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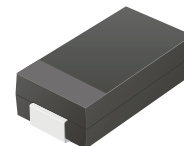
sales@integrated-circuit.com

SMD Schottky Barrier Rectifiers



CDBA5817-G

Reverse Voltage: 20 Volts
Forward Current: 1A
RoHS Device

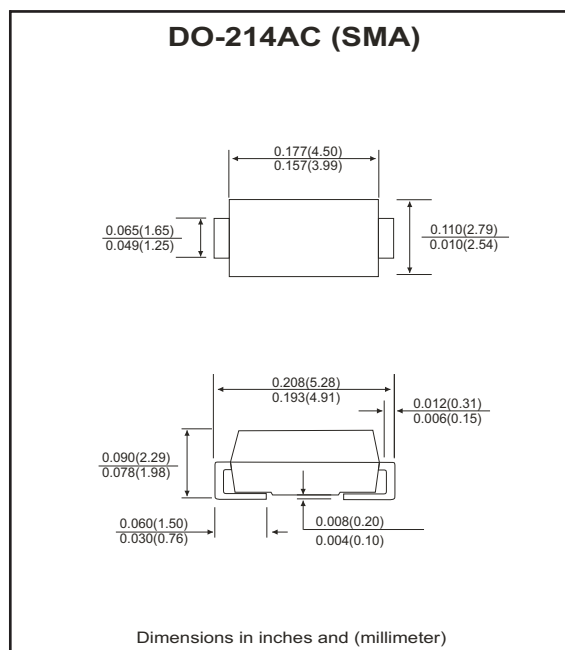


Features

- Ideal for surface mount applications.
- Low power losses, high efficiency.
- High current capability, Low forward voltage drop.
- High surge capability.
- High temperature soldering:
250°C/10 seconds at terminals.

Mechanical data

- Case: JEDEC DO-214AC, molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode end.
- Approx. weight: 0.064 grams



Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.
 Single phase, half wave, 60Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

| Parameter | Symbol | CDBA5817-G | Unit |
|---|-----------------|------------|------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 20 | V |
| Maximum RMS voltage | V_{RMS} | 14 | V |
| Maximum DC blocking voltage | V_{DC} | 20 | V |
| Maximum average forward rectified current 0.375" (9.5mm) lead length (see Fig.1) | $I_{F(AV)}$ | 1.0 | A |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 30 | A |
| Max. instantaneous forward voltage at 1.0A (Note 1) | V_F | 0.55 | V |
| Maximum instantaneous reverse current at Rated DC blocking voltage (Note 1) | I_R | 0.5 10 | mA |
| Typical thermal capacitance (Note 2) | $R_{\theta JL}$ | 28 | °C/W |
| | $R_{\theta JA}$ | 88 | |
| Operating temperature range | T_J | -65 ~ +125 | °C |
| Storage temperature range | T_{STG} | -65 ~ +150 | °C |

NOTES:

1. Pulse test: 300µs pulse width, 1% duty cycle.
2. P.C.B. Mounted with 0.2×0.2" (5.0×5.0mm) copper pads.
3. Company reserves the right to improve product design, functions and reliability without notice.

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RATING AND CHARACTERISTIC CURVES (CDBA5817-G)

