

## Features

- $I_{F(AV)}$  3A
- $V_{RRM}$  20V-200V
- High surge current capability
- Polarity: Color band denotes cathode

## Applications

- Rectifier

## Marking

- SK3X

X : From 2 To 20



SMB top view



Schematic diagram



Halogen-Free

## Limiting Values(Absolute Maximum Rating)

| Symbol      | Parameter                            | Test Conditions                                    | SK3           |    |    |    |    |    |     |     |     | Unit        |
|-------------|--------------------------------------|----------------------------------------------------|---------------|----|----|----|----|----|-----|-----|-----|-------------|
|             |                                      |                                                    | 2             | 3  | 4  | 5  | 6  | 8  | 10  | 15  | 20  |             |
| $V_{RRM}$   | Repetitive Peak Reverse Voltage      |                                                    | 20            | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | V           |
| $V_{RMS}$   | Maximum RMS voltage                  |                                                    | 14            | 21 | 28 | 35 | 42 | 56 | 70  | 105 | 140 | V           |
| $I_{F(AV)}$ | Average Forward Current              | 60Hz Half-sine wave<br>Resistance load             | 3.0           |    |    |    |    |    |     |     |     | A           |
| $I_{FSM}$   | Surge(Non-repetitive)Forward Current | 60Hz Half-sine wave,<br>1 cycle, $T_a=25^{\circ}C$ | 80            |    |    |    |    |    |     |     |     | A           |
| $T_j$       | Junction Temperature                 |                                                    | $-55\sim+150$ |    |    |    |    |    |     |     |     | $^{\circ}C$ |
| $T_{stg}$   | Storage Temperature Range            |                                                    | $-55\sim+150$ |    |    |    |    |    |     |     |     | $^{\circ}C$ |

## Electrical Characteristics (T=25°C Unless otherwise specified)

| Item                          | Symbol            | Test Condition                                          |          | SK3  |   |   |     |     |      |    |      | Unit |    |
|-------------------------------|-------------------|---------------------------------------------------------|----------|------|---|---|-----|-----|------|----|------|------|----|
|                               |                   |                                                         |          | 2    | 3 | 4 | 5   | 6   | 8    | 10 | 15   |      | 20 |
| Peak Forward Voltage          | V <sub>F</sub>    | I <sub>F</sub> =3.0A                                    |          | 0.55 |   |   | 0.7 |     | 0.85 |    | 0.95 |      | V  |
| Peak Reverse Current          | I <sub>RRM1</sub> | V <sub>RM</sub> =V <sub>RRM</sub>                       | Ta =25℃  | 0.5  |   |   |     | 0.1 |      |    |      | mA   |    |
|                               | I <sub>RRM2</sub> | V <sub>RM</sub> =V <sub>RRM</sub>                       | Ta =100℃ | 10   |   |   |     | 5.0 |      |    |      |      |    |
| Thermal Resistance(Typical)   | R <sub>θJ-A</sub> | Between junction and ambient                            |          | 55   |   |   |     |     |      |    |      | ℃/W  |    |
|                               | R <sub>θJ-L</sub> | Between junction and terminal                           |          | 13   |   |   |     |     |      |    |      |      |    |
| Juction Capacitance (Typical) | C <sub>j</sub>    | Measured at 1MHZ and Applied Rever Voltage of 4.0 V.D.C |          | 146  |   |   | 117 |     | 85   |    | 66   | 57   | pF |

## Ordering Information (Example)

| Type  | Package | Marking | Minimum Package(pcs) | Inner Box Quantity(pcs) | Outer Carton Quantity(pcs) | Delivery Mode |
|-------|---------|---------|----------------------|-------------------------|----------------------------|---------------|
| SK32  | SMB     | SK32    | 2,000                | 10,000                  | 100,000                    | 7"reel        |
| SK33  |         | SK33    |                      |                         |                            |               |
| SK34  |         | SK34    |                      |                         |                            |               |
| SK35  |         | SK35    |                      |                         |                            |               |
| SK36  |         | SK36    |                      |                         |                            |               |
| SK38  |         | SK38    |                      |                         |                            |               |
| SK310 |         | SK310   |                      |                         |                            |               |
| SK315 |         | SK315   |                      |                         |                            |               |
| SK320 |         | SK320   |                      |                         |                            |               |

