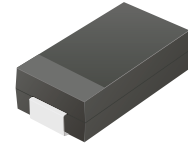


## CDBC520-G Thru. CDBC5100-G

Reverse Voltage: 20 to 100 Volts

Forward Current: 5.0 Amp

RoHS Device

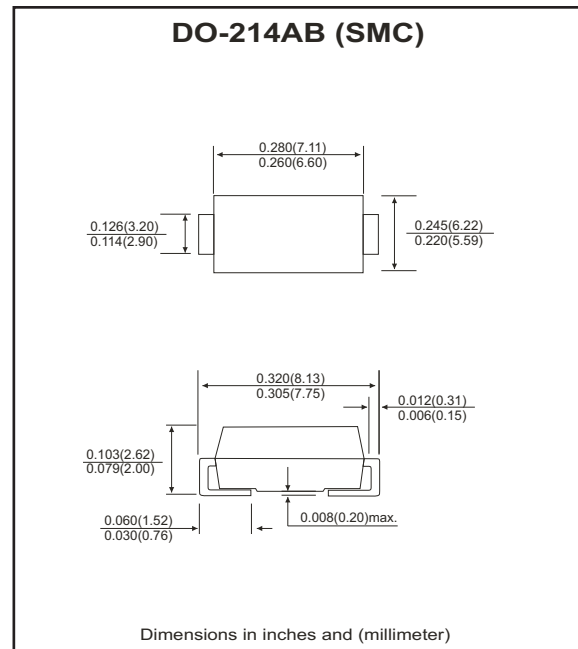


### Features

- 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-214AB, molded plastic.
- Terminals: solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end.
- Approx. weight: 0.21 grams



### Maximum Ratings and Electrical Characteristics

| Parameter                                                                                            | Symbol                               | CDBC 520-G  | CDBC 540-G | CDBC 560-G | CDBC 580-G | CDBC 5100-G | Units |
|------------------------------------------------------------------------------------------------------|--------------------------------------|-------------|------------|------------|------------|-------------|-------|
| Max. repetitive peak reverse voltage                                                                 | V <sub>RRM</sub>                     | 20          | 40         | 60         | 80         | 100         | V     |
| Max. DC blocking voltage                                                                             | V <sub>DC</sub>                      | 20          | 40         | 60         | 80         | 100         | V     |
| Max. RMS voltage                                                                                     | V <sub>RMS</sub>                     | 14          | 28         | 42         | 56         | 70          | V     |
| Peak surge forward current, 8.3ms single half sine-wave superimposed on rate load (JEDEC method)     | I <sub>FSM</sub>                     | 100         |            |            |            |             | A     |
| Max. average forward current                                                                         | I <sub>O</sub>                       | 5.0         |            |            |            |             | A     |
| Max. instantaneous forward voltage at 5.0A                                                           | V <sub>F</sub>                       | 0.55        |            | 0.75       | 0.85       |             | V     |
| Max. DC reverse current at T <sub>A</sub> =25 °C<br>rated DC blocking voltage T <sub>A</sub> =100 °C | I <sub>R</sub>                       | 0.5<br>50   |            |            |            |             | mA    |
| Max. thermal resistance (Note 1)                                                                     | R <sub>θJA</sub><br>R <sub>θJL</sub> | 50<br>10    |            |            |            |             | °C/W  |
| Operation Junction Temperature                                                                       | T <sub>J</sub>                       | -40 to +125 |            |            |            |             | °C    |
| Storage temperature                                                                                  | T <sub>STG</sub>                     | -65 to +150 |            |            |            |             | °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 (CDBC520-G thru CDBC5100-G)

