



RS5A~RS5M FAST RECOVERY RECTIFIER

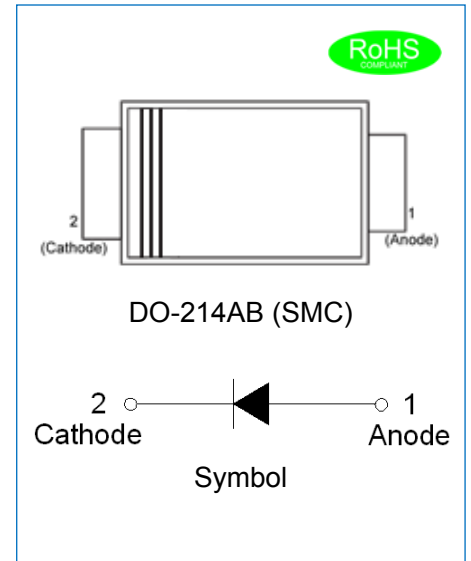
Rev.2.4

DESCRIPTION:

- ✧ Plastic package has underwriters laboratory flammability classification 94V-0
- ✧ For surface mounted applications in order to optimize board space
- ✧ Glass passivated junction
- ✧ Lead free in compliance with EU RoHS 2011/65/EU directive
- ✧ Fast recovery time

MECHANICAL DATA

- ✧ Case: JEDEC DO-214AB molded plastic
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Polarity: Color band denotes cathode end
- ✧ Weight: 0.26 gram



ABSOLUTE MAXIMUM RATING AND ELECTRICAL CHARACTERISTICS

(Rating at 25°C ambient temperature unless otherwise specified.)

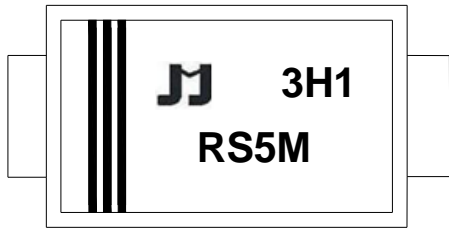
| Parameter | Symbol | RS5A | RS5B | RS5D | RS5G | RS5J | RS5K | RS5M | Unit | |
|---|-------------------------|-------------|------|------|------|------|------|------|------------------|---------------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 460 | 560 | 700 | V | |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V | |
| Maximum average forward current at $T_L=75^\circ\text{C}$ | $I_{F(AV)}$ | 5.0 | | | | | | | A | |
| Peak forward surge current: 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 120 | | | | | | | A | |
| Maximum forward voltage @ $I_F=5\text{A}$ | V_F | 1.3 | | | | | | | V | |
| Maximum DC reverse current at rated DC blocking voltage | $T_j=25^\circ\text{C}$ | I_R | 5.0 | | | | | | | μA |
| | $T_j=150^\circ\text{C}$ | | 500 | | | | | | | μA |
| Typical junction capacitance $V_R=4.0\text{V}$, $f=1\text{MHz}$ | C_J | 65 | | | | | | | pF | |
| Operating junction and storage temperature range | T_j, T_{stg} | -55 to +150 | | | | | | | $^\circ\text{C}$ | |
| Maximum reverse recovery time $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=0.25\text{A}$ | t_{rr} | 150 | | | | 250 | 500 | | ns | |

THERMAL RESISTANCES

| Symbol | Parameter | RS5A | RS5B | RS5D | RS5G | RS5J | RS5K | RS5M | Unit |
|---------------|-------------------------|------|------|------|------|------|------|------|------|
| $R_{th(j-L)}$ | Junction to lead(note1) | 15 | | | | | | | °C/W |

Note1: Thermal resistance from junction to lead mounted on P.C.B. with 8.0 mm x 8.0 mm copper pad areas.

