

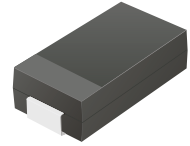
## CDBA120-HF Thru. CDBA1100-HF

Reverse Voltage: 20 to 100 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free

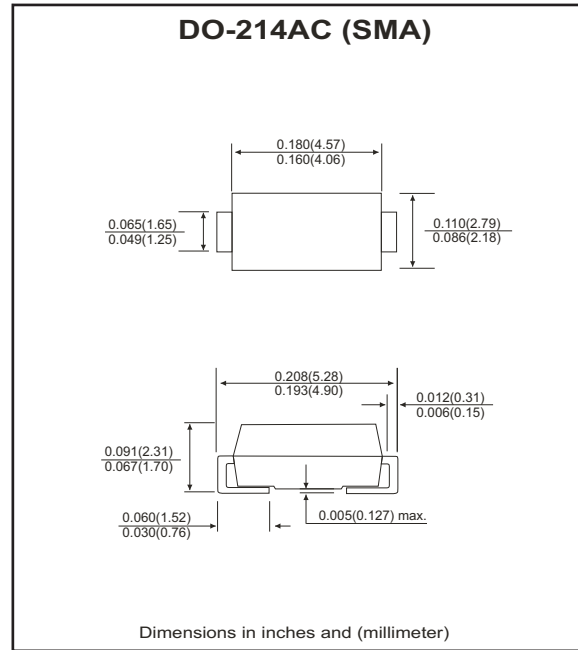


### Features

- Ideal for surface mount applications.
- Easy pick and place.
- Plastic package has Underwriters Lab. flammability classification 94V-0.
- Built-in strain relief.
- Low forward voltage drop.

### Mechanical data

- Case: JEDEC DO-214AC, molded plastic.
- Terminals: solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end.
- Approx. weight: 0.056 grams



### Maximum Ratings and Electrical Characteristics

| Parameter   | Symbol                             | CDBA 120-HF | CDBA 140-HF | CDBA 160-HF | CDBA 180-HF | CDBA 1100-HF | Units |                    |
|---|------------------------------------|-------------|-------------|-------------|-------------|--------------|-------|--------------------|
| Max. repetitive peak reverse voltage  | $V_{RRM}$                          | 20          | 40          | 60          | 80          | 100          | V     |                    |
| Max. DC blocking voltage  | $V_{DC}$                           | 20          | 40          | 60          | 80          | 100          | V     |                    |
| Max. RMS voltage  | $V_{RMS}$                          | 14          | 28          | 42          | 56          | 70           | V     |                    |
| Peak surge forward current, 8.3ms single half sine-wave superimposed on rate load (JEDEC method)                    | $I_{FSM}$                          | 30          |             |             |             |              |       | A                  |
| Max. average forward current  | $I_o$                              | 1.0         |             |             |             |              |       | A                  |
| Max. instantaneous forward voltage at 1.0A  | $V_F$                              | 0.50        |             | 0.70        | 0.85        |              | V     |                    |
| Max. DC reverse current at $T_A=25\text{ }^\circ\text{C}$ rated DC blocking voltage $T_A=100\text{ }^\circ\text{C}$ | $I_R$                              |             |             |             | 0.5<br>10   |              |       | mA                 |
| Max. thermal resistance (Note 1)  | $R_{\theta JA}$<br>$R_{\theta JL}$ |             |             |             | 88<br>20    |              |       | $^\circ\text{C/W}$ |
| Max. operating junction temperature   | $T_J$                              | 125         |             |             |             |              |       | $^\circ\text{C}$   |
| Storage temperature   | $T_{STG}$                          | -65 to +150 |             |             |             |              |       | $^\circ\text{C}$   |

Notes: 1. Thermal resistance from junction to ambient and junction to lead mounted on P.C.B. with 0.2×0.2 inch copper pad area.