Fig.1 Reverse Characteristics

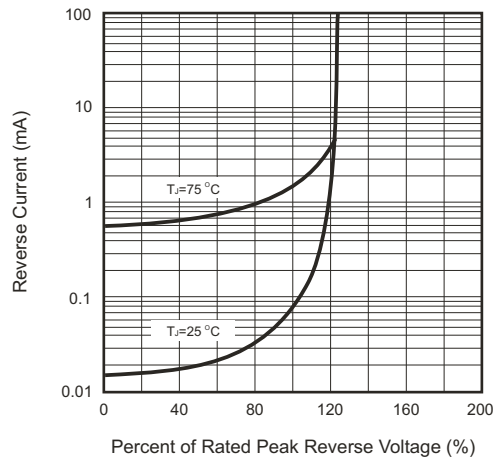


Fig.2 Forward Characteristics

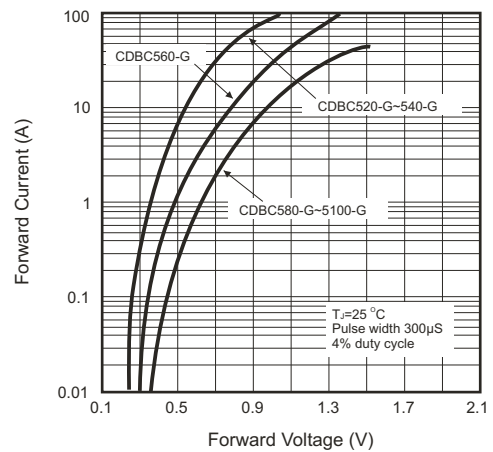


Fig.3 Junction Capacitance