Fig.1 - Forward Current derating curve

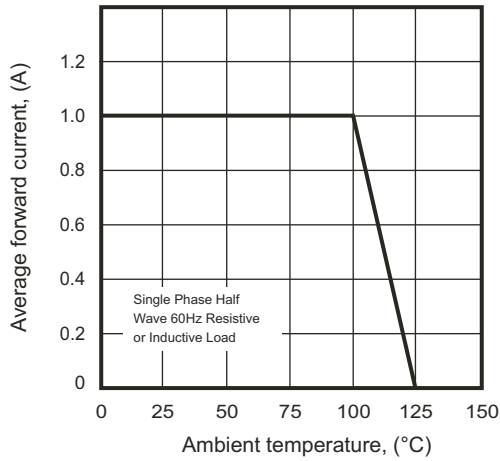


Fig.2 - Maximum Non-repetitive Surge Current

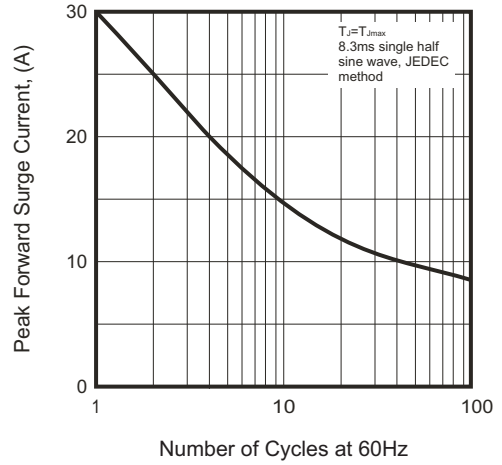


Fig.3 - Typical Instantaneous Forward Characteristics

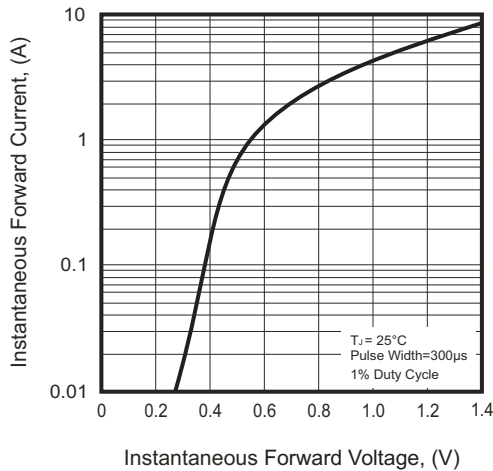


Fig.4 - Typical Junction Capacitance

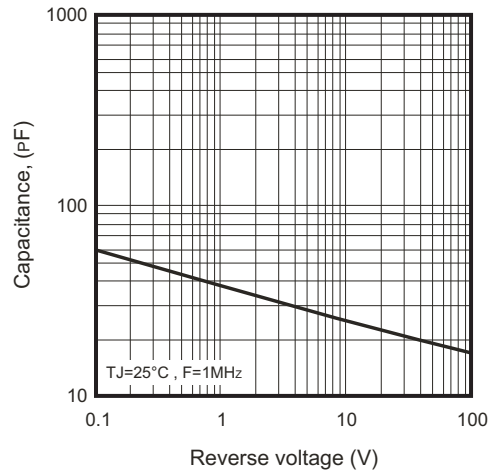
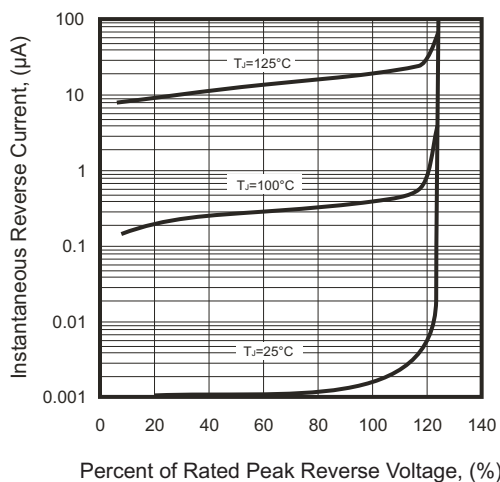


