

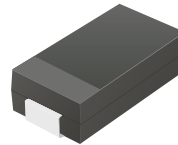
ACGRC301-HF Thru. ACGRC307-HF

Reverse Voltage: 50 to 1000 Volts

Forward Current: 3.0 Amp

RoHS Device

Halogen Free

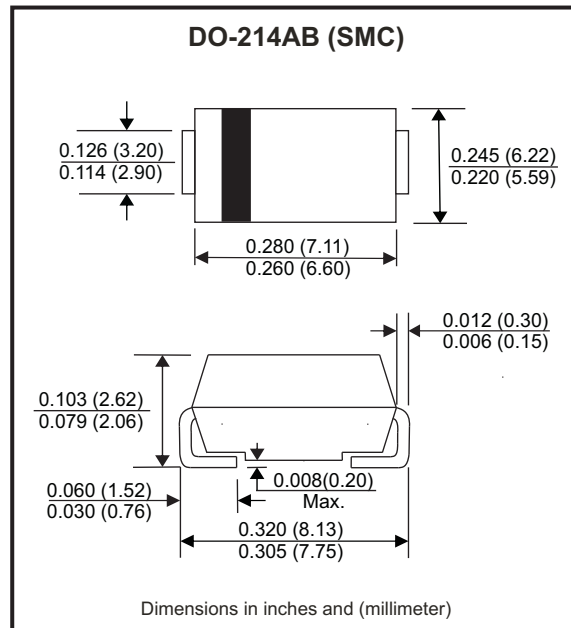


Features

- Glass Passivation Junction.
- High current capability.
- High surge current capability.
- Low reverse current.
- Comply with AEC-Q101

Mechanical data

- Case: DO-214AB / SMC, molded plastic.
- Epoxy: UL flammability classification rate 94V-0.
- Terminals: Lead free plating (Tin finish).
Solderable per MIL-STD-202, Method 208.
- Polarity: Cathode band.
- Weight: 0.231 grams(approx.).



Circuit diagram



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

| Parameter | Symbol | ACGRC 301-HF | ACGRC 302-HF | ACGRC 303-HF | ACGRC 304-HF | ACGRC 305-HF | ACGRC 306-HF | ACGRC 307-HF | Units |
|---|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Max. repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Max. DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Max. RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 100 | | | | | | | A |
| Max. average forward rectified current | I_F | 3.0 | | | | | | | A |
| Max. instantaneous forward voltage $I_F=3.0A @ 25^\circ C$ | V_F | 1.15 | | | | | | | V |
| Max. DC reverse current at rated | I_R | 5 | | | | | | | μA |
| DC blocking voltage | I_R | 50 | | | | | | | |
| Typical junction capacitance (Note 1) | C_J | 20 | | | | | | | pF |
| Typical thermal resistance | $R_{\theta JC}$ | 20 | | | | | | | $^\circ C/W$ |
| Operating temperature range | T_J | -55 to +150 | | | | | | | $^\circ C$ |
| Storage temperature range | T_{STG} | -55 to +150 | | | | | | | $^\circ C$ |

Notes: 1. Measured at 1.0MHZ and applied reverse voltage of 4.0V DC.

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

REV: B

RATING AND CHARACTERISTIC CURVES (ACGRC301-HF Thru. ACGRC307-HF)

