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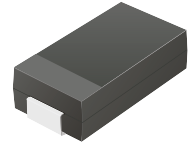


CURC301-G Thru. CURC307-G

Reverse Voltage: 50 to 1000 Volts

Forward Current: 3.0 Amp

RoHS Device

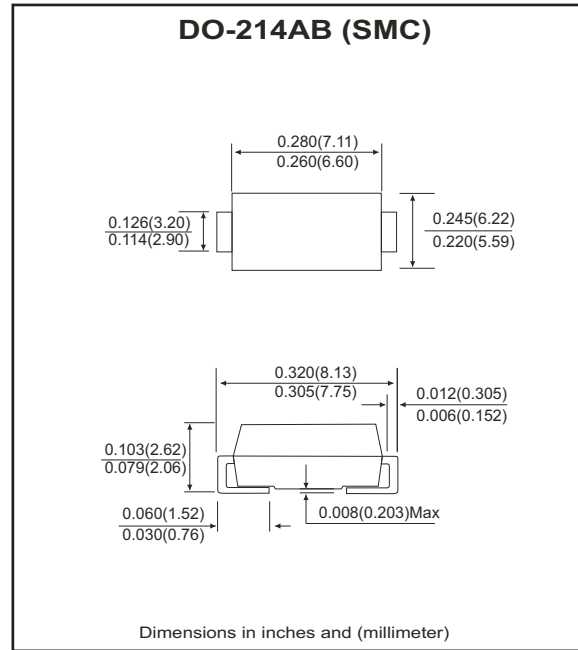


Features

- Ideal for surface mount applications.
- Easy pick and place.
- Plastic package has Underwriters Lab. flammability classification 94V-0.
- Fast recovery time: 50~75nS.
- Low leakage current.

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 | CURC 301-G | CURC 302-G | CURC 303-G | CURC 304-G | CURC 305-G | CURC 306-G | CURC 307-G | 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 surge forward current, 8.3ms single half sine-wave superimposed on rate load (JEDEC method) | I_{FSM} | 100 | | | | | | | A |
| Max. average forward current | I_o | 3.0 | | | | | | | A |
| Max. instantaneous forward voltage at 3.0A | V_F | 1.0 | | | 1.3 | 1.7 | | V | |
| Reverse recovery time | T_{rr} | 50 | | | | 75 | | | nS |
| Max. DC reverse current at $T_A=25^{\circ}C$ rated DC blocking voltage $T_A=125^{\circ}C$ | I_R | | | | | 5.0 | 150 | | μA |
| Max. thermal resistance (Note 1) | $R_{\theta JL}$ | | | | | 20 | | | $^{\circ}C/W$ |
| Max. operating junction temperature | T_J | | | | | 150 | | | $^{\circ}C$ |
| Storage temperature | T_{STG} | -55 to +150 | | | | | | | $^{\circ}C$ |

Notes: 1. Thermal resistance from junction to lead mounted on P.C.B. with 8.0x8.0 mm square land area.

RATING AND CHARACTERISTIC CURVES (CURC301-G thru CURC307-G)

