



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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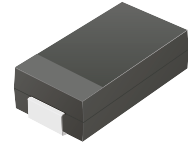


CDBA540-G Thru. CDBA5200-G

Reverse Voltage: 40 to 200 Volts

Forward Current: 5.0 Amp

RoHS Device

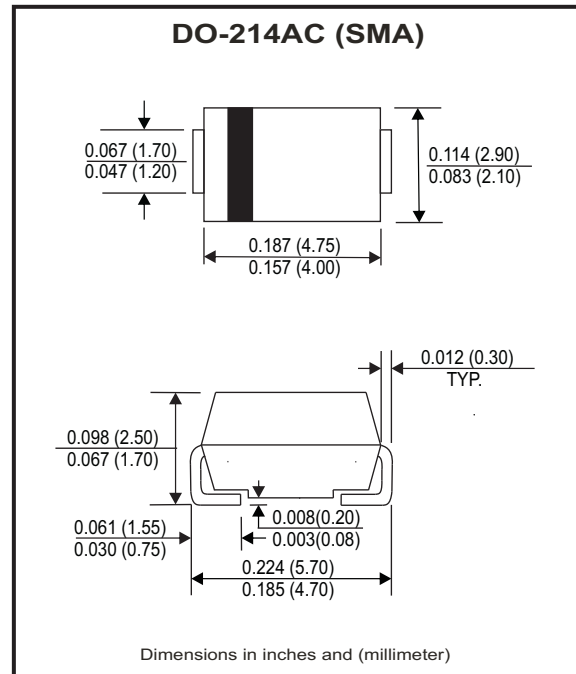


Features

- 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 Ta=25°C unless otherwise noted.
Single phase, half wave, 60Hz, resistive or inductive loaded.
For capacitive load, derate current by 20% .

| Parameter | Symbol | CDBA 540-G | CDBA 560-G | CDBA 5100-G | CDBA 5150-G | CDBA 5200-G | 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°C | V _F | 0.55 | 0.75 | 0.81 | 0.87 | 0.90 | V |
| Operating Temperature | T _J | -50 to +150 | | | -50 to +175 | | °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°C | I _R | | | 0.5 | mA |
| | V _R =V _{RRM} T _A =100°C | I _R | | | 20 | mA |
| Thermal Resistance | Junction to ambient | R _{θJA} | | 24 | | °C/W |
| Diode Junction capacitance | f=1MHz and applied 4V DC reverse Voltage | C _J | | 380 | | pF |
| Storage temperature | | T _{STG} | -50 | | +175 | °C |

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

REV: C

RATING AND CHARACTERISTIC CURVES (CDBA540-G thru. CDBA5200-G)

