

# RS3AC

Surface Mount Glass Passivated Fast Recovery Rectifiers  
Reverse Voltage 50V Forward Current 3.0A

## 1. FEATURES

- We declare that the material of product compliance with RoHS requirements and Halogen Free.
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0.
- High temperature metallurgically bonded construction.
- Cavity-free glass passivated junction.
- Capable of meeting environmental standards of MIL-S-19500.
- Fast Recovery Time for High Efficiency
- Typical IR less than 1.0 $\mu$ A.
- High temperature soldering guaranteed:260°C/10 seconds.
- Weight: 0.26g



## 2. DEVICE MARKING AND ORDERING INFORMATION

| Device | Marking | Shipping       |
|--------|---------|----------------|
| RS3AC  | RS3AC   | 3000/Tape&Reel |

## 3. MAXIMUM RATINGS(Ta = 25°C)

| Parameter                                                                                        | Symbol        | Limits    | Unit |
|--------------------------------------------------------------------------------------------------|---------------|-----------|------|
| Maximum repetitive peak reverse voltage                                                          | VRRM          | 50        | V    |
| Maximum RMS voltage                                                                              | VRMS          | 35        | V    |
| Maximum DC blocking voltage                                                                      | VDC           | 50        | V    |
| Maximum average forward rectified current at TC = 75°C                                           | IF(AV)        | 3         | A    |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | IFSM          | 80        | A    |
| Typical thermal resistance (Note 1)                                                              | R $\theta$ JA | 80        | °C/W |
|                                                                                                  | R $\theta$ JC | 20        |      |
| Operating junction and storage temperature range                                                 | TJ, TSTG      | -50 ~+150 | °C   |

## 4. ELECTRICAL CHARACTERISTICS (Ta= 25°C)

| Characteristic                                                               | Symbol | Min. | Typ. | Max.     | Unit    |
|------------------------------------------------------------------------------|--------|------|------|----------|---------|
| Maximum instantaneous forward voltage at 3.0A                                | VF     | -    | -    | 1.3      | V       |
| Maximum DC reverse current TA = 25°C at rated DC blocking voltage TJ = 125°C | IR     | -    | -    | 5<br>100 | $\mu$ A |
| Typical reverse recovery time (Note 2)                                       | trr    | -    | -    | 150      | ns      |
| Typical junction capacitance at 4.0V, 1MHz                                   | CJ     | -    | 50   | -        | PF      |