Fig.1 Reverse Characteristics

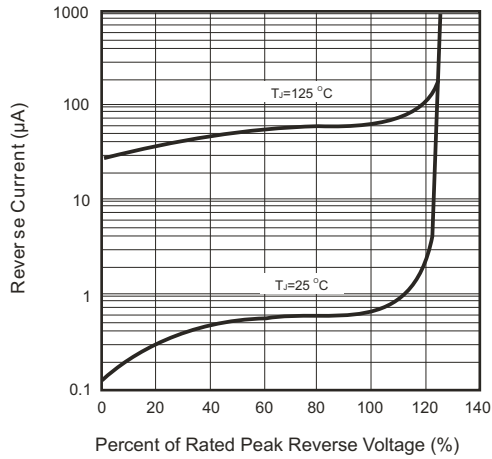


Fig.2 Forward Characteristics

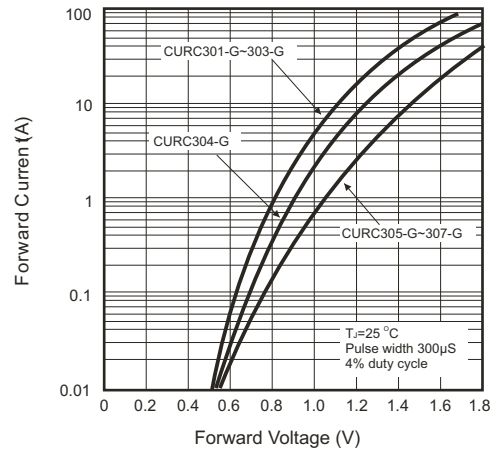


Fig.3 Junction Capacitance

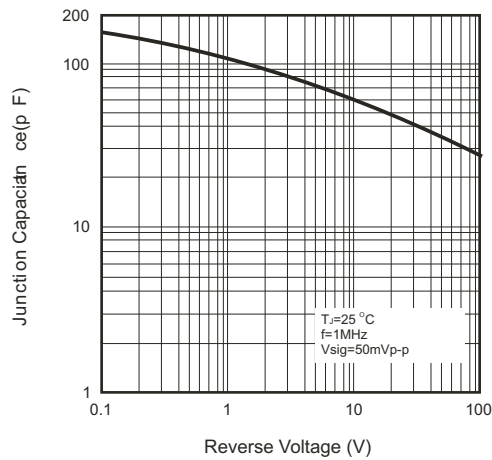


Fig.4 Non-repetitive Forward Surge Current

