

**JPCR0202SA****EPI PLANAR HYPERFAST SOFT RECOVERY RECTIFIER**

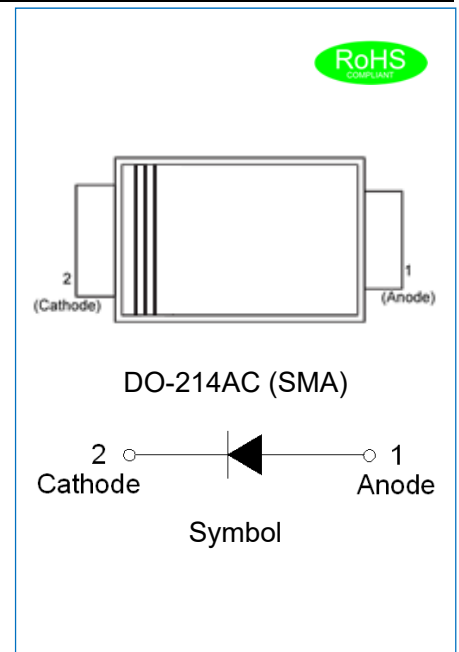
Rev.1.2

**DESCRIPTION**

- ✧ Plastic package has underwriters laboratory flammability classification 94V-0
- ✧ Lead free in comply with EU RoHS 2011/65/EU directives
- ✧ Low reverse leakage current
- ✧ Hyperfast recovery time
- ✧ Epitaxial planar technology
- ✧ 5th Generation soft fast recovery characteristics
- ✧ Low recovery loss

**MECHANICAL DATA**

- ✧ Case: JEDEC DO-214AC molded plastic
- ✧ Terminals: Solder plated, solderable per J-STD-002
- ✧ Polarity: Color band denotes cathode end
- ✧ Weight: 0.0673 gram

**ABSOLUTE MAXIMUM RATING**(Rating at 25°C ambient temperature unless otherwise specified.)

| Parameter                                                                         | Symbol         | JPCR0202SA  | Unit               |
|-----------------------------------------------------------------------------------|----------------|-------------|--------------------|
| Maximum repetitive peak reverse voltage                                           | $V_{RRM}$      | 200         | V                  |
| Maximum DC blocking voltage                                                       | $V_{DC}$       | 200         | V                  |
| Average forward current at $T_C=85^{\circ}\text{C}$                               | $I_{F(AV)}$    | 2           | A                  |
| Peak forward surge current: 10ms single half sine-wave superimposed on rated load | $I_{FSM}$      | 50          | A                  |
| Operating junction and storage temperature range                                  | $T_j, T_{stg}$ | -55 to +175 | $^{\circ}\text{C}$ |

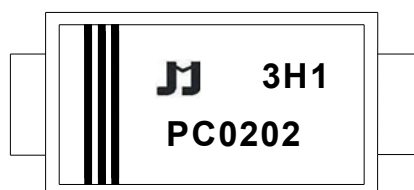
**ELECTRICAL CHARACTERISTICS**(Rating at 25°C ambient temperature unless otherwise specified.)

| Parameter             |                                                       | Symbol   | Min. | Typ. | Max. | Unit          |
|-----------------------|-------------------------------------------------------|----------|------|------|------|---------------|
| Forward voltage       | $I_F=1\text{A}, T_j=25^{\circ}\text{C}$               | $V_F$    | -    | -    | 0.87 | V             |
|                       | $I_F=2\text{A}, T_j=25^{\circ}\text{C}$               |          | -    | -    | 0.95 |               |
| Reverse current       | $V_R=200\text{V}, T_j=25^{\circ}\text{C}$             | $I_R$    | -    | -    | 5    | $\mu\text{A}$ |
|                       | $V_R=200\text{V}, T_j=150^{\circ}\text{C}$            |          | -    | -    | 100  |               |
| Reverse recovery time | $I_F=0.5\text{A}, I_R=1\text{A}, I_{rr}=0.25\text{A}$ | $t_{rr}$ | -    | -    | 25   | ns            |

## THERMAL RESISTANCES

| Symbol        | Parameter                                | Min. | Typ. | Max. | Unit |
|---------------|------------------------------------------|------|------|------|------|
| $R_{th(j-c)}$ | Thermal resistance from junction to case | -    | 50   | -    | °C/W |

## MARKING



|    |                                     |
|----|-------------------------------------|
| PC | Planar Hyperfast Recovery Rectifier |
| 02 | $I_{F(AV)}=2A$                      |
| 02 | $V_{RRM}:200V$                      |

xH1: Month, 1/2/3~9/A/B/C

3x1:

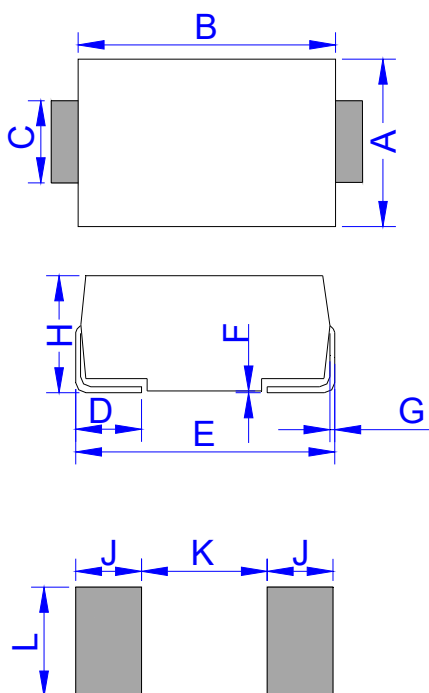
|      |      |      |      |      |      |      |
|------|------|------|------|------|------|------|
| 2018 | 2019 | 2020 | 2021 | 2022 | 2023 | 2024 |
| H    | I    | J    | K    | L    | M    | N    |
| 2025 | 2026 | 2027 | 2028 | 2029 | 2030 | ...  |
| O    | P    | Q    | R    | S    | T    | ...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

3Hx: Batch number

## ORDERING INFORMATION

|                            |            |           |           |                |                |             |
|----------------------------|------------|-----------|-----------|----------------|----------------|-------------|
| J                          | P          | C         | R         | 02             | 02             | SA          |
| JieJie<br>Microelectronics | Epi planar | Hyperfast | Rectifier | $I_{F(AV)}=2A$ | $V_{RRM}:200V$ | Package:SMA |

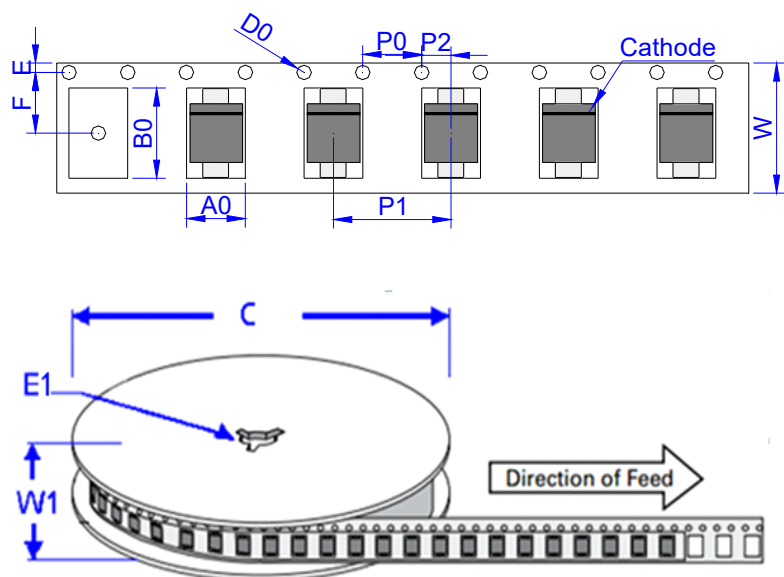
## PACKAGE MECHANICAL DATA



DO-214AC (SMA)

| Ref. | Dimensions  |       |        |       |
|------|-------------|-------|--------|-------|
|      | Millimeters |       | Inches |       |
|      | Min.        | Max.  | Min.   | Max.  |
| A    | 2.60        | 3.00  | 0.102  | 0.118 |
| B    | 4.15        | 4.65  | 0.163  | 0.183 |
| C    | 1.25        | 1.65  | 0.049  | 0.065 |
| D    | 0.95        | 1.52  | 0.037  | 0.060 |
| E    | 4.90        | 5.30  | 0.193  | 0.209 |
| F    | 0.051       | 0.203 | 0.002  | 0.008 |
| G    | 0.15        | 0.31  | 0.006  | 0.012 |
| H    | 2.00        | 2.44  | 0.079  | 0.096 |
| J    | 2.00        |       | 0.079  |       |
| K    |             | 2.30  |        | 0.091 |
| L    | 1.80        |       | 0.071  |       |