## Typical Characteristics

Fig.1 Forward Current Derating Curve

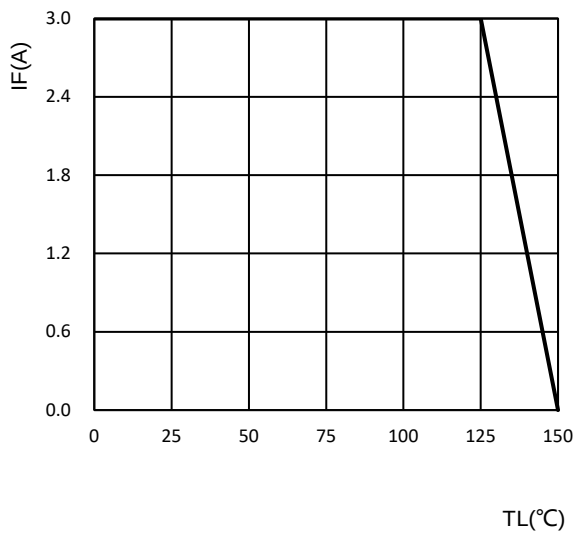
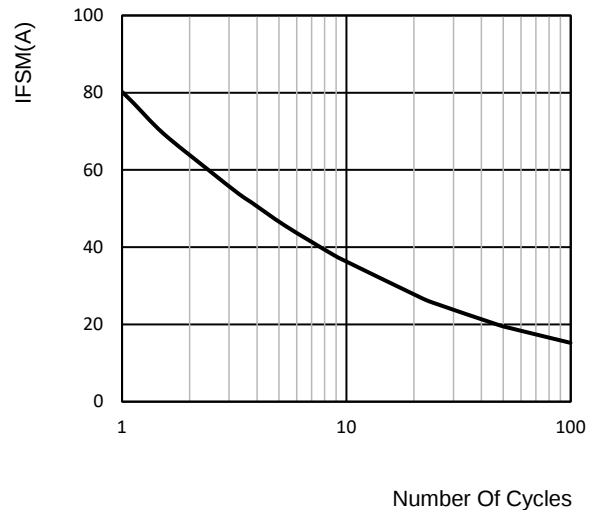
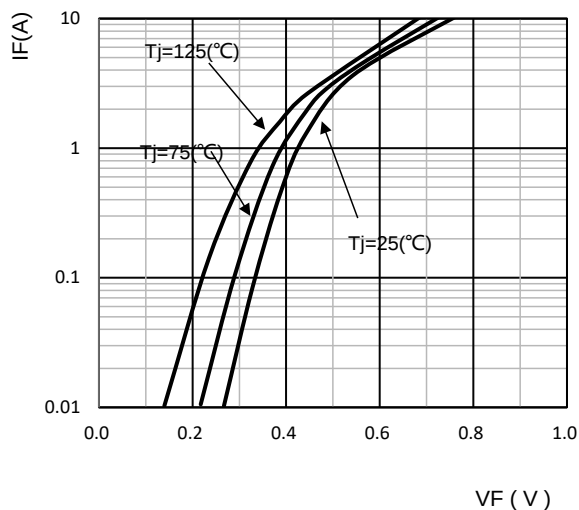