Fig.1 - Typical Forward Current Derating Curve

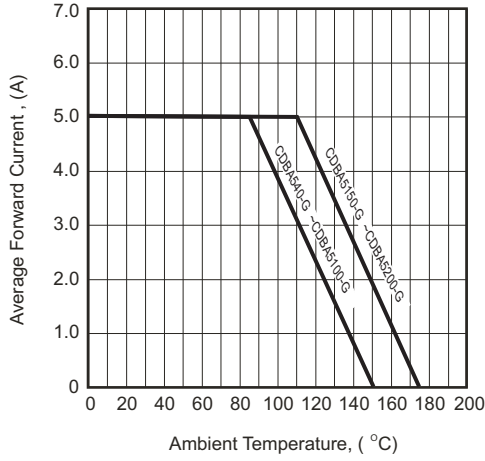


Fig.2 - Typical Forward Characteristics

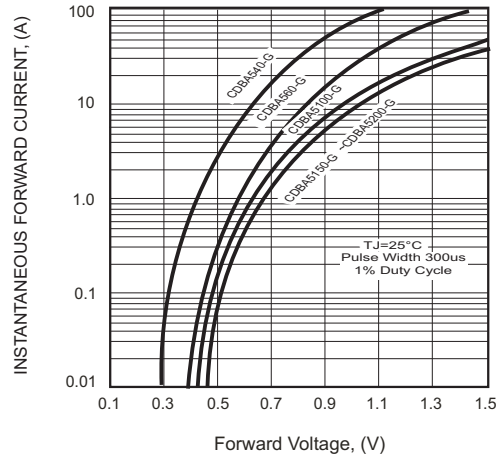


Fig.3 - Maximum Non-repetitive Forward Surge Current

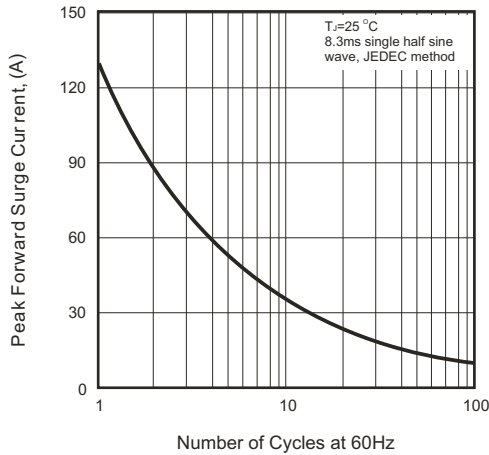


Fig.4 - Typical Junction Capacitance

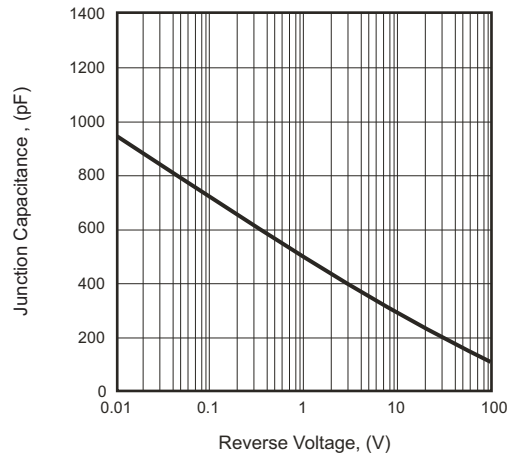
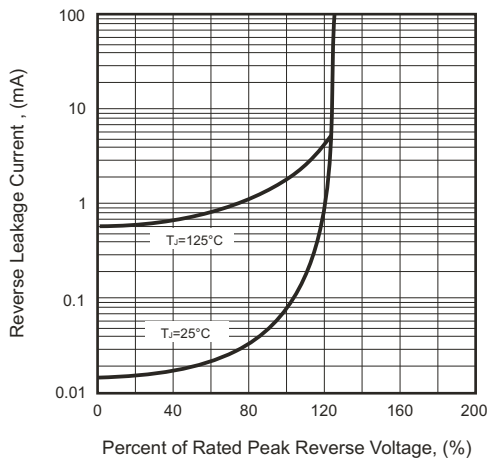
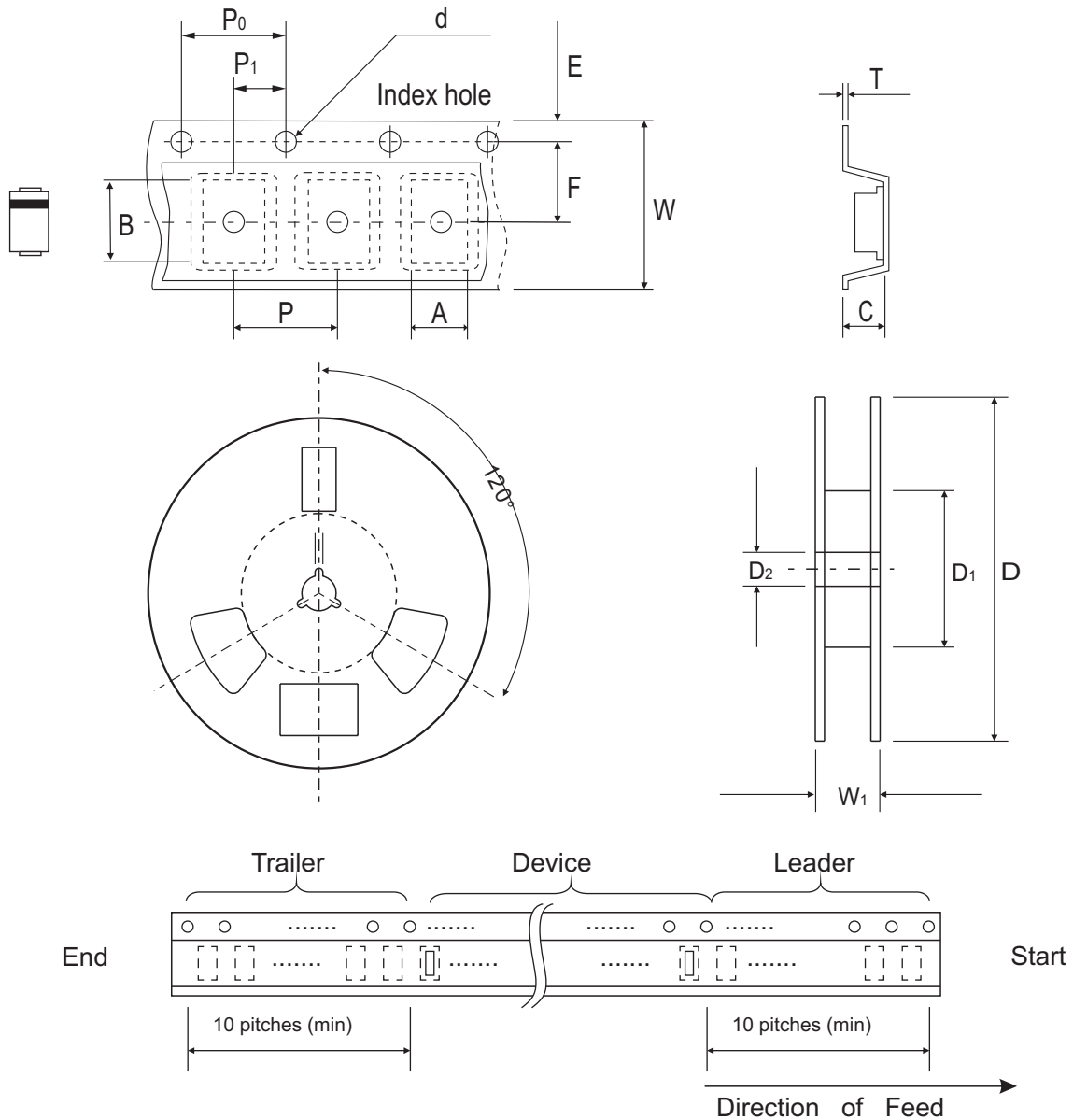


