _J | V _R = 4V, f = 1.0 MHz | - | 115 | - | pF |
| Thermal resistance | R _{θJA} | Junction to ambient (NOTE 2) | - | 88 | - | °C/W |
| | R _{θJC} | Junction to case (NOTE 2) | - | 28 | - | °C/W |

NOTES : (1) Pulse test width PW=300usec , 1% duty cycle.

(2) Mounted on P.C. board with 0.2 x 0.2"(5.0 x 5.0mm) copper pad areas.

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

REV:B

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RATING AND CHARACTERISTIC CURVES (CDBZ2140LL-HF)

Fig.1 - Typical Forward Current Derating Curve

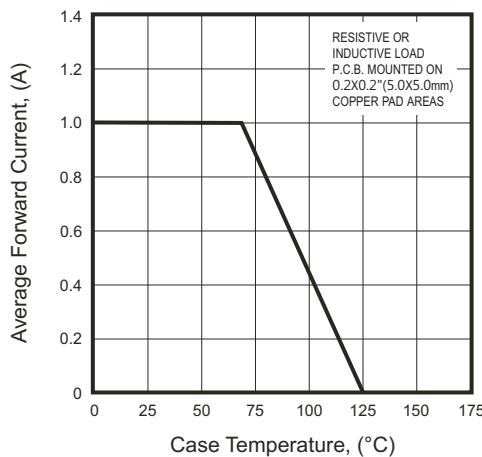


Fig.2 - Typical Forward Characteristics

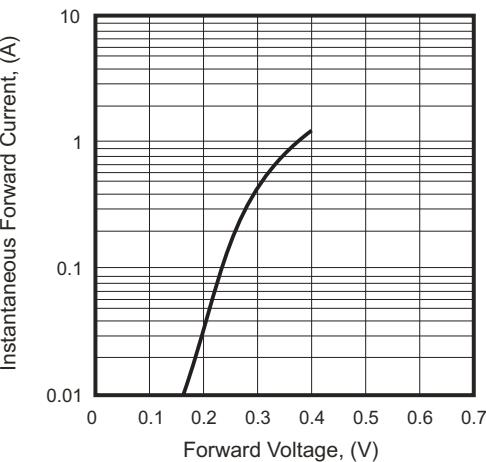


Fig.3 - Non-repetitive Forward Surge Current

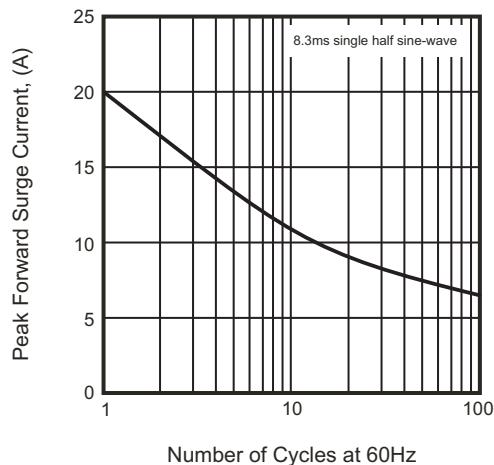


Fig.4 - Typical Reverse Characteristics

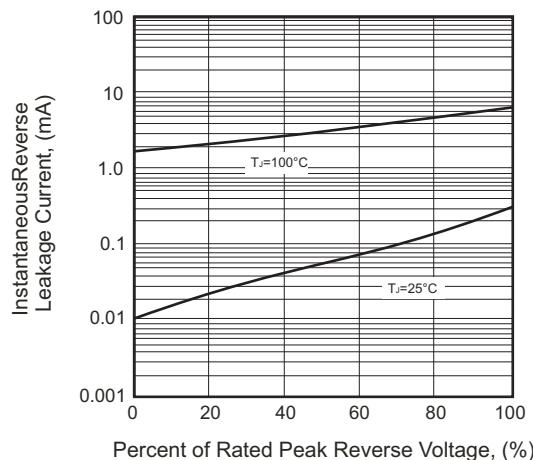
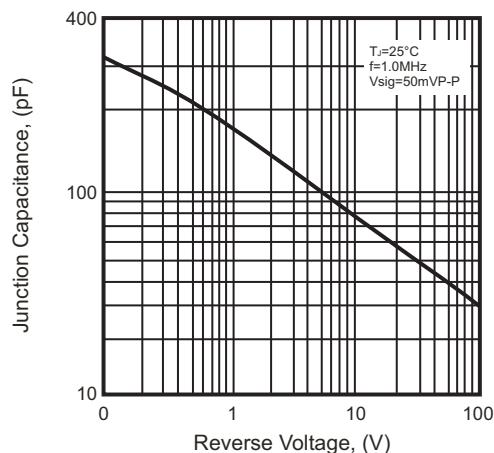
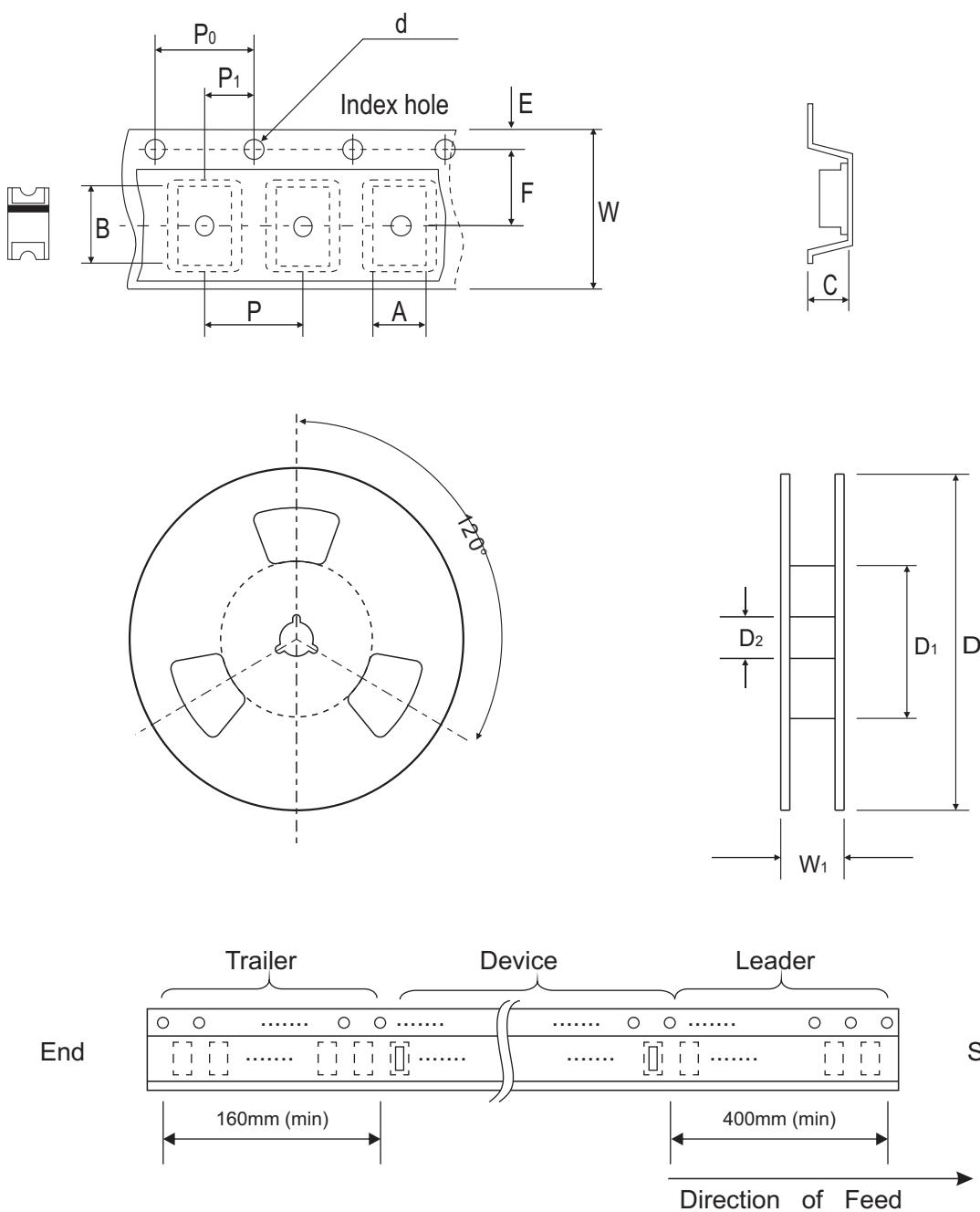


Fig.5 - Typical Junction Capacitance



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Reel Taping Specification



| Z2PAK | SYMBOL | A | B | C | d | D | D ₁ | D ₂ |