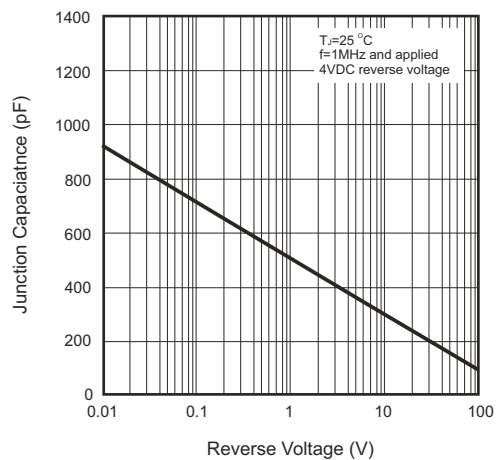


Fig.4 Current Derating Curve

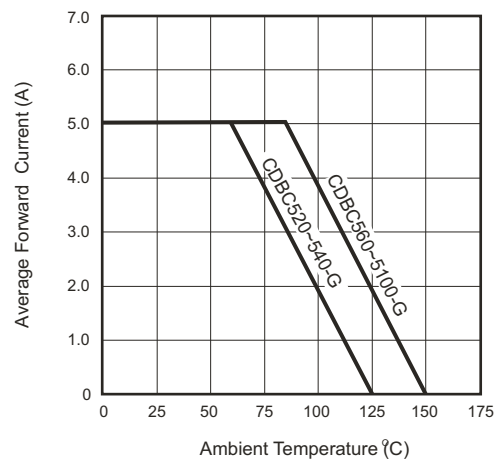
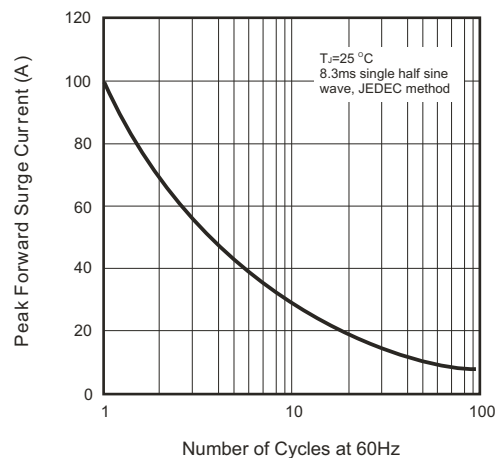
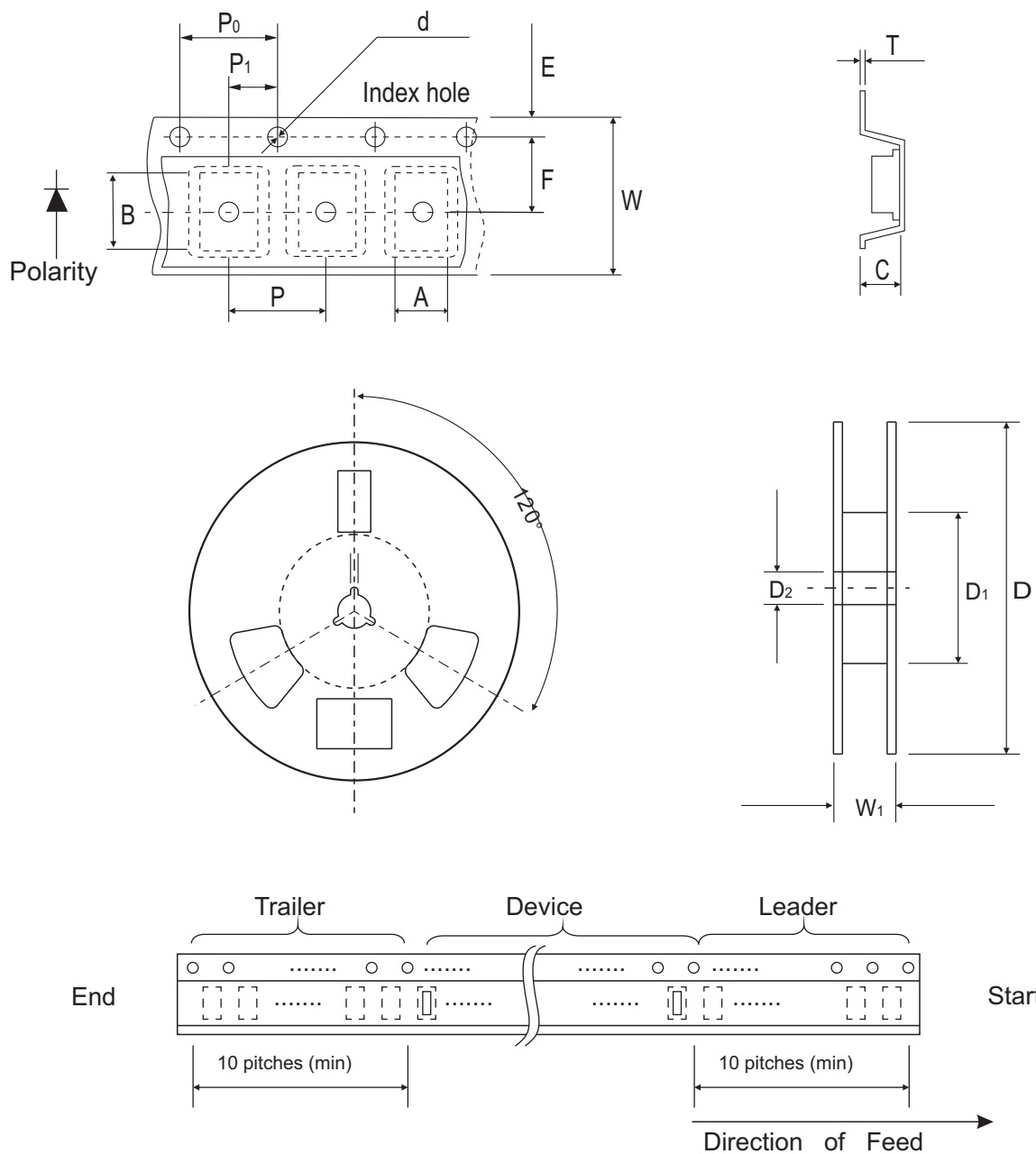


