

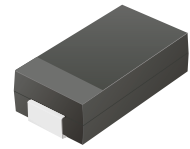
## CDBA1150-HF Thru. CDBA1200-HF

Reverse Voltage: 150 to 200 Volts

Forward Current: 1.0 Amp

RoHS Device

Halogen Free

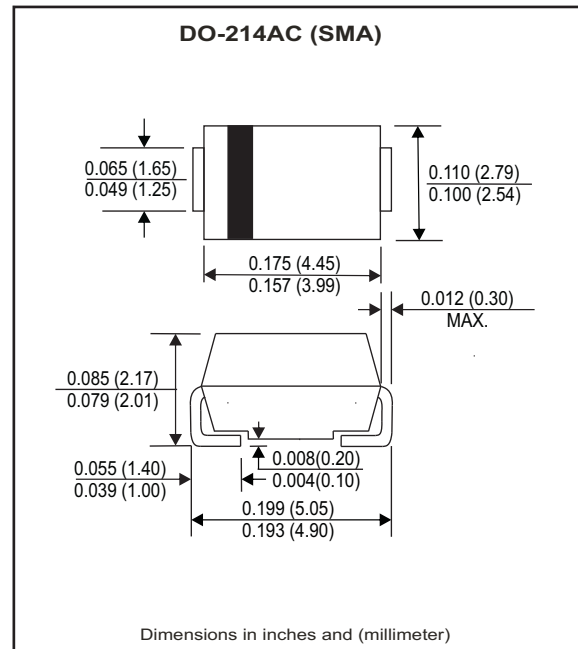


### Features

- 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-214AC / SMA
- Terminals: solderable per MIL-STD-750, method 2026.
- Polarity: Indicated by cathode band.
- weight: 0.055 grams



### Maximum Ratings and Electrical Characteristics

Ratings at  $T_a=25^{\circ}\text{C}$  unless otherwise noted.

Single phase, half wave, 60Hz, resistive or inductive loaded.

For capacitive load, derate current by 20% .

| Parameter                                                           | Symbol    | CDBA 1150-HF | CDBA 1200-HF | Units              |
|---------------------------------------------------------------------|-----------|--------------|--------------|--------------------|
| Max. Repetitive peak reverse voltage                                | $V_{RRM}$ | 150          | 200          | V                  |
| Max. DC blocking voltage                                            | $V_{DC}$  | 150          | 200          | V                  |
| Max. RMS voltage                                                    | $V_{RMS}$ | 105          | 140          | V                  |
| Max. Instantaneous forward voltage @ 1.0A, $T_a=25^{\circ}\text{C}$ | $V_F$     | 0.87         | 0.90         | V                  |
| Operating Temperature                                               | $T_J$     | -50 to +150  |              | $^{\circ}\text{C}$ |

| 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) | $I_{FSM}$       |      |      | 30   | A                    |
| Reverse Current            | $V_R = V_{RRM}$ $T_a=25^{\circ}\text{C}$                             | $I_R$           |      |      | 0.5  | mA                   |
|                            | $V_R = V_{RRM}$ $T_a=100^{\circ}\text{C}$                            | $I_R$           |      |      | 20   | mA                   |
| Thermal Resistance         | Junction to ambient                                                  | $R_{\theta JA}$ |      | 88   |      | $^{\circ}\text{C/W}$ |
| Diode Junction capacitance | f=1MHz and applied 4V DC reverse Voltage                             | $C_J$           |      | 120  |      | pF                   |
| Storage temperature        |                                                                      | $T_{STG}$       | -50  |      | +150 | $^{\circ}\text{C}$   |