## TAPE AND REEL SPECIFICATION-SMA



| Ref. | Dimensions  |               |
|------|-------------|---------------|
|      | Millimeters | Inches        |
| A0   | 2.79 ± 0.3  | 0.110 ± 0.012 |
| B0   | 5.33 ± 0.3  | 0.210 ± 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    | 5.5 ± 0.2   | 0.217 ± 0.008 |
| P0   | 4.00 ± 0.2  | 0.157 ± 0.008 |
| P1   | 4.00 ± 0.2  | 0.157 ± 0.008 |
| P2   | 2.00 ± 0.2  | 0.079 ± 0.008 |
| W    | 12.0 ± 0.2  | 0.472 ± 0.008 |
| W1   | 15.7 ± 2.0  | 0.618 ± 0.079 |

| OUTLINE | UNIT WEIGHT<br>(g/PCS) TYP | REEL<br>(PCS) | PER CARTON<br>(PCS) | REEL<br>DIAMETERS<br>(mm) |
|---------|----------------------------|---------------|---------------------|---------------------------|
| TAPING  | 0.0673                     | 7,500         | 120,000             | 330                       |

## CHARACTERISTICS CURVE

FIG.1: Typical forward characteristics

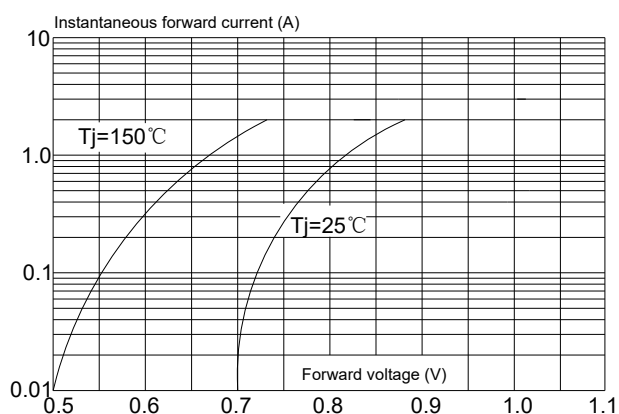


FIG.2: Typical reverse characteristics

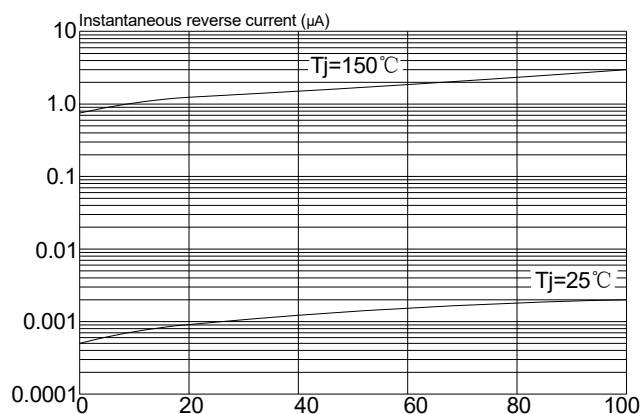


FIG.3: Maximum non-repetitive peak forward surge current

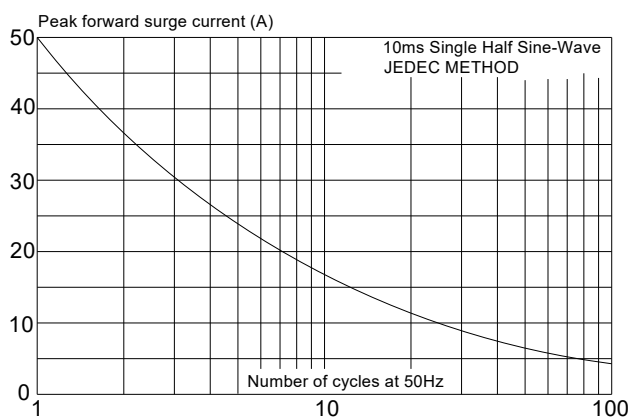
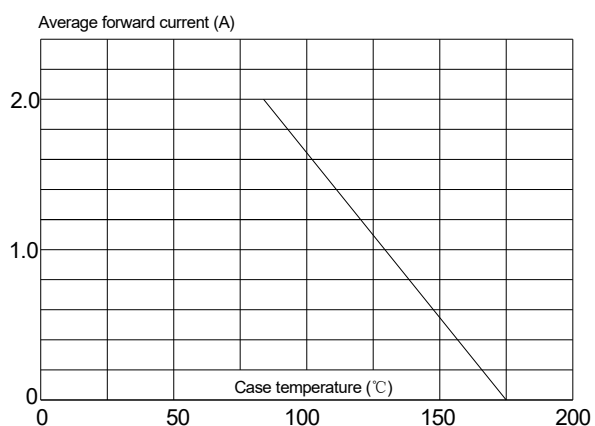


FIG.4: Forward current derating curve



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