Fig.5 Non-repetitive Forward Surge Current



## Reel Taping Specification

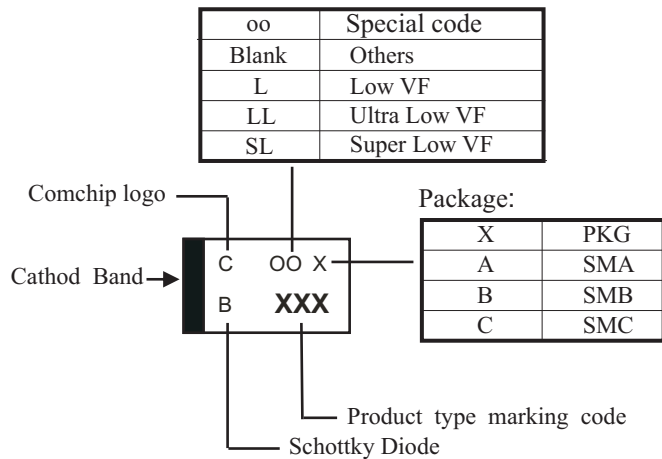


| SMC<br>(DO-214AB) | SYMBOL | A           | B           | C           | d                 | D     | D1         | D2                |
|-------------------|--------|-------------|-------------|-------------|-------------------|-------|------------|-------------------|
|                   | (mm)   | 6.30 (max)  | 8.60 (max)  | 2.90 (max)  | $1.50 \pm 0.10$   | 330   | 50.0 MIN.  | $13.5 \pm 1.00$   |
|                   | (inch) | 0.248 (max) | 0.339 (max) | 0.114 (max) | $0.059 \pm 0.004$ | 12.99 | 1.969 MIN. | $0.531 \pm 0.039$ |

| SMC<br>(DO-214AB) | SYMBOL | E                 | F                 | P                 | $P_0$             | $P_1$             | W                 | $W_1$       |
|-------------------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------|
|                   | (mm)   | $1.75 \pm 0.10$   | $7.50 \pm 0.05$   | $8.00 \pm 0.10$   | $4.00 \pm 0.10$   | $2.00 \pm 0.05$   | $16.0 \pm 0.20$   | 22.4 (max)  |
|                   | (inch) | $0.689 \pm 0.004$ | $0.295 \pm 0.002$ | $0.315 \pm 0.004$ | $0.157 \pm 0.004$ | $0.079 \pm 0.002$ | $0.630 \pm 0.008$ | 0.882 (max) |

## Marking Code

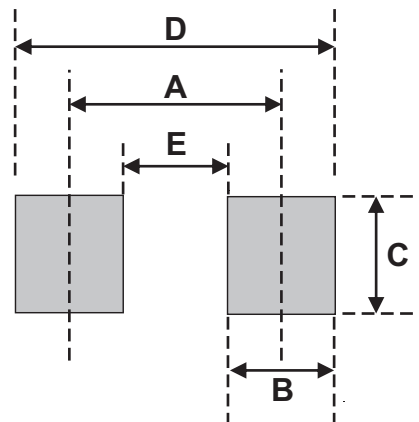
| Part Number | Marking Code |
|-------------|--------------|
| CDBC520-G   | 520          |
| CDBC540-G   | 540          |
| CDBC560-G   | 560          |
| CDBC580-G   | 580          |
| CDBC5100-G  | 5100         |



xxx/xxxx = Product type marking code

## Suggested PAD Layout

| SIZE | DO-214AB(SMC) |        |
|------|---------------|--------|
|      | (mm)          | (inch) |
| A    | 6.20          | 0.244  |
| B    | 1.60          | 0.063  |
| C    | 4.80          | 0.189  |
| D    | 7.80          | 0.307  |
| E    | 4.60          | 0.181  |



## Standard Packaging

| Case Type         | REEL PACK       |                     |
|-------------------|-----------------|---------------------|
|                   | REEL<br>( pcs ) | Reel Size<br>(inch) |
| DO-214AB<br>(SMC) | 3,000           | 13                  |