

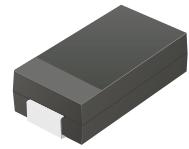
## CDBA540-HF Thru. CDBA5200-HF

Reverse Voltage: 40 to 200 Volts

Forward Current: 5.0 Amp

RoHS Device

Halogen Free

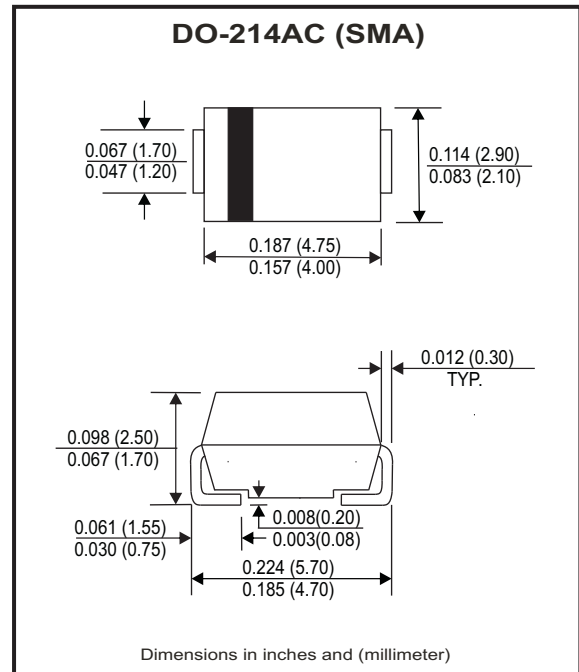


### Features

- 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.
- Guard ring 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 540-HF | CDBA 560-HF | CDBA 5100-HF | CDBA 5150-HF | CDBA 5200-HF | Units              |
|---------------------------------------------------------------------|-----------|-------------|-------------|--------------|--------------|--------------|--------------------|
| Max. repetitive peak reverse voltage                                | $V_{RRM}$ | 40          | 60          | 100          | 150          | 200          | V                  |
| Max. DC blocking voltage                                            | $V_{DC}$  | 40          | 60          | 100          | 150          | 200          | V                  |
| Max. RMS voltage                                                    | $V_{RMS}$ | 28          | 42          | 70           | 105          | 140          | V                  |
| Max. instantaneous forward voltage @ 5.0A, $T_A=25^{\circ}\text{C}$ | $V_F$     | 0.55        | 0.75        | 0.81         | 0.87         | 0.90         | V                  |
| Operating Temperature                                               | $T_J$     | -50 to +150 |             |              | -50 to +175  |              | $^{\circ}\text{C}$ |

| Parameter                  | Conditions                                                           | Symbol          | MIN. | TYP. | MAX. | Units                       |
|----------------------------|----------------------------------------------------------------------|-----------------|------|------|------|-----------------------------|
| Forward rectified current  | see Fig.1                                                            | $I_o$           |      |      | 5.0  | A                           |
| Forward surge current      | 8.3ms single half sine-wave superimposed on rate load (JEDEC method) | $I_{FSM}$       |      |      | 125  | 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                                                  | $R_{\theta JA}$ |      | 24   |      | $^{\circ}\text{C}/\text{W}$ |
| Diode Junction capacitance | f=1MHz and applied 4V DC reverse Voltage                             | $C_J$           |      | 380  |      | pF                          |
| Storage temperature        |                                                                      | $T_{STG}$       | -50  |      | +175 | $^{\circ}\text{C}$          |

Company reserves the right to improve product design , functions and reliability without notice.

