

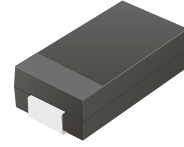
CDBB120LR-HF Thru. CDBB1200LR-HF

Reverse Voltage: 20 to 200 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free

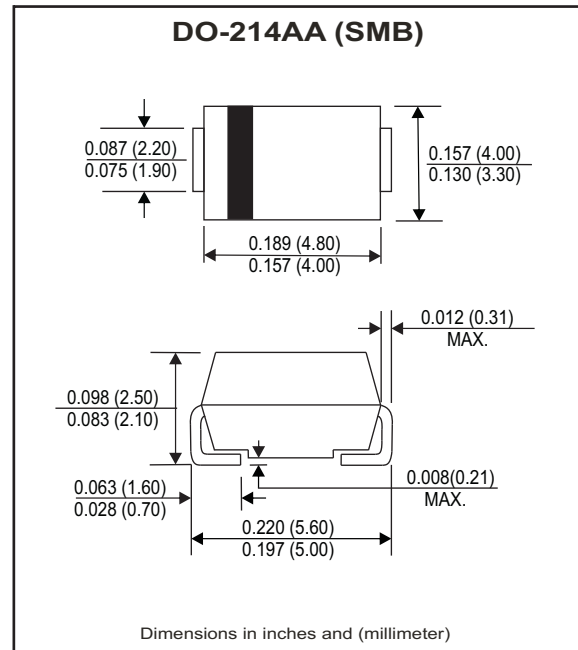


Features

- Low Profile surface mount applications in order to optimize board space.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guardring for overvoltage protection.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.

Mechanical data

- Epoxy: UL94-V0 rate flame retardant.
- Case: Molded plastic, DO-214AA / SMB
- Terminals: solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- Weight: 0.091 grams



Maximum Ratings and Electrical Characteristics

Ratings at Ta=25°C unless otherwise noted.
 Single phase, half wave, 60Hz, resistive or inductive loaded.
 For capacitive load, derate current by 20% .

| Parameter | Symbol | CDBB 120LR-HF | CDBB 140LR-HF | CDBB 160LR-HF | CDBB 1100LR-HF | CDBB 1150LR-HF | CDBB 1200LR-HF | Units |
|--|------------------|---------------|---------------|---------------|----------------|----------------|----------------|-------|
| Max. Repetitive peak reverse voltage | V _{RRM} | 20 | 40 | 60 | 100 | 150 | 200 | V |
| Max. DC blocking voltage | V _{DC} | 20 | 40 | 60 | 100 | 150 | 200 | V |
| Max. RMS voltage | V _{RMS} | 14 | 28 | 42 | 70 | 105 | 140 | V |
| Max. Instantaneous forward voltage @1.0A, T _A =25°C | V _F | 0.40 | 0.45 | 0.55 | 0.75 | 0.82 | 0.85 | V |
| Operating Temperature | T _J | -50 to +150 | | | | -50 to +175 | | °C |

| Parameter | Conditions | Symbol | MIN. | TYP. | MAX. | Units |
|----------------------------|--|------------------|------|------|------|-------|
| Forward rectified current | see Fig.1 | I _o | | | 1.0 | A |
| Forward surge current | 8.3ms single half sine-wave superimposed on rate load (JEDEC method) | I _{FSM} | | | 50 | A |
| Reverse Current | V _R =V _{RRM} T _A =25°C | I _R | | | 0.5 | mA |
| | V _R =V _{RRM} T _A =100°C | I _R | | | 20 | mA |
| Thermal Resistance | Junction to ambient | R _{θJA} | | 88 | | °C/W |
| Diode Junction capacitance | f=1MHz and applied 4V DC reverse Voltage | C _J | | 120 | | pF |
| Storage temperature | | T _{STG} | -50 | | +175 | °C |

RATING AND CHARACTERISTIC CURVES (CDBB120LR-HF Thru. CDBB1200LR-HF)