Fig.1 - Typical Forward Current Derating Curve

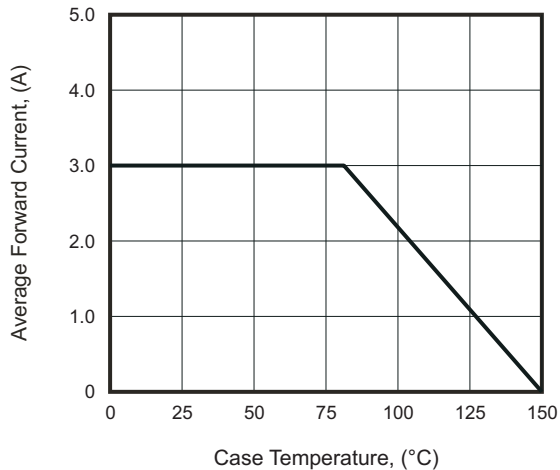


Fig.2 - Typical Forward Characteristics

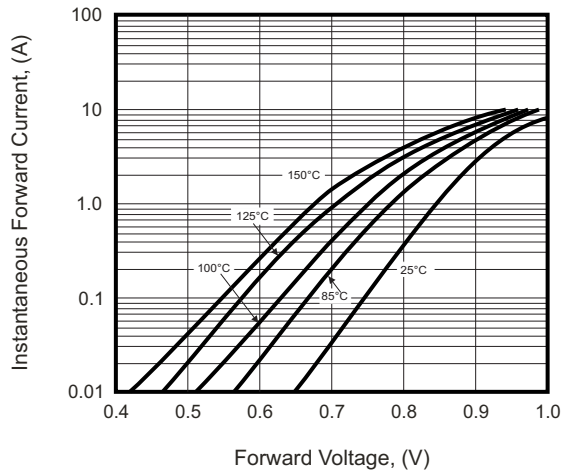


Fig.3 - Maximum Non-Repetitive Forward Surge Current

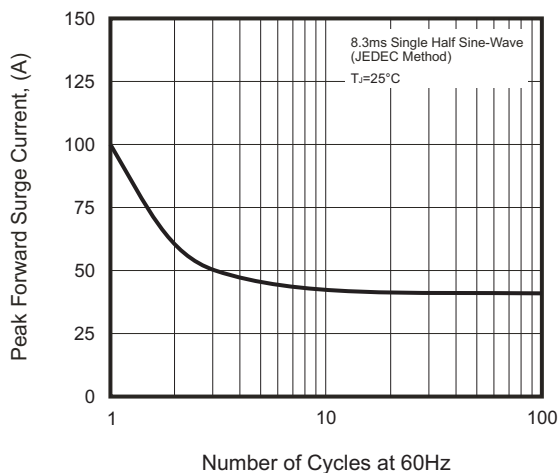


Fig.4 - Typical Reverse Characteristics

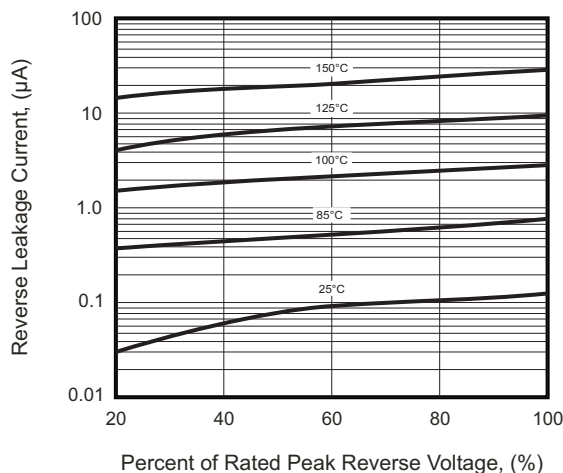
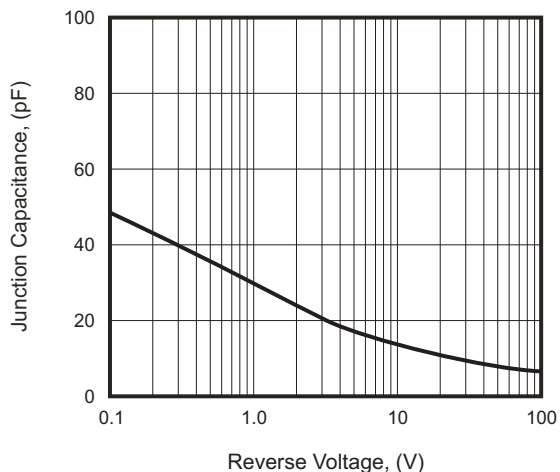