## RATING AND CHARACTERISTIC CURVES (CDBA120-HF thru CDBA1100-HF)

Fig.1 Reverse Characteristics

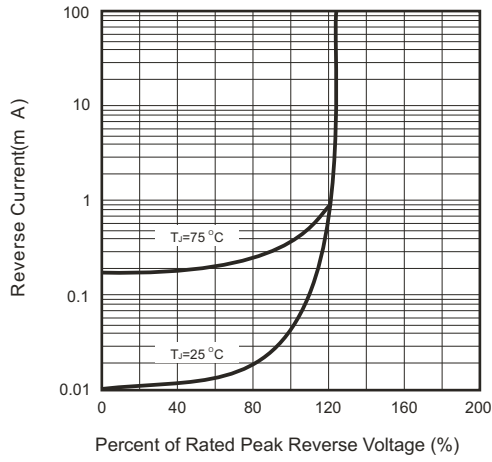


Fig.2 Forward Characteristics

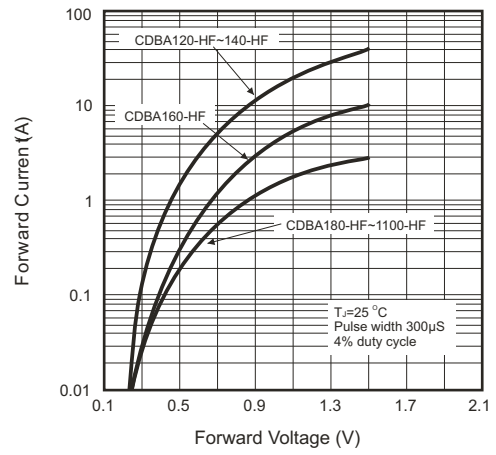


Fig.3 Junction Capacitance

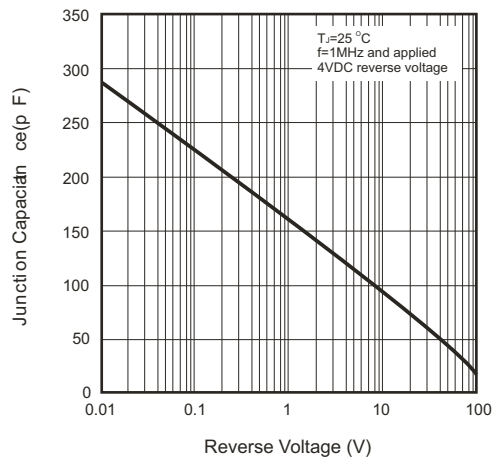


Fig.4 Current Derating Curve

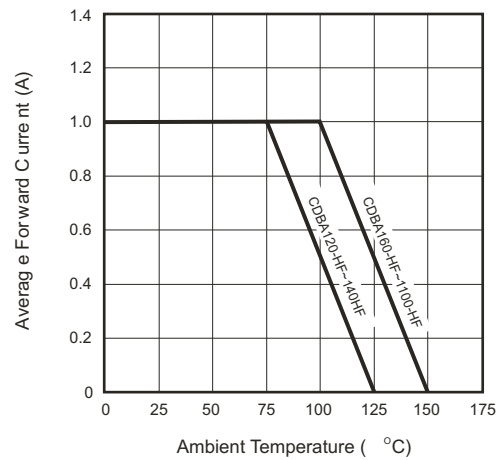
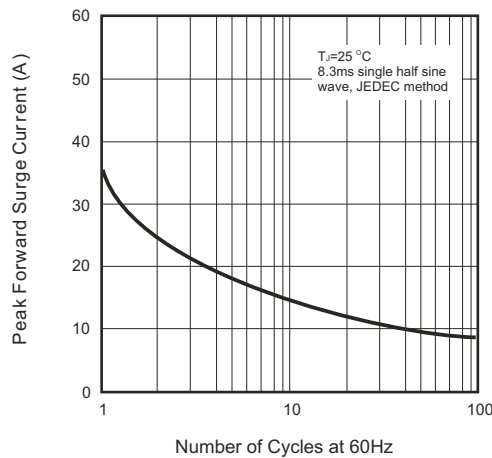
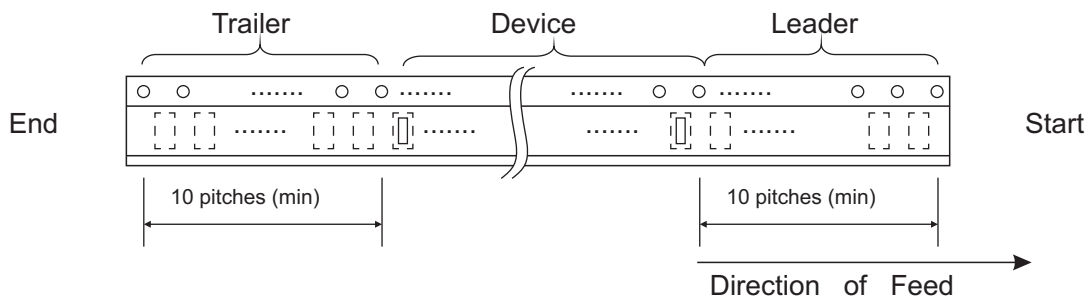
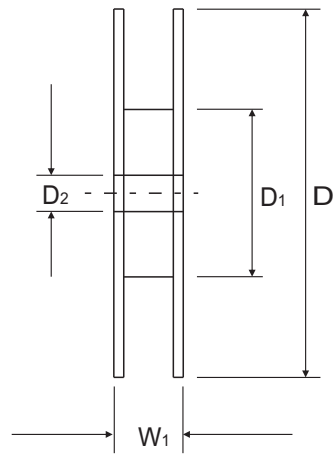
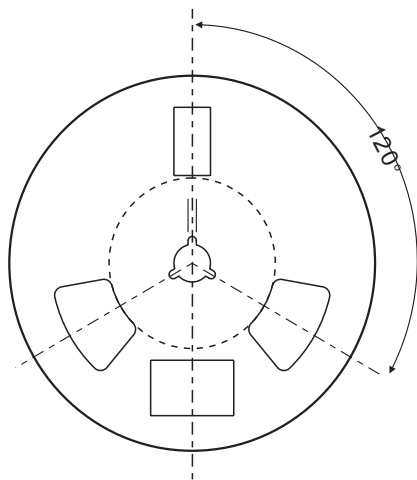
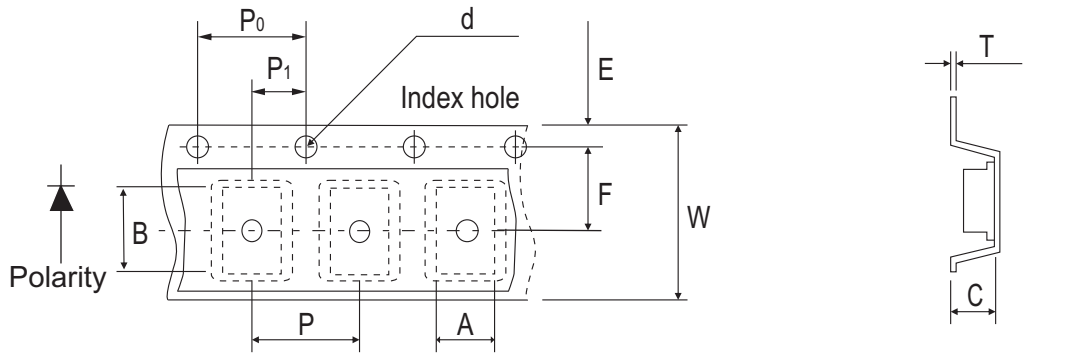