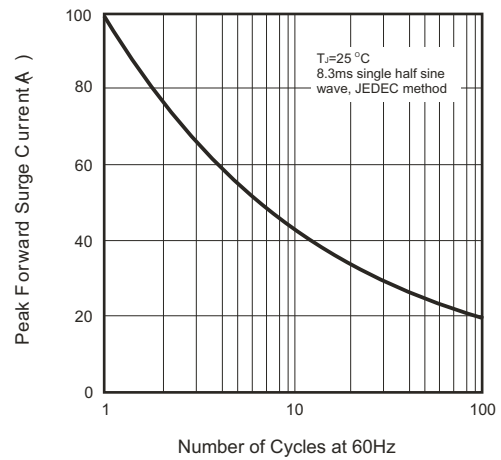


Fig.5 Test Circuit Diagram and Reverse Recovery Time Characteristics

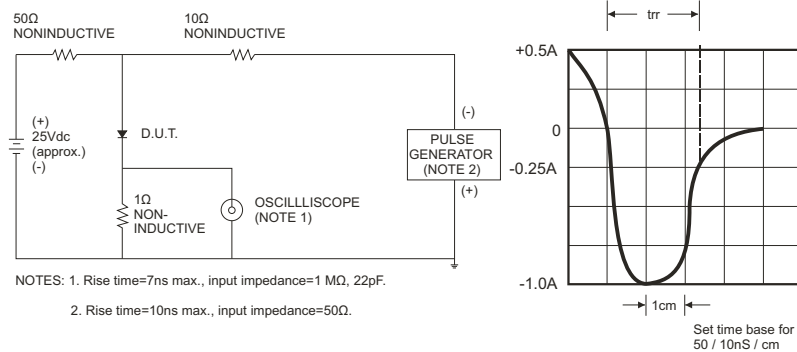
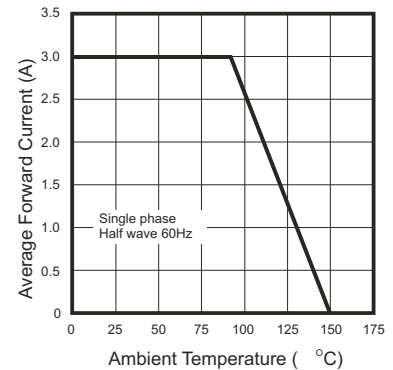
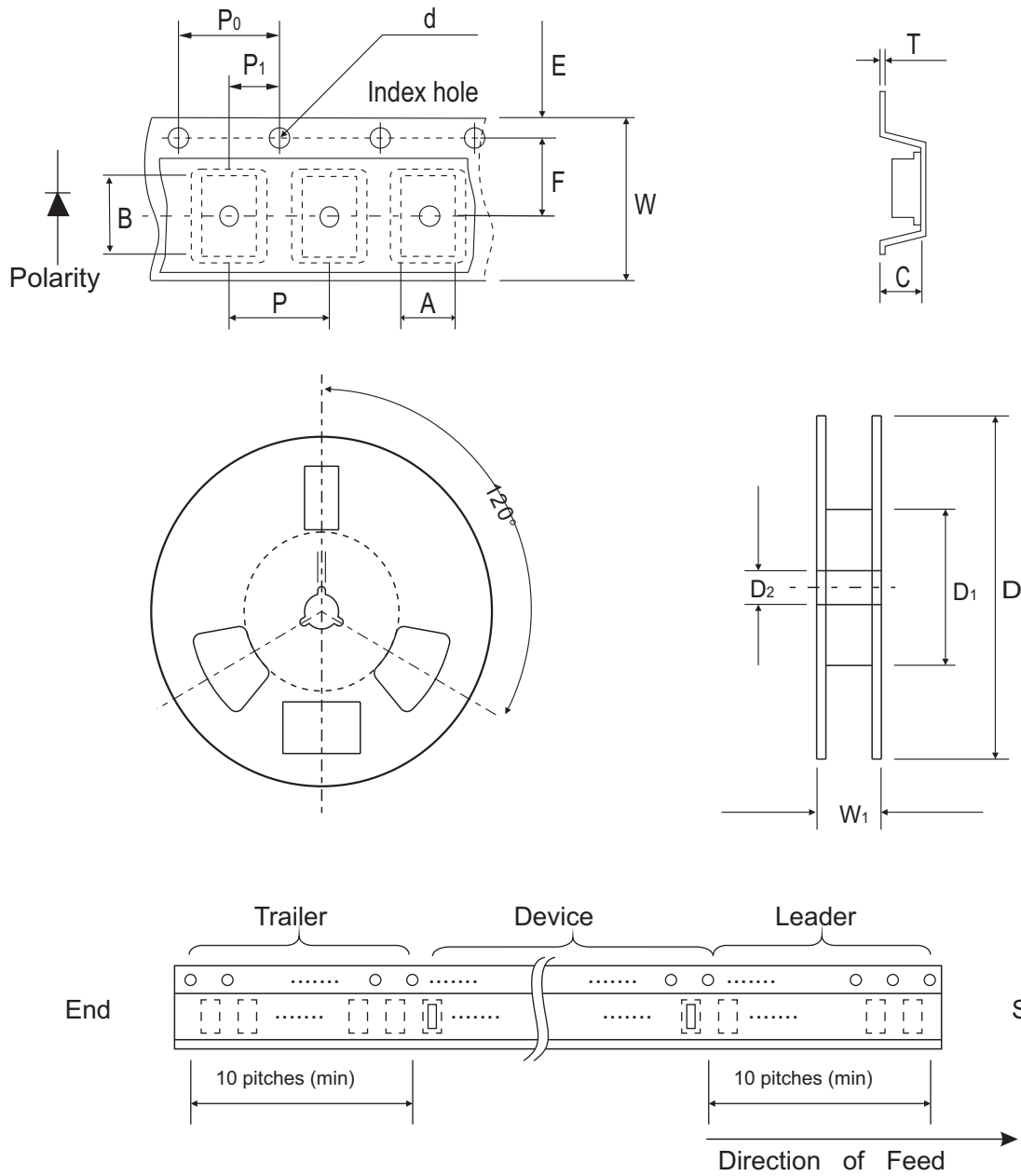