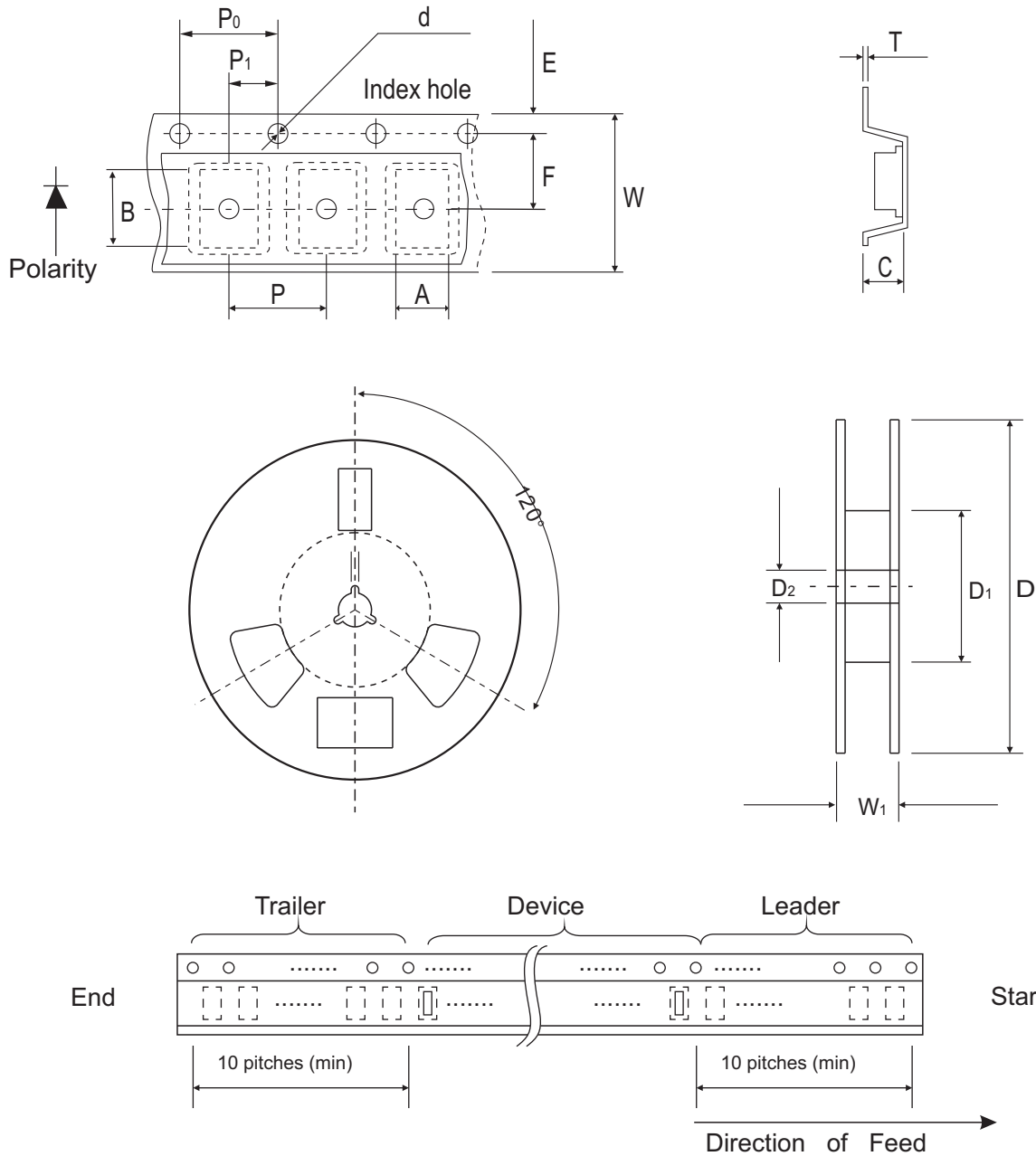
Fig.5 - Typical Reverse Characteristics



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Reel Taping Specification



| SMA (DO-214AC) | SYMBOL | A | B | C | d | D | D1 | D2 |
|-------------------|--------|-------------|-------------|-------------|-------------------|-------|------------|-------------------|
| | (mm) | 2.70 (max) | 5.30 (max) | 2.66 (max) | 1.50 ± 0.10 | 330 | 50.0 MIN. | 13.5 ± 1.00 |
| | (inch) | 0.106 (max) | 0.209 (max) | 0.105 (max) | 0.059 ± 0.004 | 12.99 | 1.969 MIN. | 0.531 ± 0.039 |

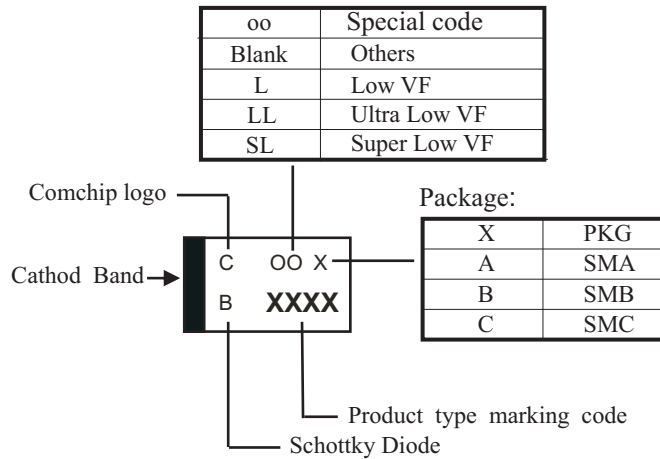
| SMA (DO-214AC) | SYMBOL | E | F | P | P_0 | P_1 | W | W_1 |
|-------------------|--------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------------|-------------|
| | (mm) | 1.75 ± 0.10 | 5.50 ± 0.05 | 4.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.05 | 12.0 ± 0.20 | 18.4 (max) |
| | (inch) | 0.689 ± 0.004 | 0.217 ± 0.002 | 0.157 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.002 | 0.472 ± 0.008 | 0.724 (max) |

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Marking Code

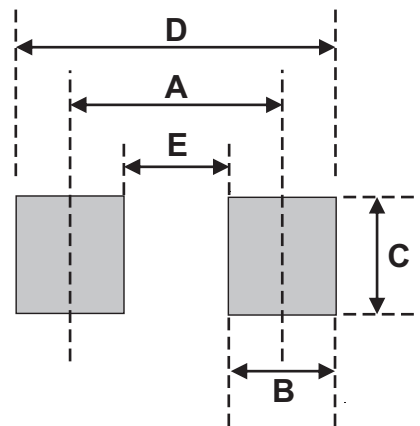
| Part Number | Marking Code |
|-------------|--------------|
| CDBA5817-G | 5817 |



xxxx = Product type marking code

Suggested PAD Layout

| SIZE | DO-214AC(SMA) | |
|------|---------------|--------|
| | (mm) | (inch) |
| A | 3.80 | 0.150 |
| B | 1.60 | 0.063 |
| C | 2.80 | 0.110 |
| D | 5.40 | 0.213 |
| E | 2.20 | 0.087 |



Standard Packaging

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