

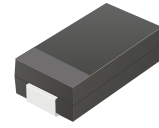
# CDBA5819-HF

Reverse Voltage: 40 Volts

Forward Current: 1A

RoHS Device

Halogen Free



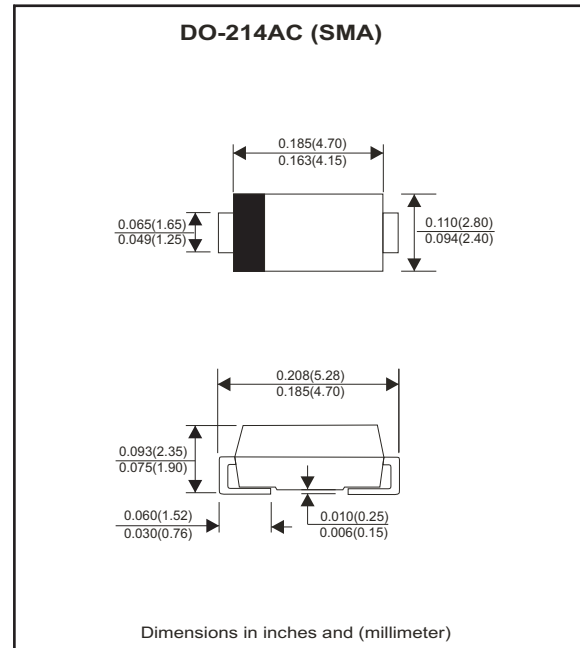
## Features

- 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.
- Weight: 0.064 grams(Approx.).

## Circuit diagram



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

| Parameter                                                                                                | Symbol          | Value       | Unit |
|----------------------------------------------------------------------------------------------------------|-----------------|-------------|------|
| Maximum repetitive peak reverse voltage                                                                  | $V_{RRM}$       | 40          | V    |
| Maximum DC bolcking voltage                                                                              | $V_{DC}$        | 40          | V    |
| Maximum RMS voltage                                                                                      | $V_{RMS}$       | 28          | V    |
| Peak surge forward current<br>8.3ms single half sine-wave<br>superimposed on rate load<br>(JEDEC method) | $I_{FSM}$       | 20          | A    |
| Maximum Average forward current                                                                          | $I_O$           | 1           | A    |
| Thermal resistance from junction to ambience                                                             | $R_{\theta JA}$ | 55          | °C/W |
| Operating junction temperature range                                                                     | $T_j$           | -55 to +125 | °C   |
| Storage temperature range                                                                                | $T_{STG}$       | -55 to +125 | °C   |

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

| Parameter                                               | Symbol | Value                                                 | Unit |
|---------------------------------------------------------|--------|-------------------------------------------------------|------|
| Max. Forward voltage at 1.0 A (Note 1)                  | $V_F$  | 0.55                                                  | V    |
| Max. DC reverse current at<br>rated DC blocking voltage | $I_R$  | 0.5<br>20                                             | mA   |
|                                                         |        | $T_a = 25^\circ\text{C}$<br>$T_a = 100^\circ\text{C}$ |      |

Note 1: Pulse test:300μs pulse width, 1% duty cycle.

RATING AND CHARACTERISTIC CURVES (CDBA5819-HF)