Fig.1 - Typical Forward Current Derating Curve

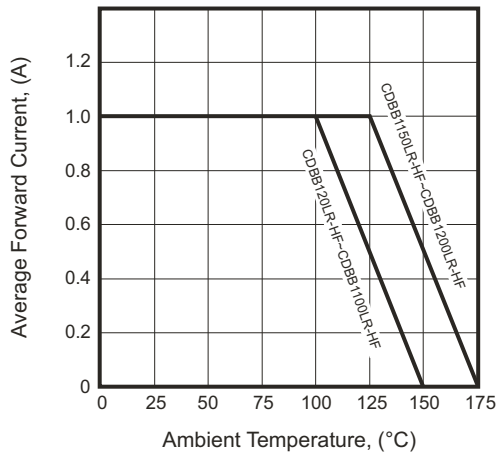


Fig.2 - Typical Forward Characteristics

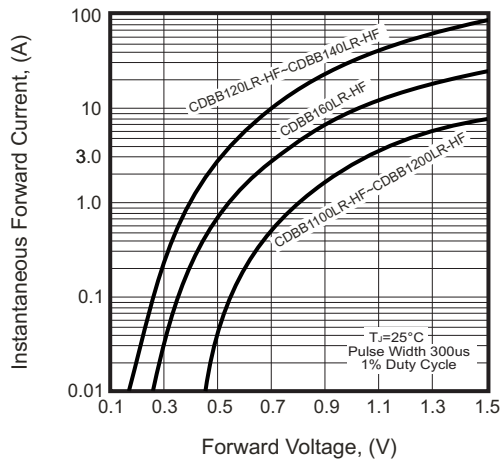


Fig.3 - Maximum Non-repetitive Forward Surge Current

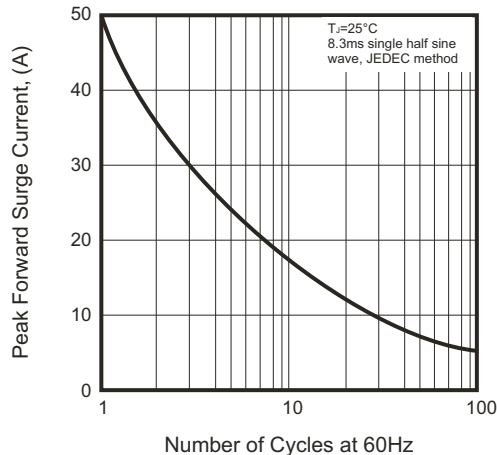


Fig.4 - Typical Junction Capacitance

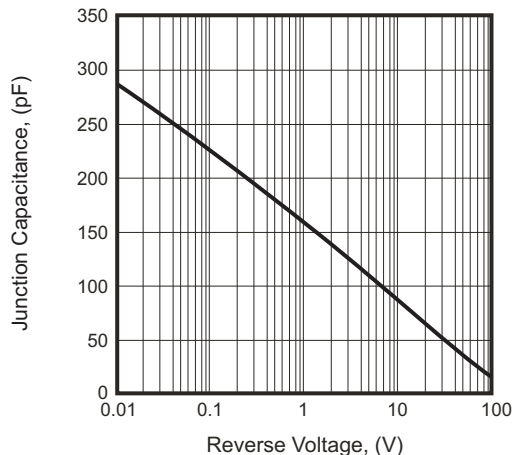
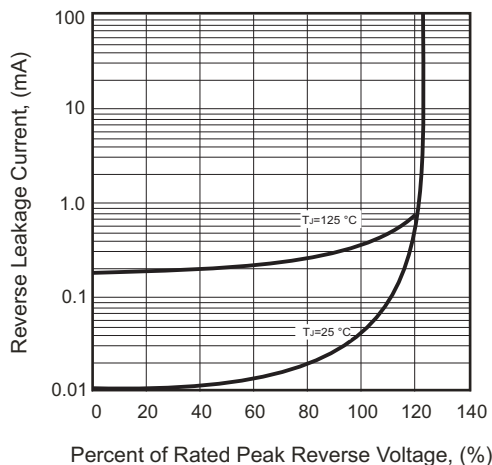
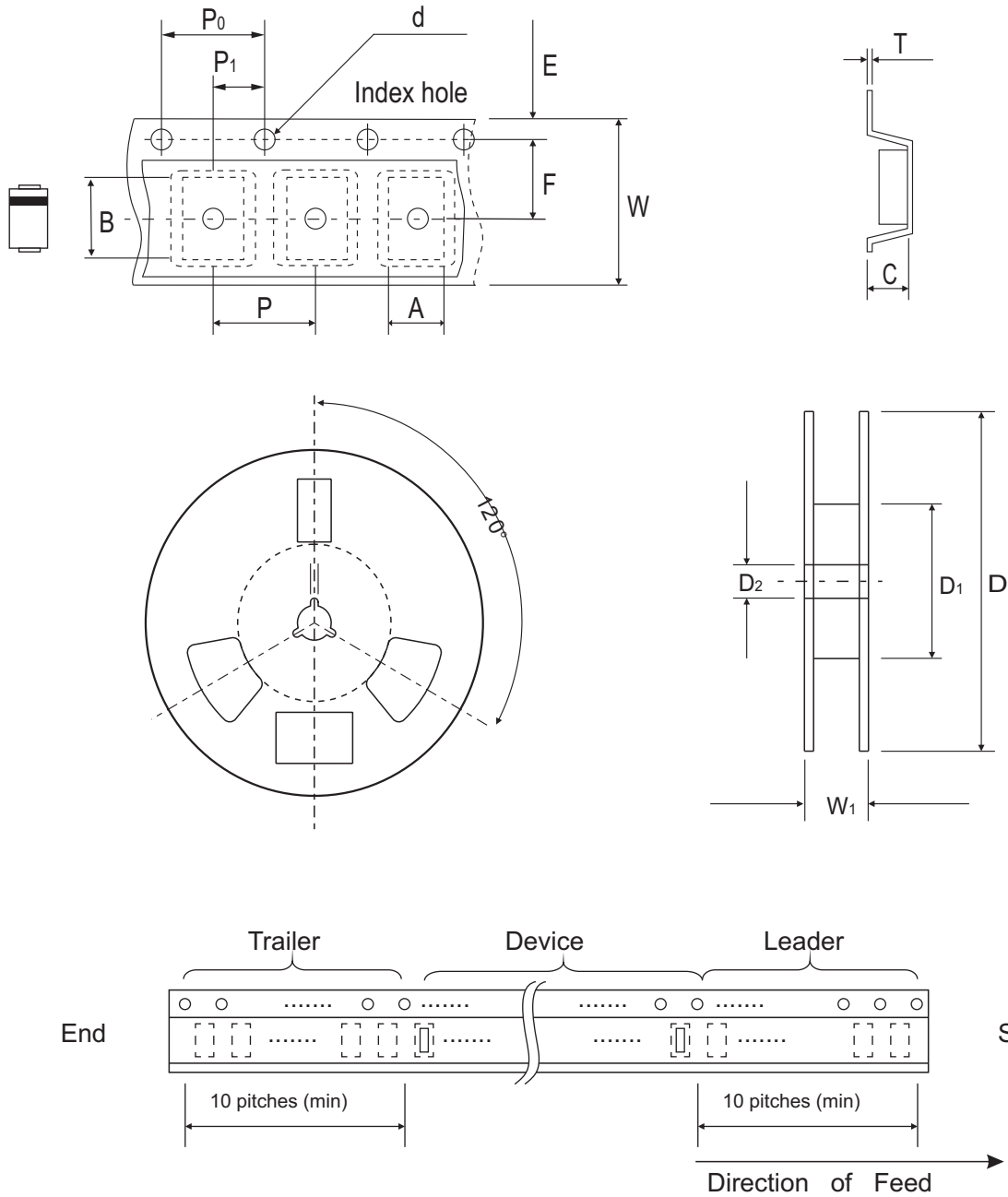


