

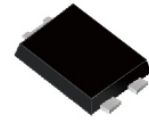
CDBHA1545-HF

Reverse Voltage: 45V

Forward Current: 15A

RoHS Device

Halogen Free



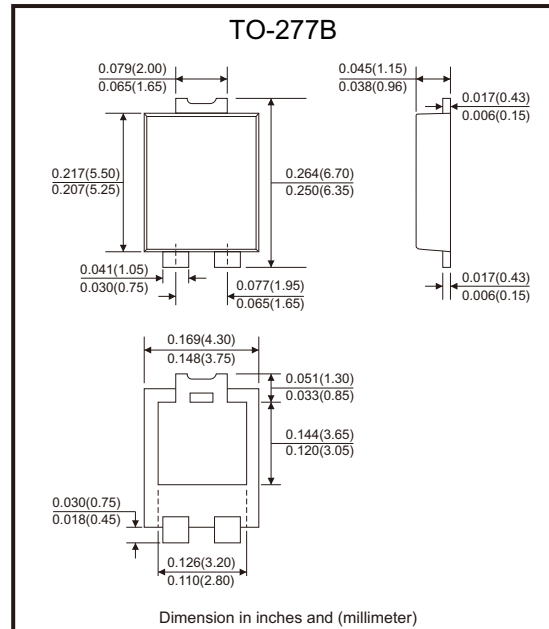
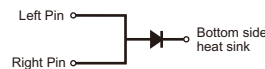
Features

- Metal silicon junction, majority carrier conduction.
- High surge capability.
- High temperature soldering guaranteed: 260°C/10 seconds.
- High current capability, low forward voltage drop.

Mechanical data

- Case: TO-277B, molded plastic.
- Epoxy: UL flammability classification rating 94V-0.
- Terminals: Solder plated, solderable per MIL-STD-202, method 208.

Circuit Diagram



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

| Parameter | Symbol | Value | Unit |
|---------------------------------------------------------|-----------------|------------|------|
| Peak repetitive reverse voltage | V_{RRM} | 45 | V |
| RMS reverse voltage | V_{RMS} | 31.5 | V |
| DC blocking voltage | V_{DC} | 45 | V |
| Maximum average forward output current | $I_{F(AV)}$ | 15 | A |
| Peak forward surge current, 8.3ms single half sine-wave | I_{FSM} | 250 | A |
| Typical thermal resistance (Note 1) | $R_{\theta JA}$ | 60 | °C/W |
| | $R_{\theta JC}$ | 20 | |
| | $R_{\theta JL}$ | 15 | |
| Operating junction temperature range | T_J | -55 ~ +150 | °C |
| Storage temperature range | T_{STG} | -55 ~ +150 | °C |

Notes: 1. Device mounted on PCB with 10mm x 20mm x 0.1mm copper pad areas.

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

| Parameter | Conditions | Symbol | Min. | Typ. | Max. | Unit |
|---------------------------------------------|-------------------------------------------------------------|--------|------|------|------|---------|
| Max. instantaneous forward voltage (Note 1) | $I_F = 15A$, @ $T_A = 25^\circ C$ | V_F | | | 0.47 | V |
| Maximum reverse current (Note 2) | Rated V_R , @ $T_J = 25^\circ C$ @ $T_J = 100^\circ C$ | I_R | | | 500 | μA |
| | | | | | 40 | mA |

- Notes: 1. Pulse test: 300 μs pulse width, 1% duty cycle.
2. Pulse test: pulse width 40ms.

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

REV:A

Rating and Characteristics Curves (CDBHA1545-HF)