Fig.1 - Typical Forward Characteristics

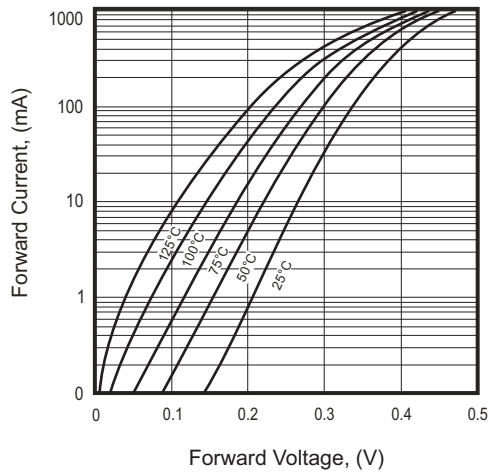


Fig.2 - Typical Reverse characteristics

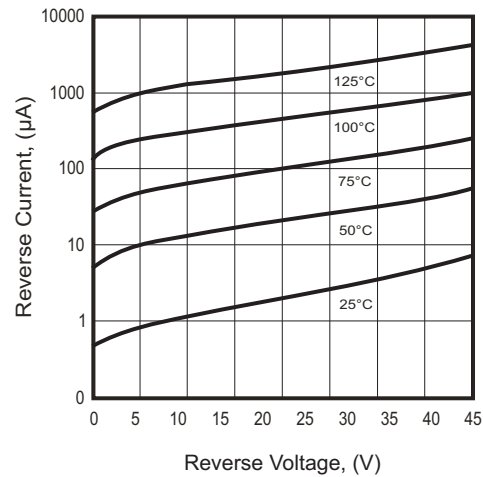


Fig.3 - Current Derating Curve

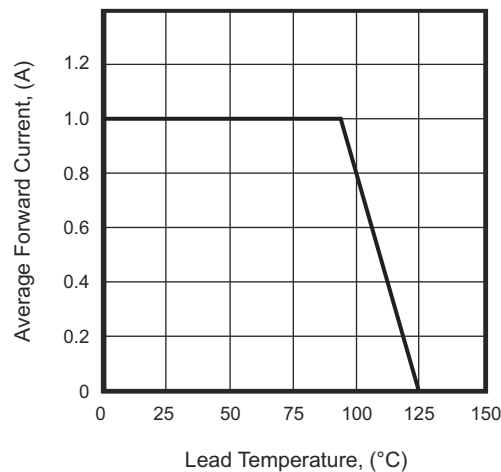
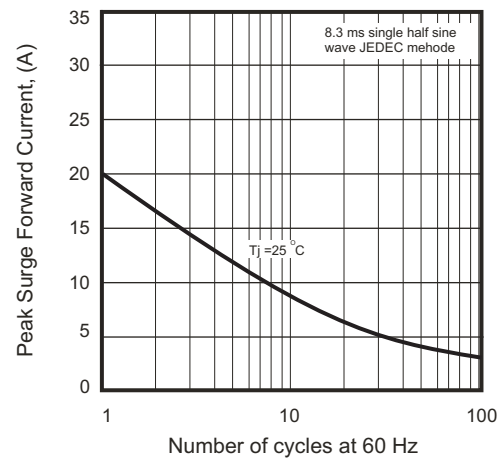
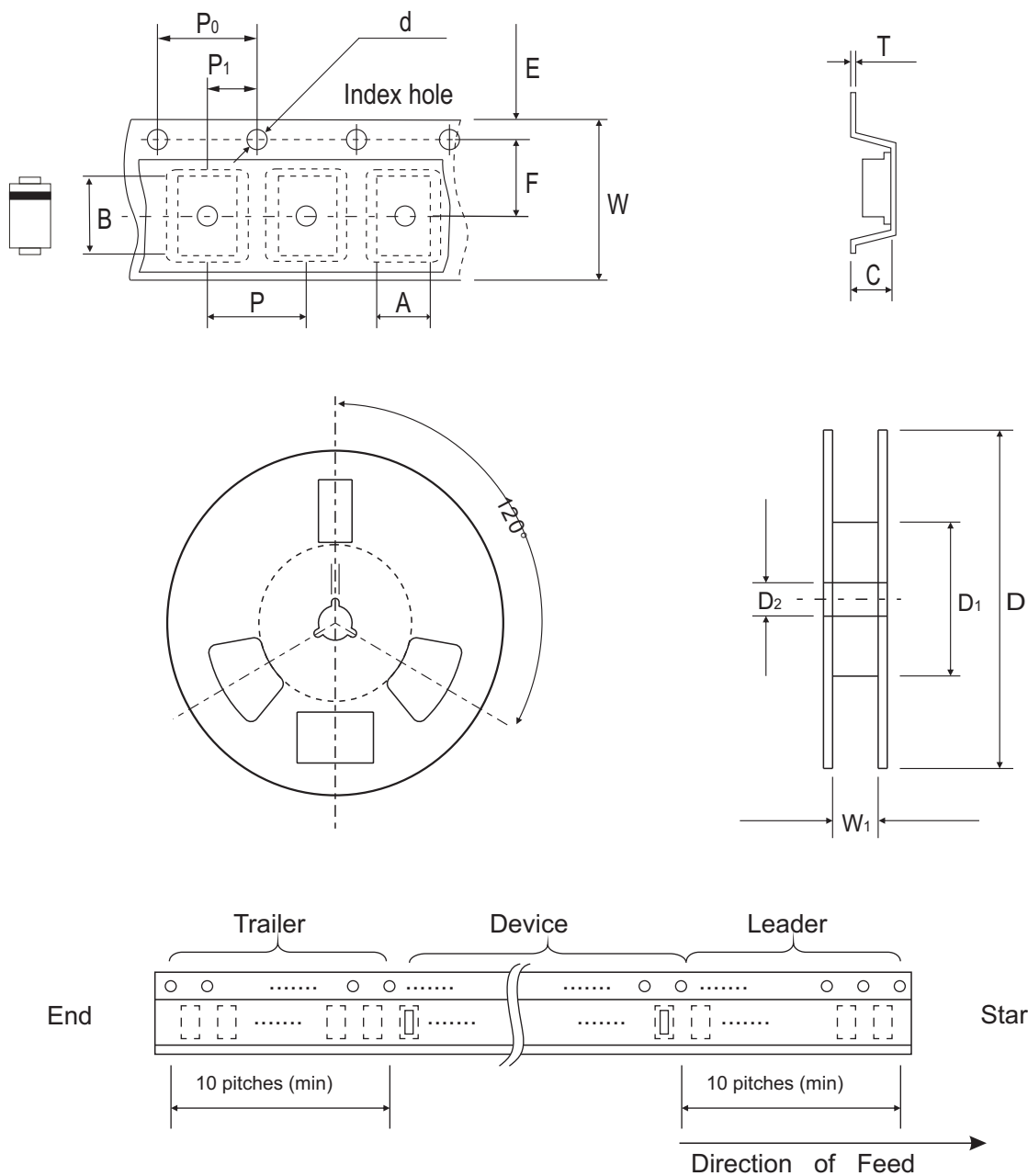