Fig.5 - Typical Reverse Characteristics



Reel Taping Specification

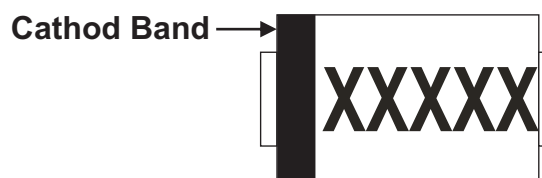


| DO-214AA (SMB) | SYMBOL | A | B | C | d | D | D1 | D2 |
|-------------------|--------|---------------|---------------|---------------|---------------|---------------|------------|---------------|
| | (mm) | 4.00 ± 0.10 | 5.90 ± 0.10 | 3.00 ± 0.10 | 1.50 ± 0.10 | 330 ± 2.00 | 50.0 MIN. | 13.50 ± 0.50 |
| | (inch) | 0.157 ± 0.004 | 0.232 ± 0.004 | 0.118 ± 0.004 | 0.059 ± 0.004 | 12.99 ± 0.079 | 1.969 MIN. | 0.531 ± 0.020 |

| DO-214AA (SMB) | 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 | 0.60 ± 0.10 | 12.00 ± 0.30 | 18.40 ± 1.00 |
| | (inch) | 0.069 ± 0.004 | 0.217 ± 0.004 | 0.315 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.236 ± 0.004 | 0.472 ± 0.012 | 0.724 ± 0.040 |

Marking Code

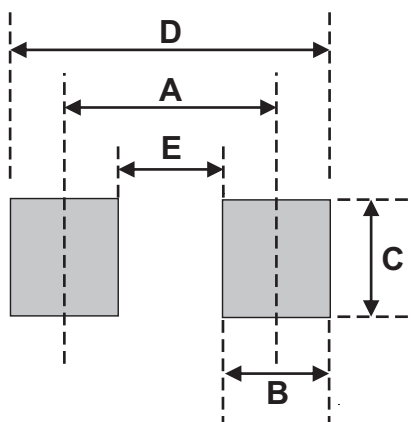
| Part Number | Marking Code |
|---------------|--------------|
| CDBB120LR-HF | KL12 |
| CDBB140LR-HF | KL14 |
| CDBB160LR-HF | KL16 |
| CDBB1100LR-HF | KL110 |
| CDBB1150LR-HF | KL115 |
| CDBB1200LR-HF | KL120 |



XXXXXX = Product type marking code

Suggested PAD Layout

| SIZE | DO-214AA (SMB) | |
|------|----------------|--------|
| | (mm) | (inch) |
| A | 4.30 | 0.169 |
| B | 2.50 | 0.098 |
| C | 2.30 | 0.091 |
| D | 6.80 | 0.268 |
| E | 1.80 | 0.071 |



Standard Packaging

| Case Type | REEL PACK | |
|----------------|--------------|------------------|
| | REEL (pcs) | Reel Size (inch) |
| DO-214AA (SMB) | 3,000 | 13 |