Fig.6 Current Derating Curve



Reel Taping Specification

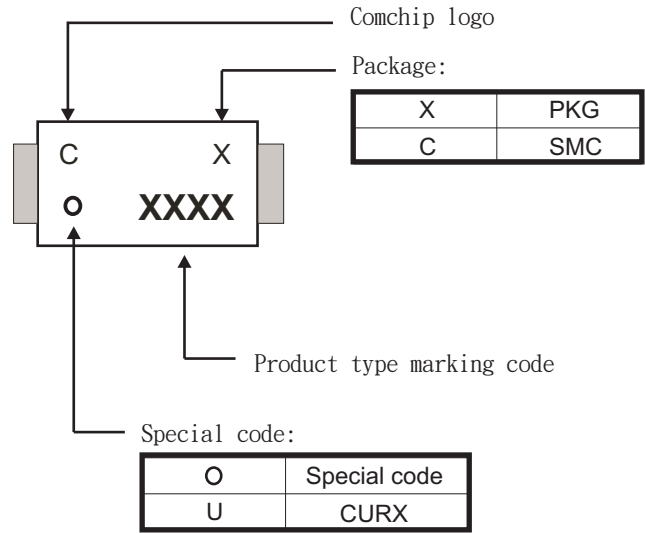


| SMC (DO-214AB) | SYMBOL | A | B | C | d | D | D1 | D2 |
|-------------------|--------|-----------|-----------|-----------|---------------|---------------|-----------|---------------|
| | (mm) | 6.3 Max | 8.6 Max | 2.9 Max | 1.50 ± 0.1 | 330 ± 2.0 | 50.0 min | 13.5 ± 1 |
| | (inch) | 0.248 Max | 0.339 Max | 0.114 Max | 0.060 ± 0.039 | 13.00 ± 0.079 | 1.969 min | 0.531 ± 0.039 |

| SMC (DO-214AB) | SYMBOL | E | F | P | P0 | P1 | W | W1 |
|-------------------|--------|---------------|---------------|---------------|---------------|---------------|---------------|-----------|
| | (mm) | 1.75 ± 0.10 | 7.50 ± 0.10 | 8.00 ± 0.10 | 4.00 ± 0.10 | 2.00 ± 0.05 | 16.0 ± 0.30 | 22.4 Max |
| | (inch) | 0.069 ± 0.004 | 0.295 ± 0.004 | 0.315 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.002 | 0.630 ± 0.012 | 0.882 Max |

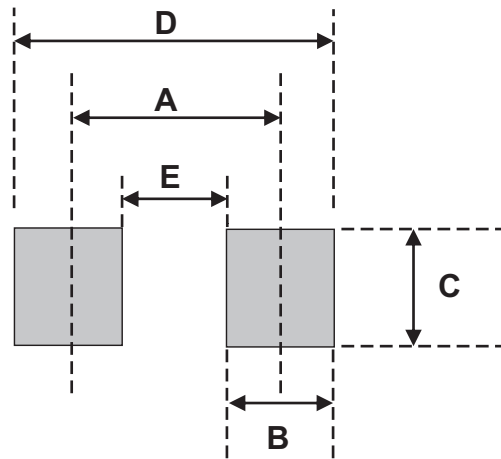
Marking Code

| Part Number | Marking Code |
|-------------|--------------|
| CURC301-G | 301 |
| CURC302-G | 302 |
| CURC303-G | 303 |
| CURC304-G | 304 |
| CURC305-G | 305 |
| CURC306-G | 306 |
| CURC307-G | 307 |



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 | 1.441 |
| E | 4.6 | 0.181 |



Standard Packaging

| Case Type | Qty per Reel | Reel Size |
|----------------|--------------|-----------|
| | (Pcs) | (inch) |
| DO-214AB (SMC) | 3,000 | 13 |