MARKING



| | |
|---|-------------------------|
| R | Fast Recovery Rectifier |
| S | Surface Mount |
| 5 | $I_{F(AV)}=5A$ |
| M | $V_{RRM}:1000V$ |

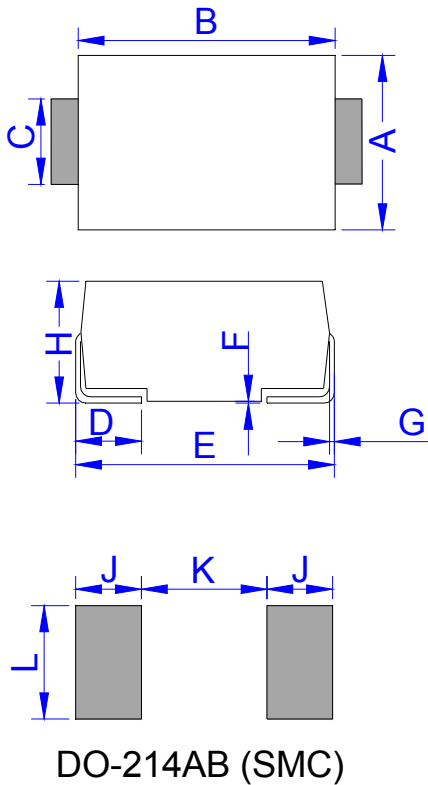
$xH1$: Month, 1、2、3 ~ 9、A、B、C

$3x1$:

| | | | | | | |
|------|------|------|------|------|------|------|
| 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
| H | I | J | K | L | M | N |
| 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | ... |
| O | P | Q | R | S | T | ... |

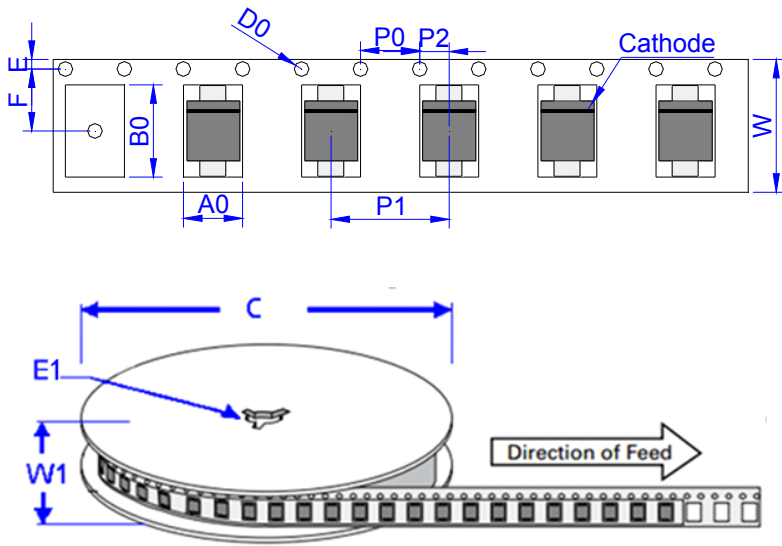
$3Hx$: Batch number

PACKAGE MECHANICAL DATA



| Ref. | Dimensions | | | |
|------|-------------|-------|--------|-------|
| | Millimeters | | Inches | |
| | Min. | Max. | Min. | Max. |
| A | 5.75 | 6.25 | 0.226 | 0.246 |
| B | 6.90 | 7.40 | 0.272 | 0.291 |
| C | 2.75 | 3.25 | 0.108 | 0.128 |
| D | 0.95 | 1.52 | 0.037 | 0.060 |
| E | 7.70 | 8.20 | 0.303 | 0.323 |
| F | 0.051 | 0.203 | 0.002 | 0.008 |
| G | 0.15 | 0.31 | 0.006 | 0.012 |
| H | 2.15 | 2.62 | 0.085 | 0.103 |
| J | 2.40 | | 0.094 | |
| K | | 4.20 | | 0.165 |
| L | 3.30 | | 0.130 | |