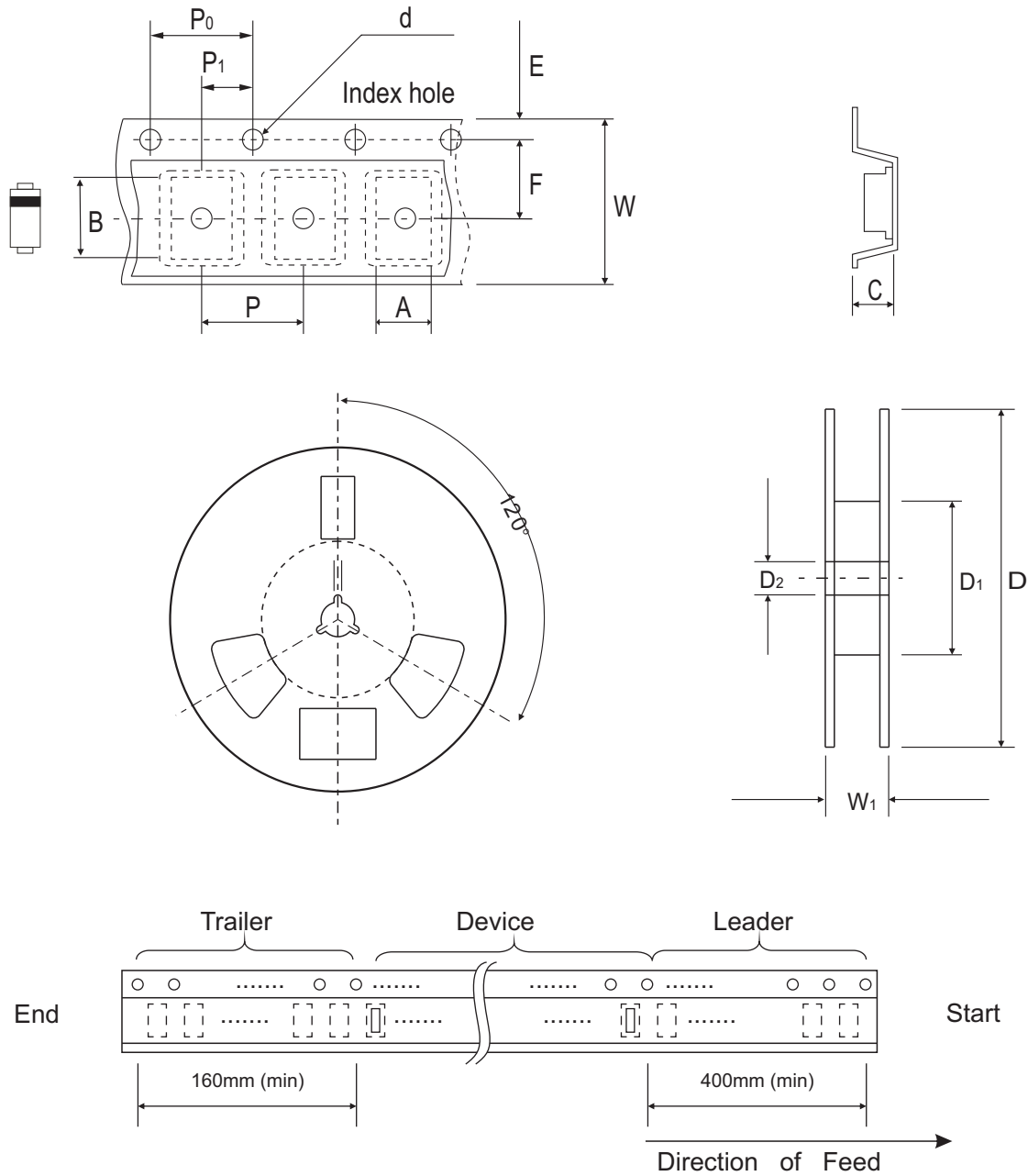
Fig.5 - Typical Junction Capacitance



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Reel Taping Specification



| DO-214AB (SMC) | SYMBOL | A | B | C | d | D | D ₁ | D ₂ |
|-------------------|--------|------------|------------|------------|---------------|---------------|----------------|----------------|
| | (mm) | 6.30 MAX. | 8.60 MAX. | 2.90 MAX. | 1.50 ± 0.10 | 330 ± 2.00 | 50 MIN. | 13.50 ± 1.00 |
| | (inch) | 0.248 MAX. | 0.339 MAX. | 0.114 MAX. | 0.059 ± 0.004 | 13.00 ± 0.079 | 1.969 MIN. | 0.531 ± 0.039 |

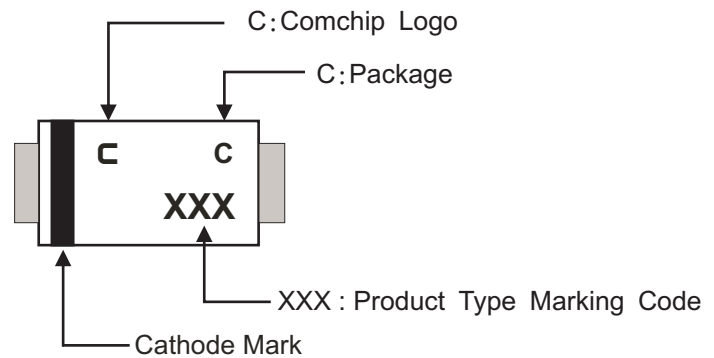
| DO-214AB (SMC) | SYMBOL | E | F | P | P ₀ | P ₁ | W | W ₁ |
|-------------------|--------|---------------|---------------|---------------|----------------|----------------|---------------|----------------|
| | (mm) | 1.75 ± 0.10 | 7.50 ± 0.05 | 8.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.05 | 16.00 ± 0.30 | 22.40 MAX. |
| | (inch) | 0.069 ± 0.004 | 0.295 ± 0.002 | 0.315 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.002 | 0.630 ± 0.012 | 0.882 MAX. |

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REV: B

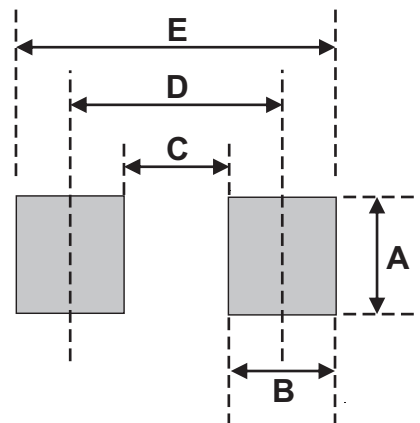
Marking Code

| Part Number | Marking code |
|-------------|--------------|
| ACGRC301-HF | 301 |
| ACGRC302-HF | 302 |
| ACGRC303-HF | 303 |
| ACGRC304-HF | 304 |
| ACGRC305-HF | 305 |
| ACGRC306-HF | 306 |
| ACGRC307-HF | 307 |



Suggested PAD Layout

| SIZE | DO-214AB (SMC) | |
|------|----------------|--------|
| | (mm) | (inch) |
| A | 3.30 | 0.130 |
| B | 2.50 | 0.098 |
| C | 4.40 | 0.173 |
| D | 6.80 | 0.268 |
| E | 9.40 | 0.370 |



Note:

1. The pad layout is for reference purposes only.

Standard Packaging

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

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