## RATING AND CHARACTERISTIC CURVES (CDBA1150-HF thru. CDBA1200-HF)

Fig.1- Typical Forward Current Derating Curve

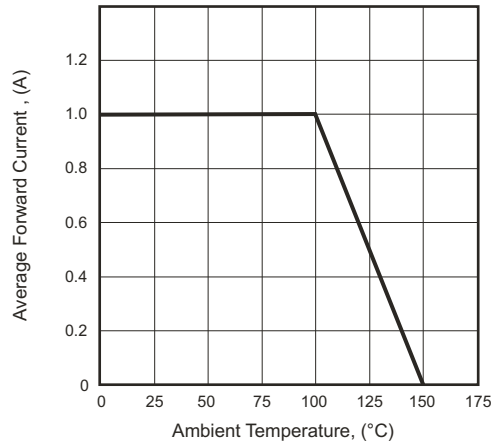


Fig.2- Typical Forward Characteristics

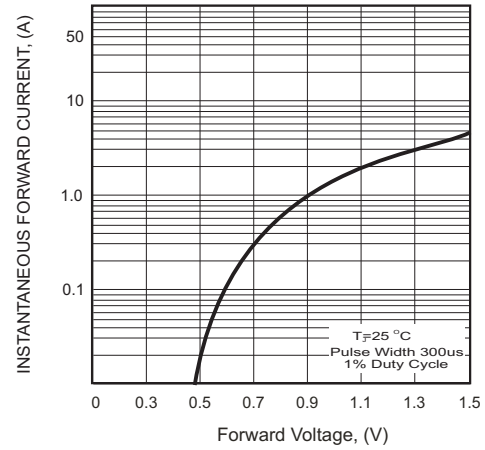


Fig.3- Maximum Non-repetitive Forward Surge Current

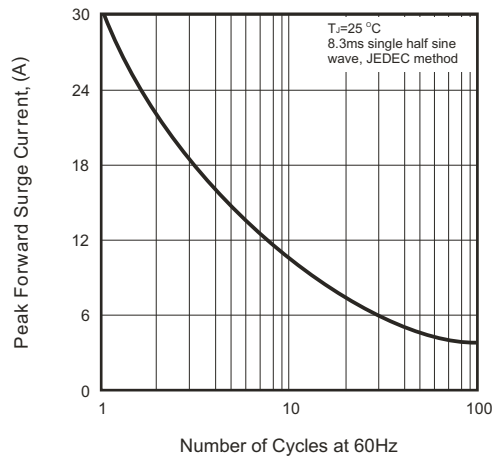


Fig.4- Typical Junction Capacitance

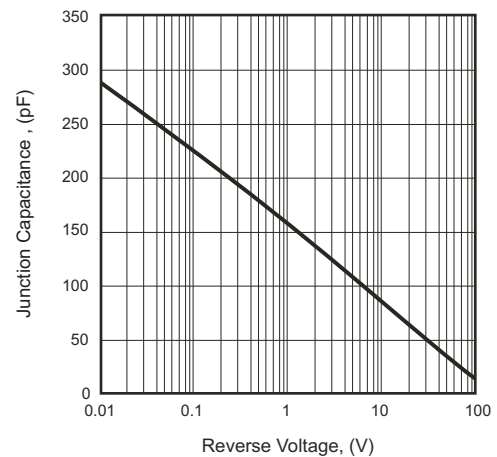
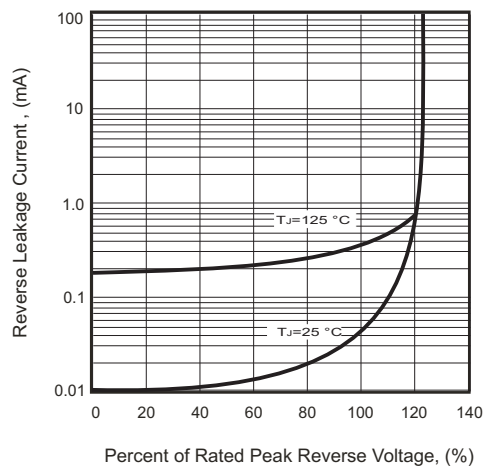
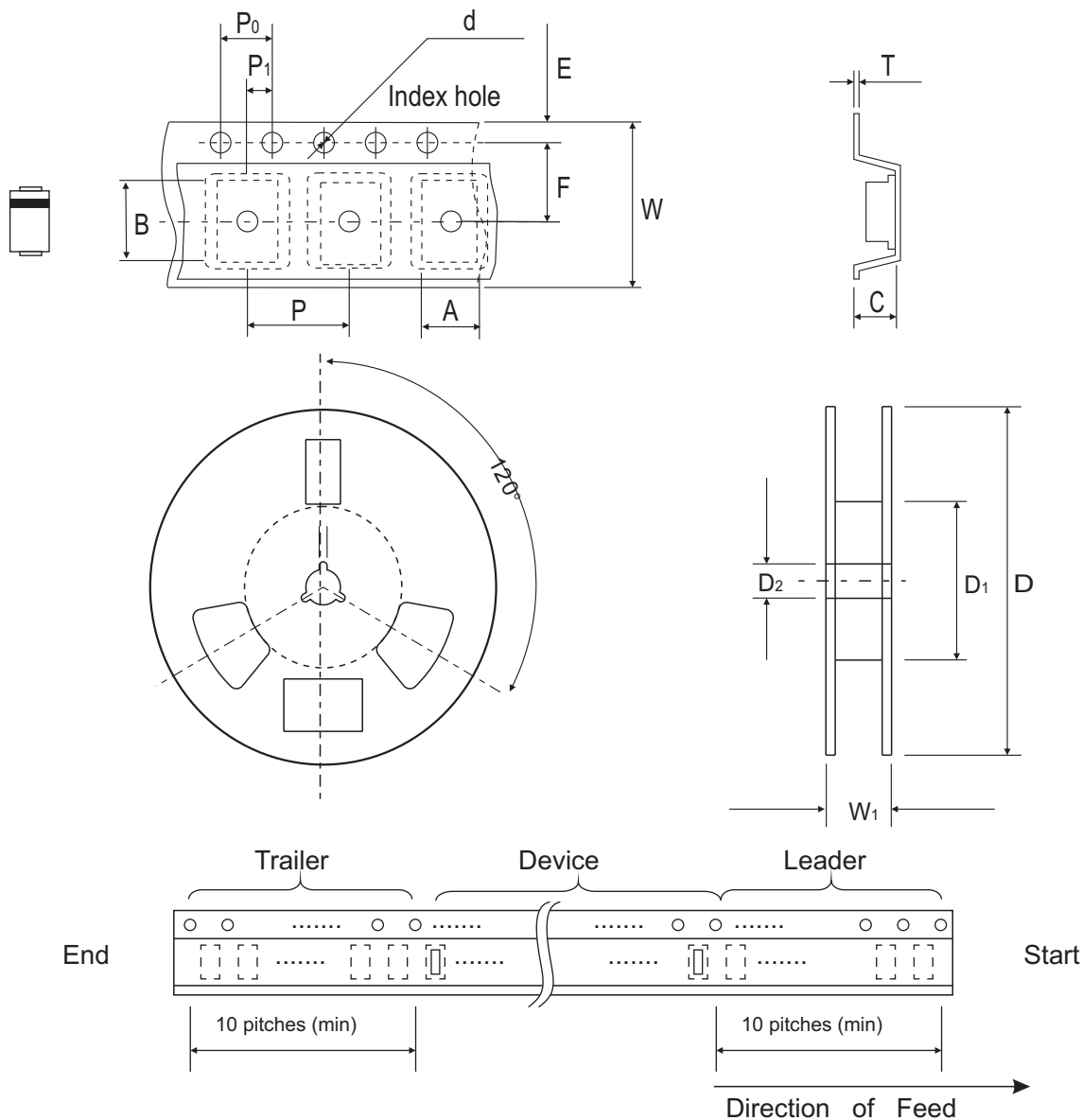