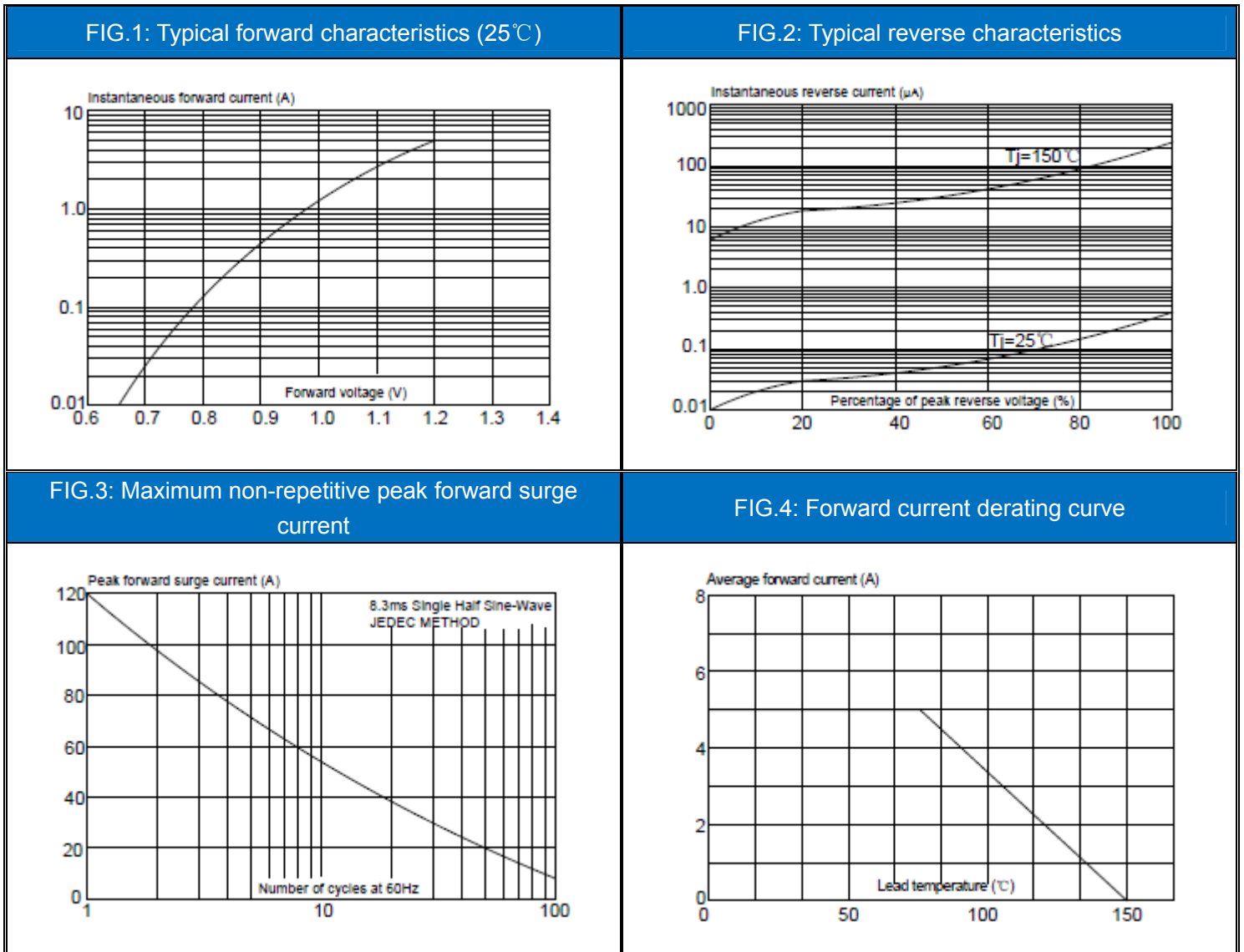
TAPE AND REEL SPECIFICATION-SMC



| Ref. | Dimensions | |
|------|-------------|----------------|
| | Millimeters | Inches |
| A0 | 6.05 ± 0.3 | 0.238 ± 0.012 |
| B0 | 8.31 ± 0.3 | 0.327 ± 0.012 |
| C | 330.0 | 13.0 |
| D0 | 1.55 ± 0.1 | 0.061 ± 0.004 |
| E | 1.75 ± 0.2 | 0.069 ± 0.008 |
| E1 | 13.3 ± 0.3 | 0.524 ± 0.012 |
| F | 7.50 ± 0.2 | 0.295 ± 0.008 |
| P0 | 4.00 ± 0.2 | 0.157 ± 0.008 |
| P1 | 8.00 ± 0.2 | 0.3145 ± 0.008 |
| P2 | 2.00 ± 0.2 | 0.079 ± 0.008 |
| W | 16.0 ± 0.2 | 0.630 ± 0.008 |
| W1 | 19.7 ± 2.0 | 0.776 ± 0.079 |

| OUTLINE | UNIT WEIGHT (g/PCS) typ. | REEL (PCS) | PER CARTON (PCS) | REEL DIAMETERS (mm) |
|---------|-----------------------------|---------------|---------------------|------------------------|
| TAPING | 0.26 | 3,000 | 48,000 | 330 |

CHARACTERISTICS CURVE



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