Fig.5 - Typical Reverse Characteristics



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Reel Taping Specification



| DO-214AC (SMA) | SYMBOL | A | B | C | d | D | D ₁ | D ₂ |
|-------------------|--------|---------------|---------------|---------------|---------------|---------------|----------------|----------------|
| | (mm) | 2.70 ± 0.10 | 5.30 ± 0.10 | 2.66 ± 0.10 | 1.50 ± 0.10 | 330 ± 2.00 | 62.0 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 | 2.441 MIN. | 0.531 ± 0.020 |

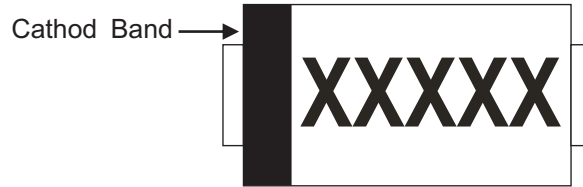
| DO-214AC (SMA) | SYMBOL | E | F | P | P ₀ | P ₁ | T | W | W ₁ |
|-------------------|--------|---------------|---------------|---------------|----------------|----------------|---------------|---------------|----------------|
| | (mm) | 1.75 ± 0.10 | 5.50 ± 0.10 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.10 | 0.60 ± 0.10 | 12.0 ± 0.30 | 18.40 ± 1.00 |
| | (inch) | 0.069 ± 0.004 | 0.217 ± 0.004 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.004 | 0.236 ± 0.004 | 0.472 ± 0.012 | 0.724 ± 0.039 |

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REV: C

Marking Code

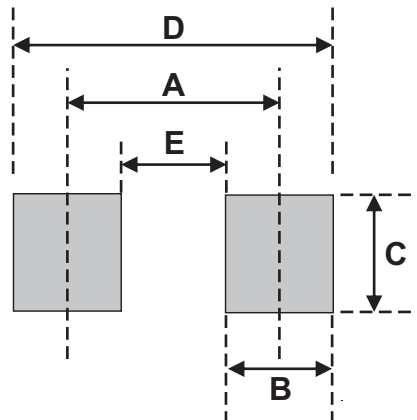
| Part Number | Marking Code |
|-------------|--------------|
| CDBA540-G | SK54 |
| CDBA560-G | SK56 |
| CDBA5100-G | SK510 |
| CDBA5150-G | SK515 |
| CDBA5200-G | SK520 |



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 (pcs) | Reel Size (inch) |
| DO-214AC (SMA) | 5,000 | 13 |