

## CDBKA20120L-HF

**Reverse Voltage: 120 V**

**Forward Current: 20 A**

**RoHS Device**

**Halogen Free**

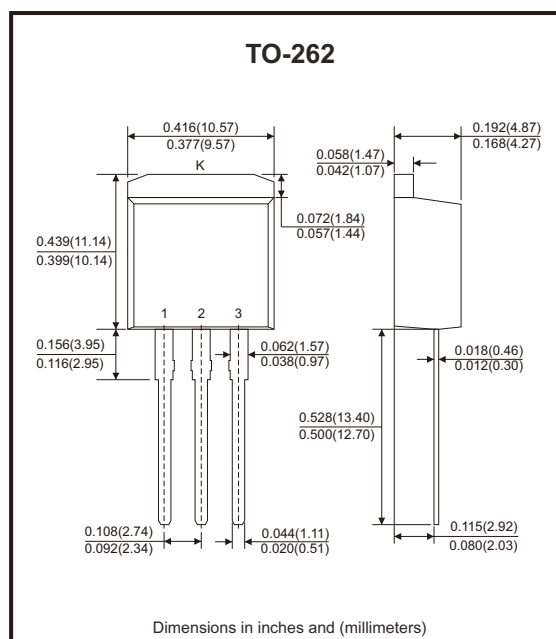


### Features

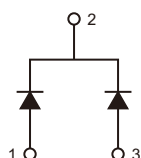
- Ultra low forward voltage drop.
- Excellent high temperature stability.
- Patented super barrier rectifier technology.
- Soft, fast switching capability.

### Mechanical data

- Case: TO-262, molded plastic.
- Case material: molded plastic UL flammability classification rating 94V-0.
- Terminals: Matte Tin Finish annealed over copper leadframe. Solderable per MIL-STD-202, method 208.
- Mounting position: Any.



### Circuit Diagram



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

| Parameter                                                                         | Conditions | Symbol          | Value       | Unit |
|-----------------------------------------------------------------------------------|------------|-----------------|-------------|------|
| Maximum repetitive peak reverse voltage                                           |            | $V_{RRM}$       | 120         | V    |
| Maximum RMS voltage                                                               |            | $V_{RMS}$       | 84          | V    |
| Maximum average forward rectified current                                         | per device | $I_{F(AV)}$     | 20          | A    |
|                                                                                   | per diode  |                 | 10          |      |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load | per diode  | $I_{FSM}$       | 200         | A    |
| Typical thermal resistance per diode                                              | (Note 1)   | $R_{\theta JC}$ | 10          | °C/W |
| Operating junction temperature range                                              |            | $T_J$           | -55 to +150 | °C   |
| Storage temperature range                                                         |            | $T_{STG}$       | -55 to +150 | °C   |

Note: 1. Mounted on infinite heatsink.

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

| Parameter                               | Conditions                                      | Symbol   | Min | Typ  | Max  | Unit          |
|-----------------------------------------|-------------------------------------------------|----------|-----|------|------|---------------|
| Breakdown voltage per diode             | $I_R = 0.5\text{mA}$ , $T_J = 25^\circ\text{C}$ | $V_{BR}$ | 120 |      |      | V             |
| Instantaneous forward voltage per diode | $I_F = 1\text{A}$ , $T_J = 25^\circ\text{C}$    | $V_F$    |     | 0.48 |      | V             |
|                                         | $I_F = 5\text{A}$ , $T_J = 25^\circ\text{C}$    |          |     | 0.64 |      |               |
|                                         | $I_F = 10\text{A}$ , $T_J = 25^\circ\text{C}$   |          |     | 0.76 | 0.80 |               |
|                                         | $I_F = 1\text{A}$ , $T_J = 125^\circ\text{C}$   |          |     | 0.41 |      |               |
|                                         | $I_F = 5\text{A}$ , $T_J = 125^\circ\text{C}$   |          |     | 0.56 |      |               |
| Reverse current per diode               | $V_R = 96\text{V}$ , $T_J = 25^\circ\text{C}$   | $I_R$    |     | 2    |      | $\mu\text{A}$ |
|                                         | $V_R = 120\text{V}$ , $T_J = 25^\circ\text{C}$  |          |     |      | 50   | $\mu\text{A}$ |
|                                         | $V_R = 120\text{V}$ , $T_J = 125^\circ\text{C}$ |          |     | 2.6  |      | $\text{mA}$   |