Fig.1 - Forward Current Derating Curve

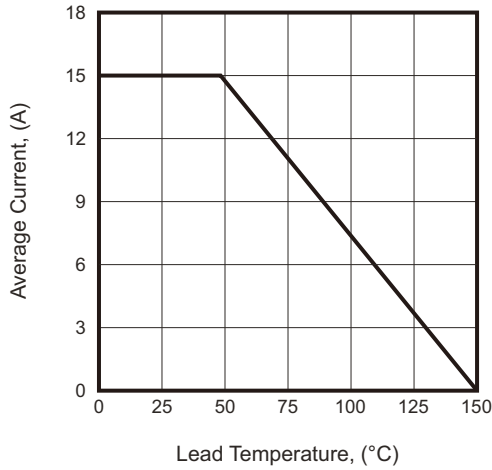


Fig.2 - Surge Current Derating Curve

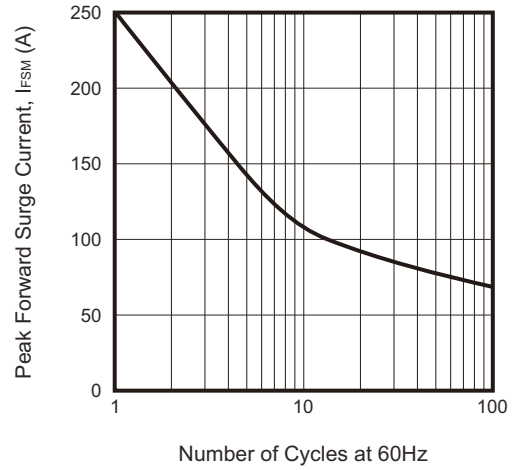


Fig.3 - Typical Forward Voltage Characteristics

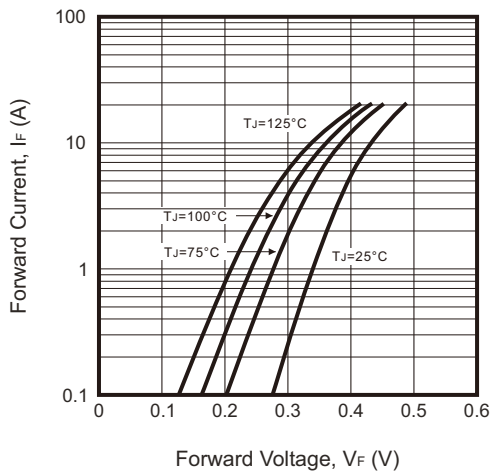
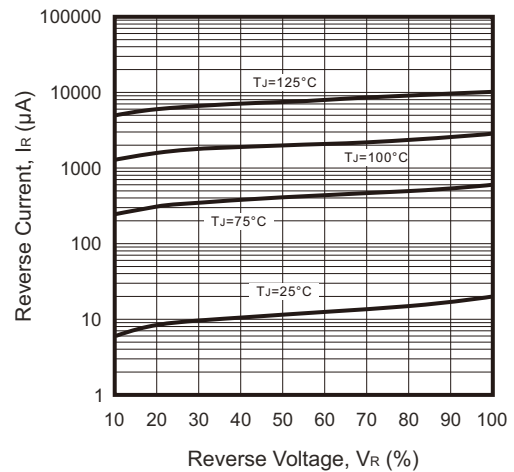
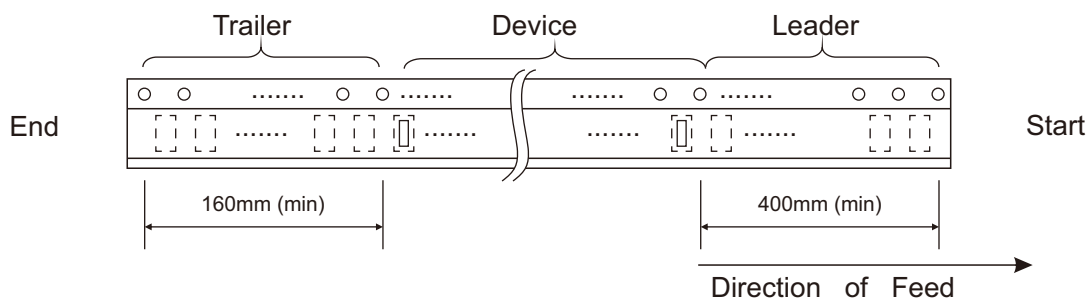
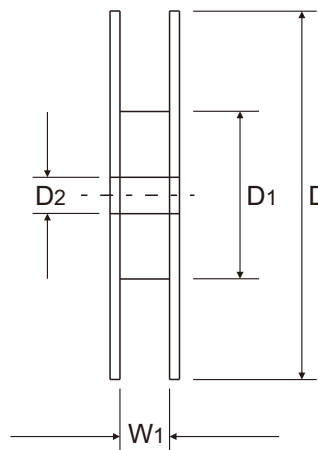
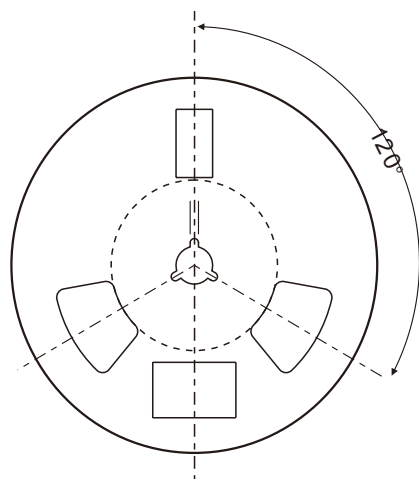
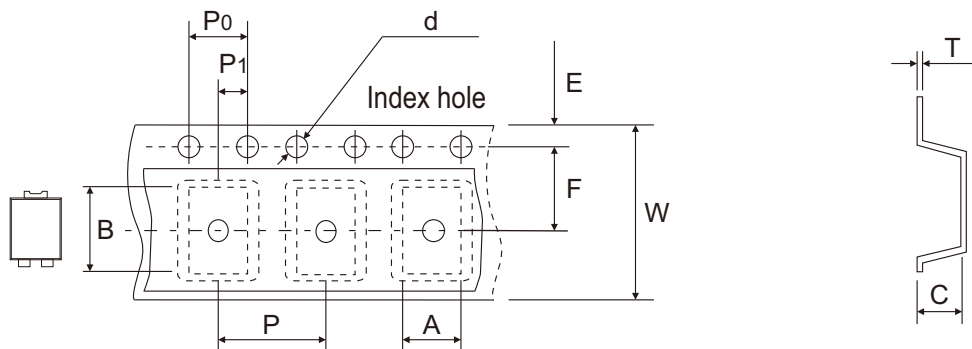