Fig.5 Typical Reverse Characteristics



## Reel Taping Specification

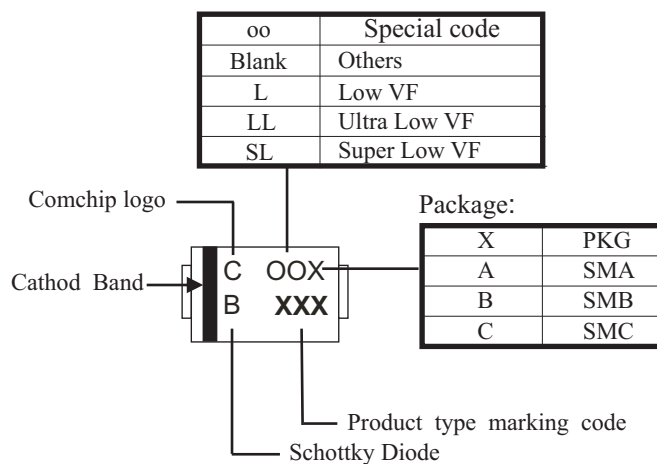


| DO-214AC<br>(SMA) | SYMBOL | A             | B             | C             | d             | D             | D <sub>1</sub> | D <sub>2</sub> |
|-------------------|--------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|
|                   | (mm)   | 2.70 ± 0.10   | 5.30 ± 0.10   | 2.66 ± 0.10   | 1.50 ± 0.10   | 330 ± 2.00    | 50.0 MIN.      | 13.50 ± 0.50   |
|                   | (inch) | 0.106 ± 0.004 | 0.209 ± 0.004 | 0.105 ± 0.004 | 0.059 ± 0.004 | 12.99 ± 0.079 | 1.969 MIN.     | 0.531 ± 0.020  |

| DO-214AC<br>(SMA) | SYMBOL | E             | F             | P             | P <sub>0</sub> | P <sub>1</sub> | T             | W             | W <sub>1</sub> |
|-------------------|--------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
|                   | (mm)   | 1.75 ± 0.10   | 5.50 ± 0.10   | 4.00 ± 0.10   | 4.00 ± 0.10    | 2.00 ± 0.10    | 0.60 ± 0.10   | 12.0 ± 0.30   | 18.4 ± 1.00    |
|                   | (inch) | 0.069 ± 0.004 | 0.217 ± 0.004 | 0.157 ± 0.004 | 0.157 ± 0.004  | 0.079 ± 0.004  | 0.024 ± 0.004 | 0.472 ± 0.012 | 0.724 ± 0.040  |

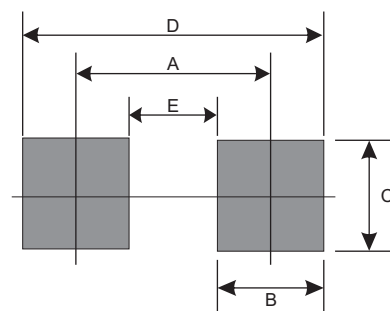
## Marking Code

| Part Number | Marking Code |
|-------------|--------------|
| CDBA1150-HF | 1150         |
| CDBA1200-HF | 1200         |



## Suggested PAD Layout

| SIZE | DO-214AC (SMA) |        |
|------|----------------|--------|
|      | (mm)           | (inch) |
| A    | 4.00           | 0.157  |
| B    | 2.50           | 0.100  |
| C    | 1.70           | 0.068  |
| D    | 6.50           | 0.256  |
| E    | 1.50           | 0.060  |



## Standard Package

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