Fig.5 Non-repetitive Forward Surge Current



## Reel Taping Specification



| SMA<br>(DO-214AC) | SYMBOL | A           | B           | C           | d             | D     | D1         | D2            |
|-------------------|--------|-------------|-------------|-------------|---------------|-------|------------|---------------|
|                   | (mm)   | 2.70 (max)  | 5.30 (max)  | 2.66 (max)  | 1.50 ± 0.10   | 330   | 50.0 MIN.  | 13.5 ± 1.00   |
|                   | (inch) | 0.106 (max) | 0.209 (max) | 0.105 (max) | 0.059 ± 0.004 | 12.99 | 1.969 MIN. | 0.531 ± 0.039 |

| SMA<br>(DO-214AC) | SYMBOL | E             | F             | P             | P0            | P1            | W             | W1          |
|-------------------|--------|---------------|---------------|---------------|---------------|---------------|---------------|-------------|
|                   | (mm)   | 1.75 ± 0.10   | 5.50 ± 0.05   | 4.00 ± 0.10   | 4.00 ± 0.10   | 2.00 ± 0.05   | 12.0 ± 0.20   | 18.4 (max)  |
|                   | (inch) | 0.689 ± 0.004 | 0.217 ± 0.002 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.002 | 0.472 ± 0.008 | 0.724 (max) |

## Marking Code

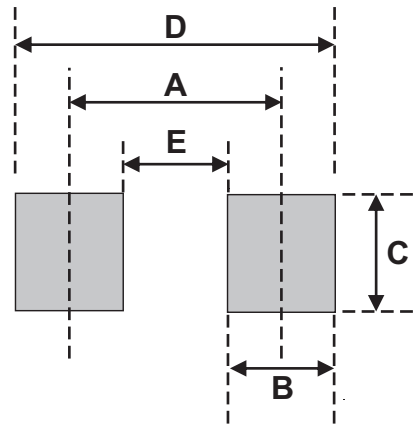
| Part Number | Marking Code |
|-------------|--------------|
| CDBA120-HF  | 120          |
| CDBA140-HF  | 140          |
| CDBA160-HF  | 160          |
| CDBA180-HF  | 180          |
| CDBA1100-HF | 1100         |



xxxx = Product type marking code

## Suggested PAD Layout

| SIZE | DO-214AC(SMA) |        |
|------|---------------|--------|
|      | (mm)          | (inch) |
| A    | 3.80          | 0.150  |
| B    | 1.60          | 0.063  |
| C    | 2.80          | 0.110  |
| D    | 5.40          | 0.213  |
| E    | 2.20          | 0.087  |



## Standard Packaging

| Case Type      | Qty per Reel | Reel Size |
|----------------|--------------|-----------|
|                | (Pcs)        | (inch)    |
| DO-214AC (SMA) | 5000         | 13        |