|--------|-------------------|-------------------|-------------------|-------------------|-------------------|------------|-------------------|----------------|
| (mm) | 2.20 ± 0.10 | 3.65 ± 0.10 | 1.28 ± 0.10 | 1.50 ± 0.10 | 178.00 ± 2.00 | 50.00 MIN. | 13.00 ± 0.50 | |
| (inch) | 0.087 ± 0.004 | 0.144 ± 0.004 | 0.050 ± 0.004 | 0.059 ± 0.004 | 7.008 ± 0.079 | 1.969 MIN. | 0.512 ± 0.020 | |

| Z2PAK | SYMBOL | E | F | P | P ₀ | P ₁ | W | W ₁ |
|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|------------|----------------|
| (mm) | 1.75 ± 0.10 | 5.50 ± 0.05 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.10 | 12.00 ± 0.30 | 18.70 MAX. | |
| (inch) | 0.069 ± 0.004 | 0.217 ± 0.002 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.472 ± 0.012 | 0.736 MAX. | |

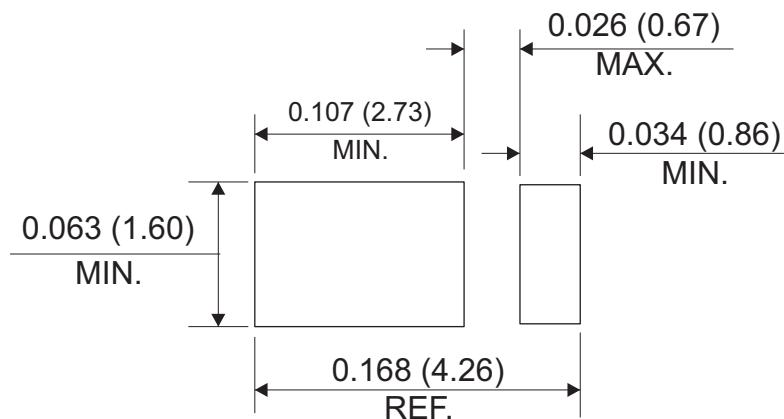
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Marking Code

| Part Number | Marking Code |
|---------------|--------------|
| CDBZ2140LL-HF | A4L |



Suggested PAD Layout



NOTES : 1. Dimensions in inches and (millimeter)
2. The Layout is just for reference.

Standard Packaging

| Case Type | REEL PACK | |
|-----------|-----------------|---------------------|
| | REEL (pcs) | Reel Size (inch) |
| Z2PAK | 3,000 | 7 |