REV: C

## RATING AND CHARACTERISTIC CURVES (CDBA540-HF thru. CDBA5200-HF)

Fig.1 Typical Forward Current Derating Curve

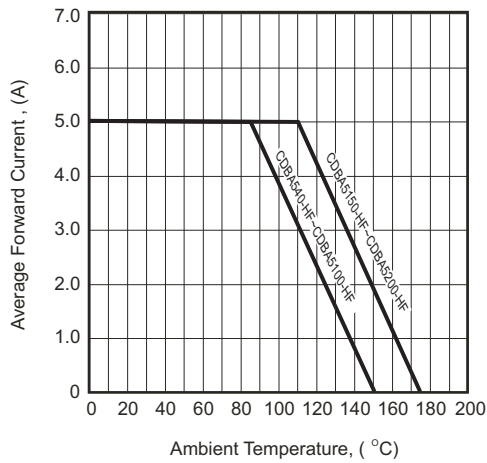


Fig.2- Typical Forward Characteristics

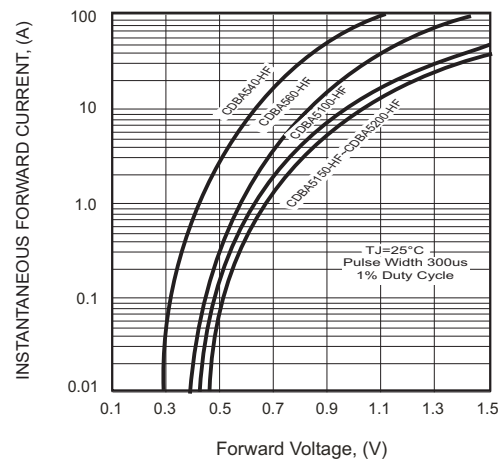


Fig.3- Maximum Non-repetitive Forward Surge Current

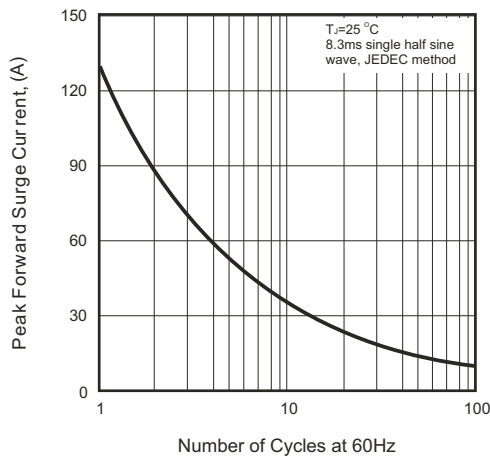


Fig.4- Typical Junction Capacitance

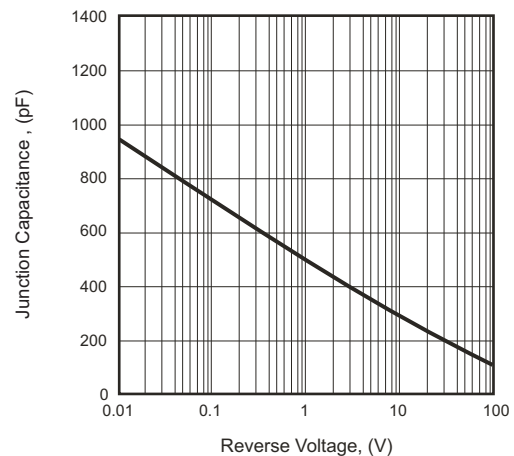
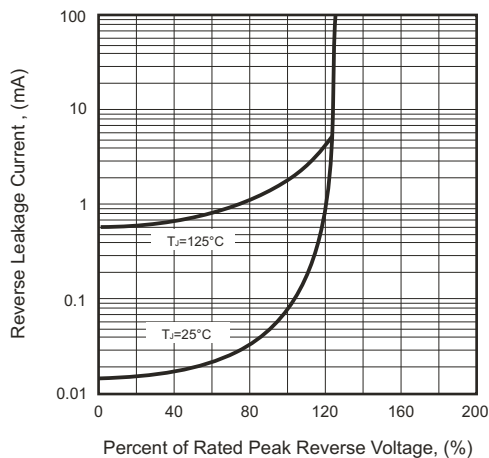
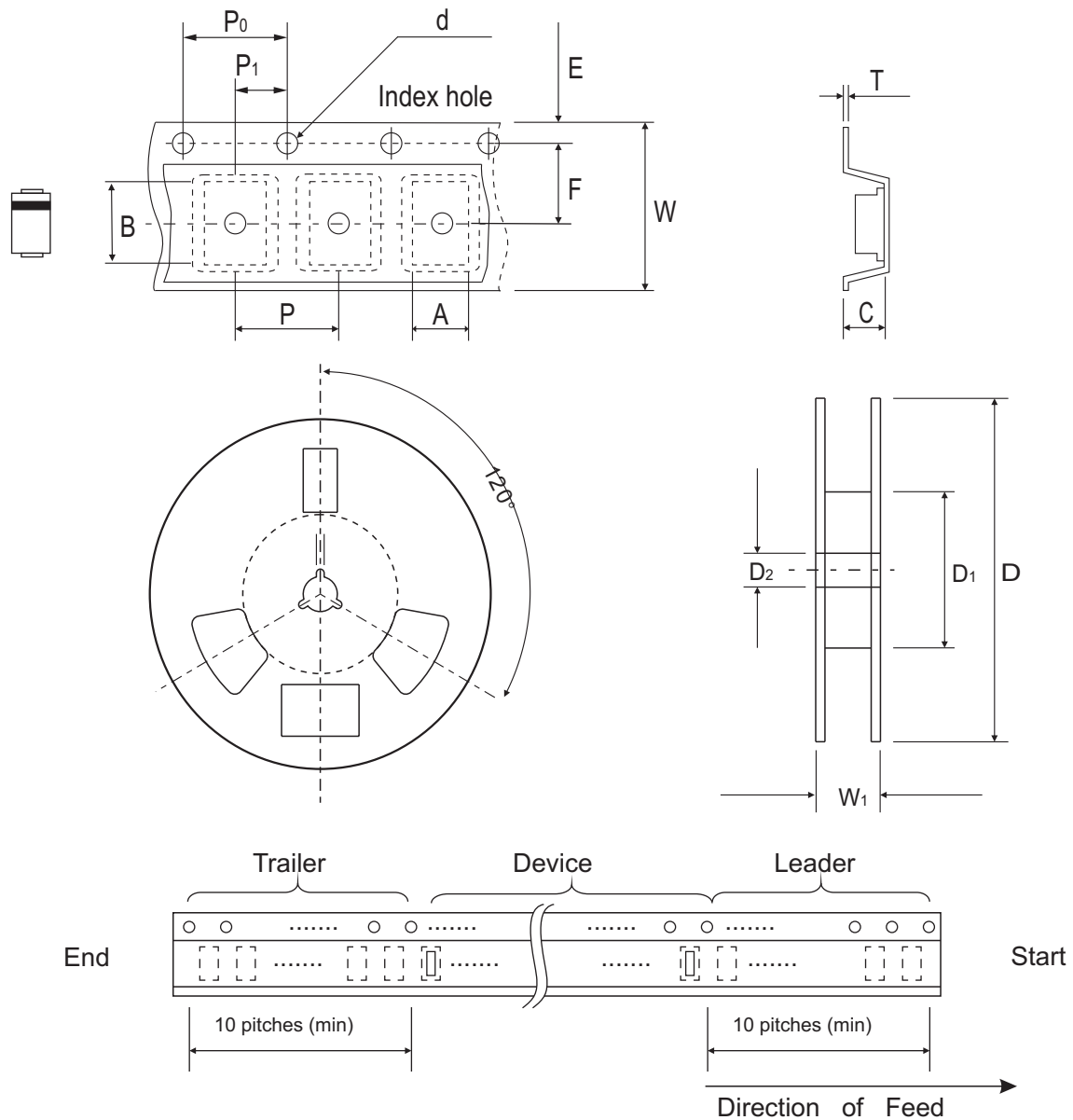


Fig.5- Typical Reverse Characteristics



## Reel Taping Specification



| DO-214AC<br>(SMA) | SYMBOL | A                 | B                 | C                 | d                 | D                 | D1         | D2                |
|-------------------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|------------|-------------------|
|                   | (mm)   | $2.70 \pm 0.10$   | $5.30 \pm 0.10$   | $2.66 \pm 0.10$   | $1.50 \pm 0.10$   | $330 \pm 2.00$    | 62.0 MIN.  | $13.50 \pm 0.50$  |
|                   | (inch) | $0.106 \pm 0.004$ | $0.209 \pm 0.004$ | $0.105 \pm 0.004$ | $0.059 \pm 0.004$ | $12.99 \pm 0.079$ | 2.441 MIN. | $0.531 \pm 0.020$ |