## Rating and Characteristics Curves (CDBKA20120L-HF)

Fig.1 - Forward Current Derating Curve

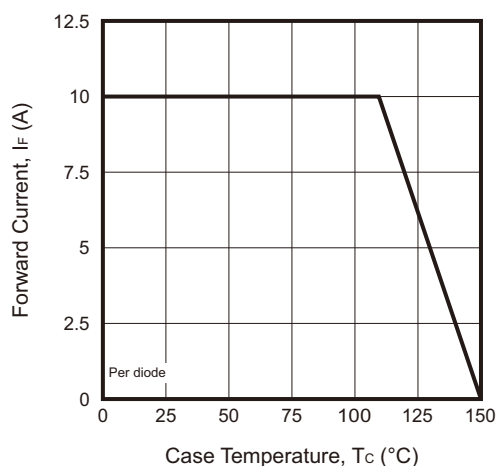


Fig.2 - Typical Junction Capacitance

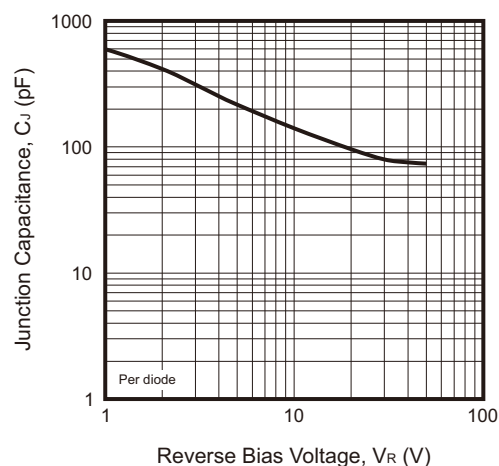


Fig.3 - Typical Reverse Characteristics

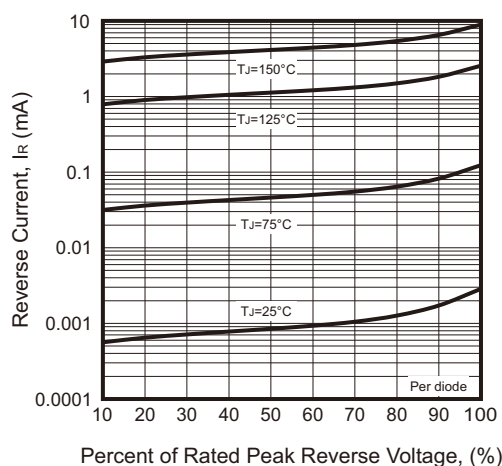
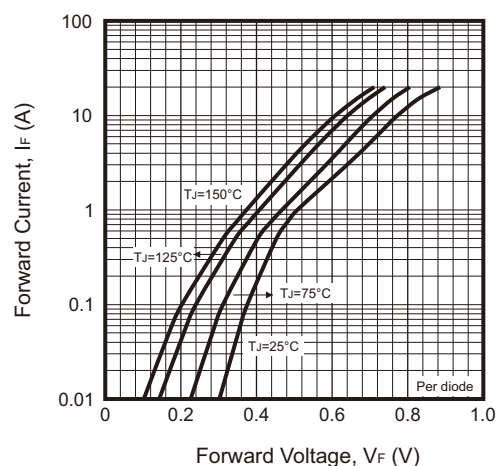
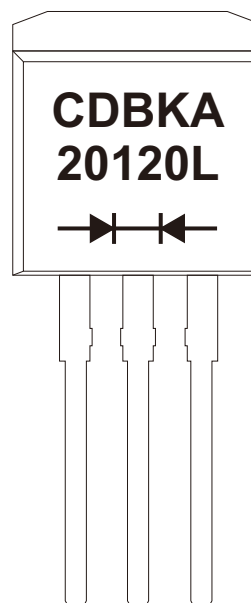


Fig.4 - Typical Forward Capacitance



## Marking Code

| Part Number    | Marking Code |
|----------------|--------------|
| CDBKA20120L-HF | CDBKA20120L  |



## Standard Packaging

| Case Type | TUBE PACK     |
|-----------|---------------|
|           | TUBE<br>(pcs) |
| TO-262    | 50            |

# Mouser Electronics

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