Fig.4 - Non Repetitive Peak Forward Surge Current



## Reel Taping Specification

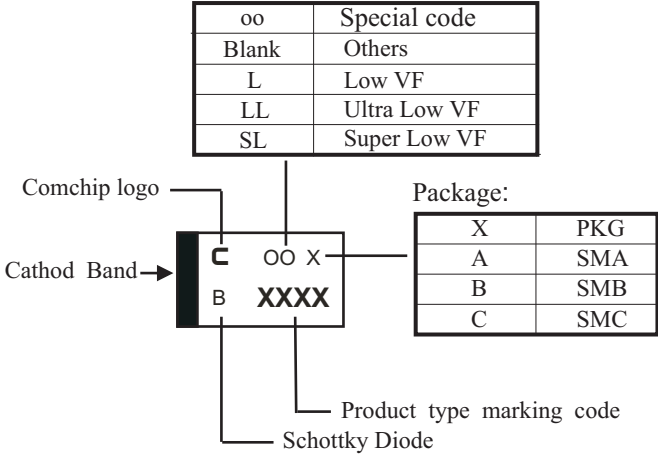


| SMA<br>(DO-214AC) | SYMBOL | A             | B             | C             | d             | D              | D <sub>1</sub> | D <sub>2</sub> |
|-------------------|--------|---------------|---------------|---------------|---------------|----------------|----------------|----------------|
|                   | (mm)   | 2.60 ± 0.15   | 5.18 ± 0.17   | 2.36 ± 0.10   | 1.50 ± 0.10   | 330 ± 1.50     | 75.00 ± 1.00   | 13.50 ± 0.50   |
|                   | (inch) | 0.102 ± 0.006 | 0.204 ± 0.007 | 0.093 ± 0.004 | 0.059 ± 0.004 | 12.992 ± 0.060 | 2.953 ± 0.040  | 0.531 ± 0.020  |

| SMA<br>(DO-214AC) | SYMBOL | E             | F             | P             | P <sub>0</sub> | P <sub>1</sub> | W             | W <sub>1</sub> |
|-------------------|--------|---------------|---------------|---------------|----------------|----------------|---------------|----------------|
|                   | (mm)   | 1.75 ± 0.10   | 5.50 ± 0.05   | 4.00 ± 0.10   | 4.00 ± 0.10    | 2.00 ± 0.05    | 12.00 ± 0.200 | 13.50 ± 0.50   |
|                   | (inch) | 0.069 ± 0.004 | 0.217 ± 0.002 | 0.157 ± 0.004 | 0.157 ± 0.004  | 0.079 ± 0.002  | 0.472 ± 0.008 | 0.531 ± 0.020  |

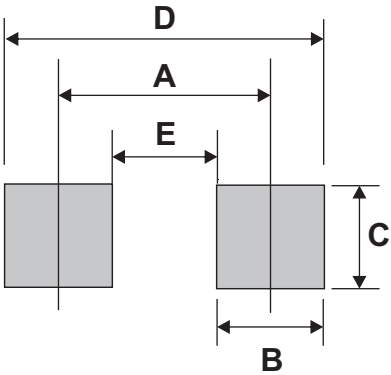
## Marking Code

| Part Number | Marking Code |
|-------------|--------------|
| CDBA5819-HF | 5819         |



## Suggested PAD Layout

| SIZE | DO-214AC (SMA) |        |
|------|----------------|--------|
|      | (mm)           | (inch) |
| A    | 4.00           | 0.157  |
| B    | 2.50           | 0.098  |
| C    | 1.70           | 0.068  |
| D    | 6.50           | 0.256  |
| E    | 1.50           | 0.060  |



## Standard Packaging

| Case Type         | REEL PACK       |                     |
|-------------------|-----------------|---------------------|
|                   | REEL<br>( pcs ) | Reel Size<br>(inch) |
| DO-214AC<br>(SMA) | 5,000           | 13                  |