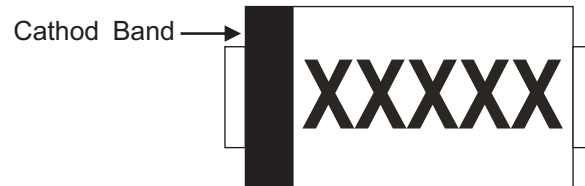
| DO-214AC<br>(SMA) | SYMBOL | E                 | F                 | P                 | P0                | P1                | T                 | W                 | W1                |
|-------------------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|
|                   | (mm)   | $1.75 \pm 0.10$   | $5.50 \pm 0.10$   | $4.00 \pm 0.10$   | $4.00 \pm 0.10$   | $2.00 \pm 0.10$   | $0.60 \pm 0.10$   | $12.0 \pm 0.30$   | $18.40 \pm 1.00$  |
|                   | (inch) | $0.069 \pm 0.004$ | $0.217 \pm 0.004$ | $0.157 \pm 0.004$ | $0.157 \pm 0.004$ | $0.079 \pm 0.004$ | $0.236 \pm 0.004$ | $0.472 \pm 0.012$ | $0.724 \pm 0.039$ |

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## Marking Code

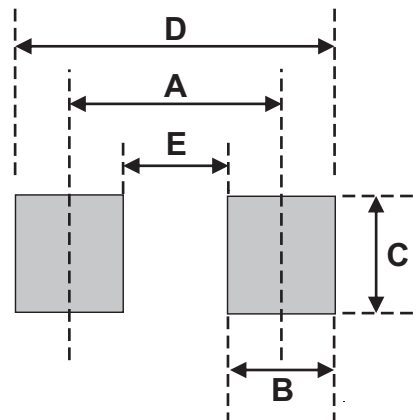
| Part Number | Marking Code |
|-------------|--------------|
| CDBA540-HF  | SK54         |
| CDBA560-HF  | SK56         |
| CDBA5100-HF | SK510        |
| CDBA5150-HF | SK515        |
| CDBA5200-HF | SK520        |



xxxxxx = Product type marking code

## 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 Packaging

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

## Данный компонент на территории Российской Федерации

**Вы можете приобрести в компании MosChip.**

Для оперативного оформления запроса Вам необходимо перейти по данной ссылке:

<http://moschip.ru/get-element>

Вы можете разместить у нас заказ для любого Вашего проекта, будь то серийное производство или разработка единичного прибора.

В нашем ассортименте представлены ведущие мировые производители активных и пассивных электронных компонентов.

Нашей специализацией является поставка электронной компонентной базы двойного назначения, продукции таких производителей как XILINX, Intel (ex.ALTERA), Vicor, Microchip, Texas Instruments, Analog Devices, Mini-Circuits, Amphenol, Glenair.

Сотрудничество с глобальными дистрибьюторами электронных компонентов, предоставляет возможность заказывать и получать с международных складов практически любой перечень компонентов в оптимальные для Вас сроки.

На всех этапах разработки и производства наши партнеры могут получить квалифицированную поддержку опытных инженеров.

Система менеджмента качества компании отвечает требованиям в соответствии с ГОСТ Р ИСО 9001, ГОСТ РВ 0015-002 и ЭС РД 009

### Офис по работе с юридическими лицами:

105318, г.Москва, ул.Щербаковская д.3, офис 1107, 1118, ДЦ «Щербаковский»

Телефон: +7 495 668-12-70 (многоканальный)

Факс: +7 495 668-12-70 (доб.304)

E-mail: [info@moschip.ru](mailto:info@moschip.ru)

Skype отдела продаж:

moschip.ru

moschip.ru\_4

moschip.ru\_6

moschip.ru\_9