1. Mounted on 0.31 x 0.31" (8.0 x 8.0mm) copper pads to each terminal

2. IF = 0.5A, IR = 1.0A, IRR = 0.25A

## 5. ELECTRICAL CHARACTERISTICS CURVES

Fig. 1 - Forward Current Derating Curve

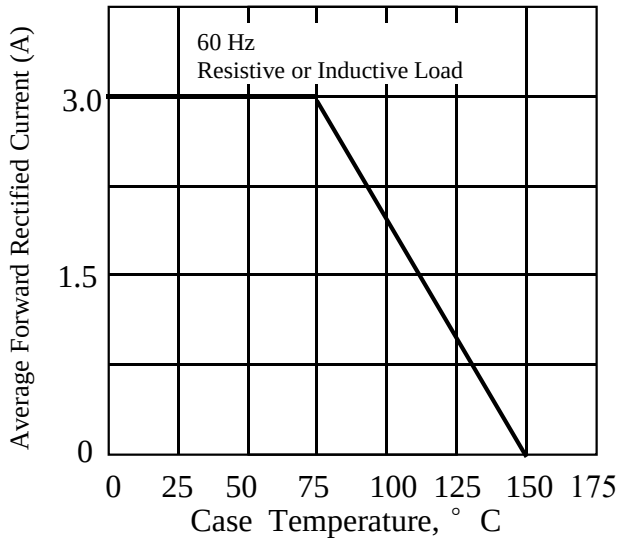


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

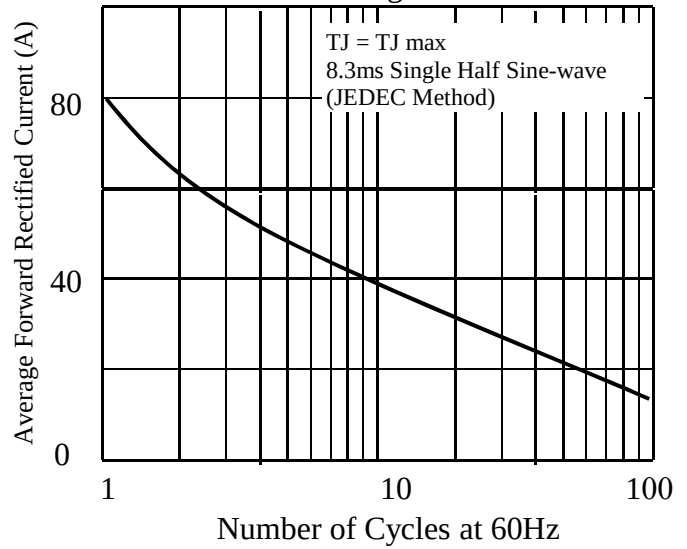


Fig 3. - Typical Instantaneous Forward Characteristics

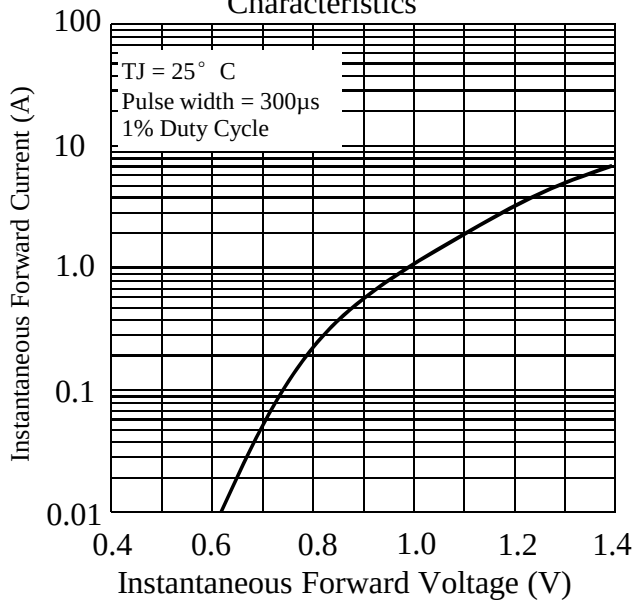


Fig 4. - Typical Reverse Characteristics

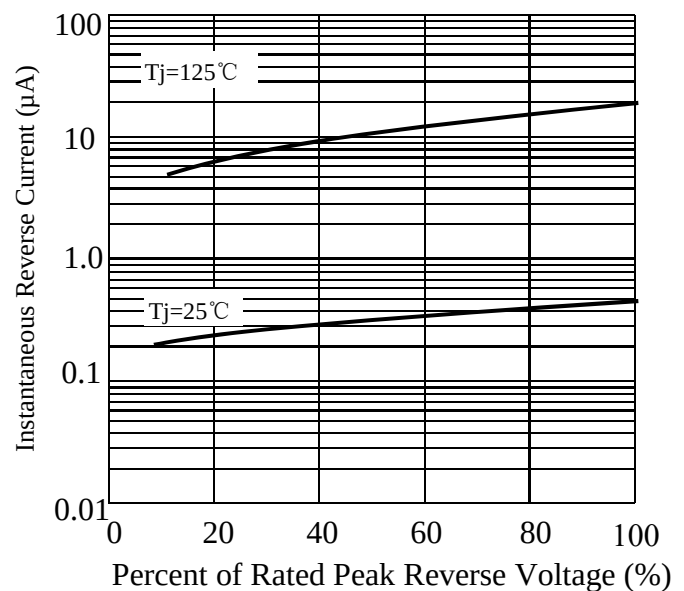
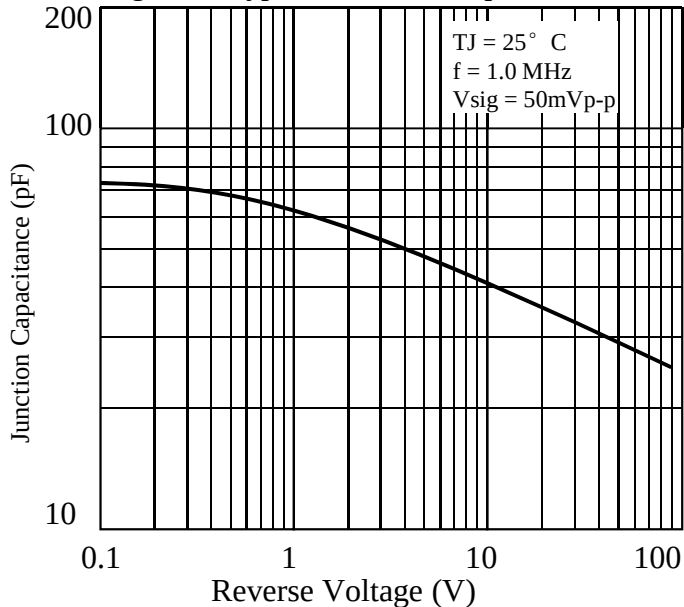
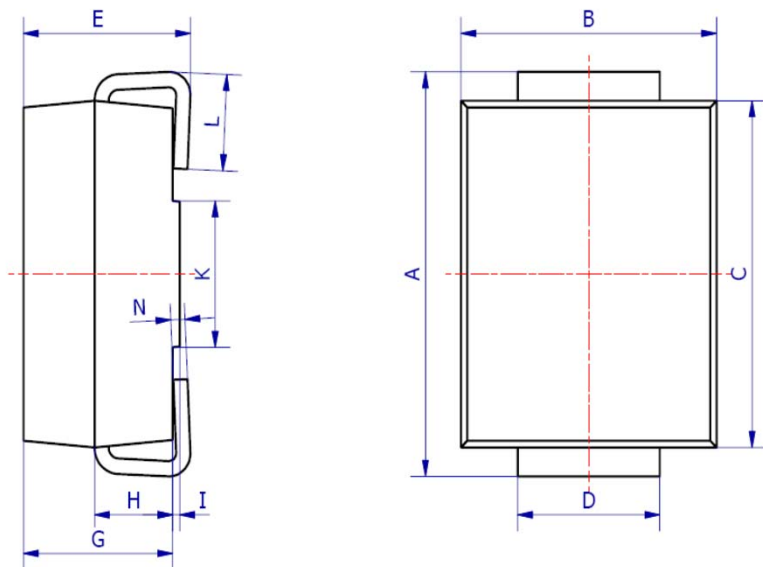


Fig 5. - Typical Junction Capacitance

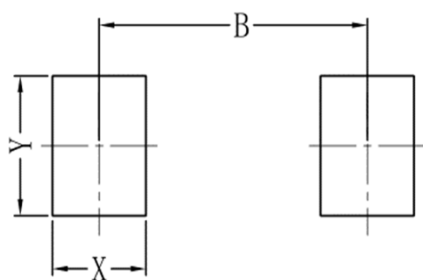


## 6.OUTLINE AND DIMENSIONS



| SMC                  |      |      |      |
|----------------------|------|------|------|
| DIM                  | Min  | Max  | Typ. |
| A                    | 7.70 | 8.30 | 8.00 |
| B                    | 5.85 | 6.25 | 6.05 |
| C                    | 6.65 | 7.05 | 6.85 |
| D                    | 2.80 | 3.20 | 3.00 |
| E                    | 2.45 | 2.85 | 2.65 |
| G                    | 2.10 | 2.50 | 2.30 |
| H                    | 1.00 | 1.40 | 1.20 |
| I                    | 0.05 | 0.15 | 0.10 |
| K                    | 4.30 | 4.70 | 4.50 |
| L                    | 1.00 | 1.50 | 1.25 |
| N                    | 0.10 | 0.30 | 0.20 |
| All Dimensions in mm |      |      |      |

## 7.SOLDERING FOOTPRINT



| SMC |      |
|-----|------|
| DIM | (mm) |
| X   | 1.60 |
| Y   | 3.30 |
| B   | 6.60 |