Fig.4 - Typical Reverse Characteristics



Reel Taping Specification



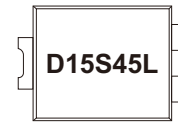
| TO-277B | SYMBOL | A | B | C | d | D | D1 | D2 |
|---------|--------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|
| | (mm) | 4.30 ± 0.10 | 6.80 ± 0.10 | 1.50 ± 0.10 | 1.55 ± 0.10 | 330 ± 1.00 | 75.00 ± 1.00 | 13.50 ± 0.50 |
| | (inch) | 0.169 ± 0.004 | 0.268 ± 0.004 | 0.059 ± 0.004 | 0.061 ± 0.004 | 12.992 ± 0.039 | 2.953 ± 0.039 | 0.531 ± 0.020 |

| TO-277B | SYMBOL | E | F | P | P0 | P1 | T | W | W1 |
|---------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| | (mm) | 1.75 ± 0.10 | 5.50 ± 0.10 | 8.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.10 | 0.23 ± 0.05 | 12.00 ± 0.10 | 17.00 ± 1.00 |
| | (inch) | 0.069 ± 0.004 | 0.217 ± 0.004 | 0.315 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.009 ± 0.002 | 0.472 ± 0.004 | 0.669 ± 0.039 |

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

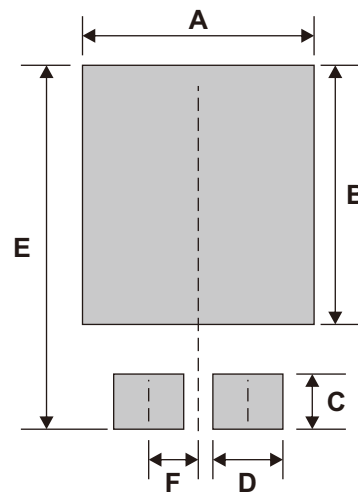
Marking Code

| Part Number | Marking Code |
|--------------|--------------|
| CDBHA1545-HF | D15S45L |



Suggested PAD Layout

| SIZE | TO-277B | |
|------|---------|--------|
| | (mm) | (inch) |
| A | 4.20 | 0.165 |
| B | 4.70 | 0.185 |
| C | 1.27 | 0.050 |
| D | 1.00 | 0.039 |
| E | 6.60 | 0.260 |
| F | 0.90 | 0.035 |



Note: 1. The pad layout is for reference purpose only.

Standard Packaging

| Case Type | REEL PACK | |
|-----------|------------|------------------|
| | REEL (pcs) | Reel Size (inch) |
| TO-277B | 4,000 | 13 |