Fig.2 Maximum Non-Repetitive Forward Surge Current



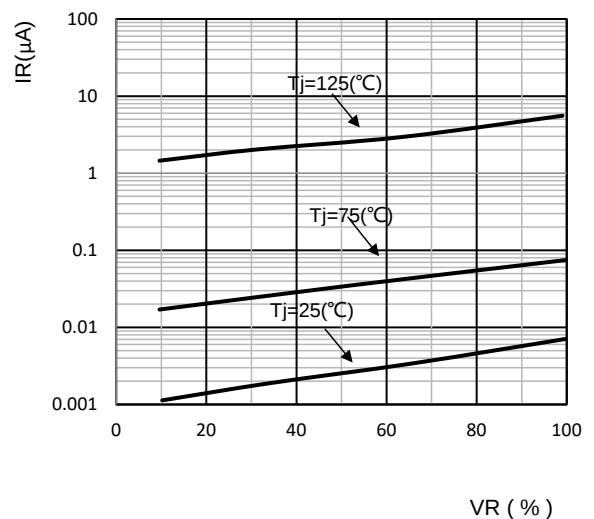
SK32-SK34

Fig.3 Typical Forward Characteristics



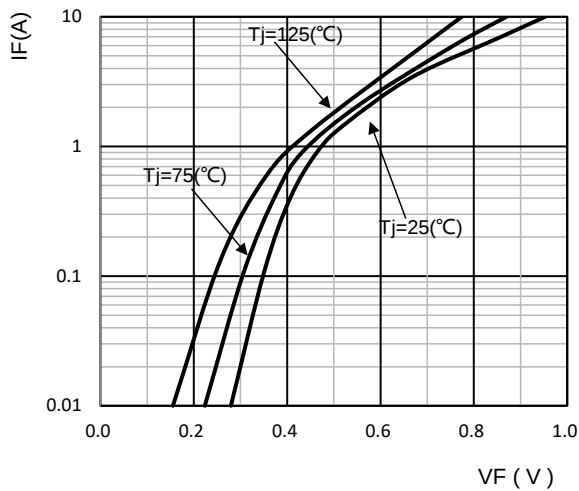
SK32-SK34

Fig.4 Typical Reverse Characteristics



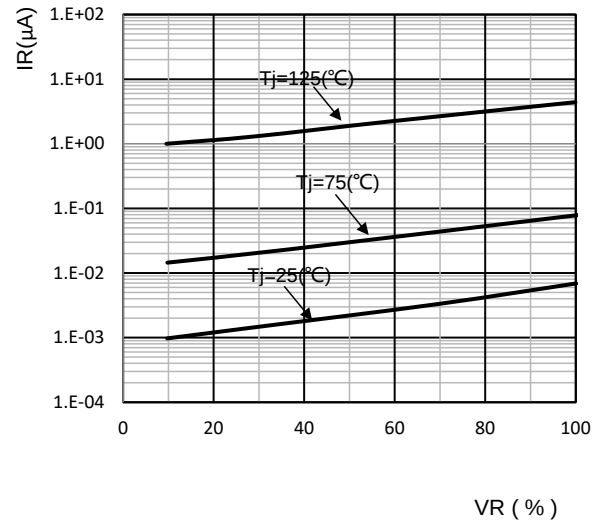
SK35-SK36

Fig.5 Typical Forward Characteristics



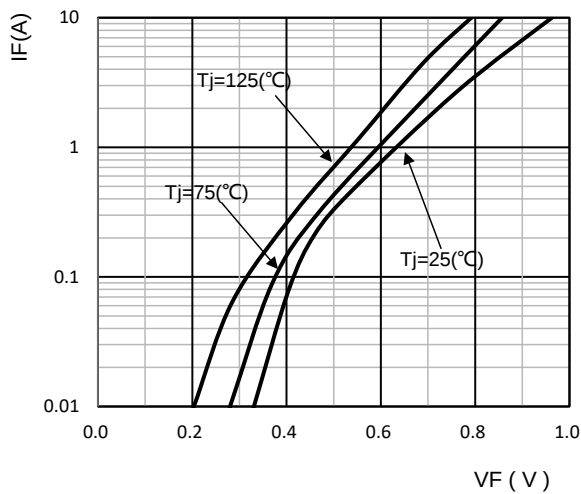
SK35-SK36

Fig.6 Typical Reverse Characteristics



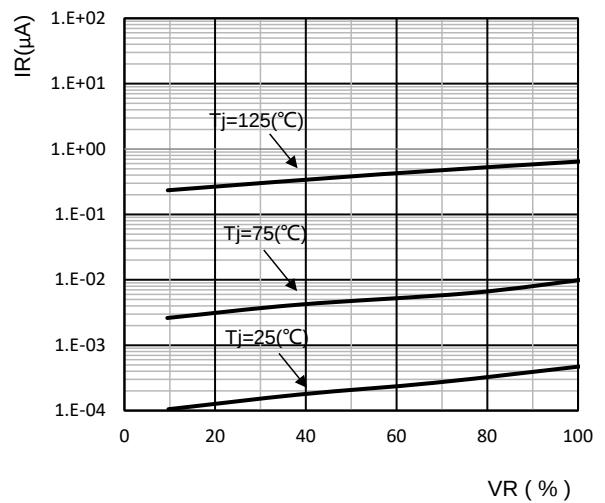
SK38-SK310

Fig.7 Typical Forward Characteristics



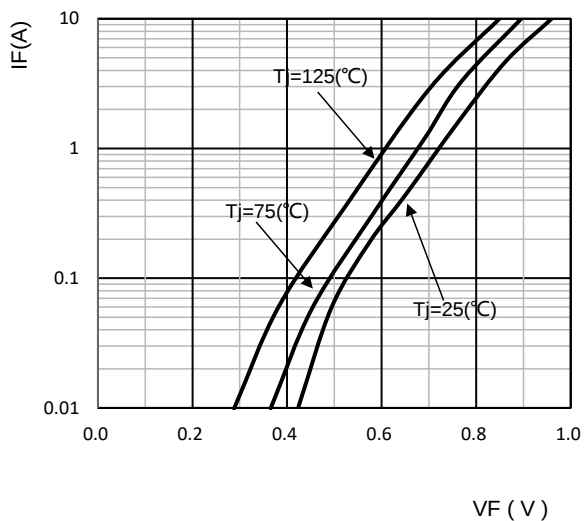
SK38-SK310

Fig.8 Typical Reverse Characteristics



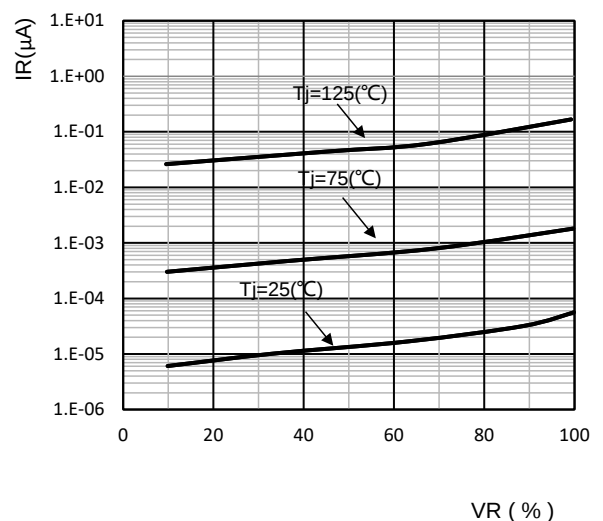
SK315

Fig.9 Typical Forward Characteristics



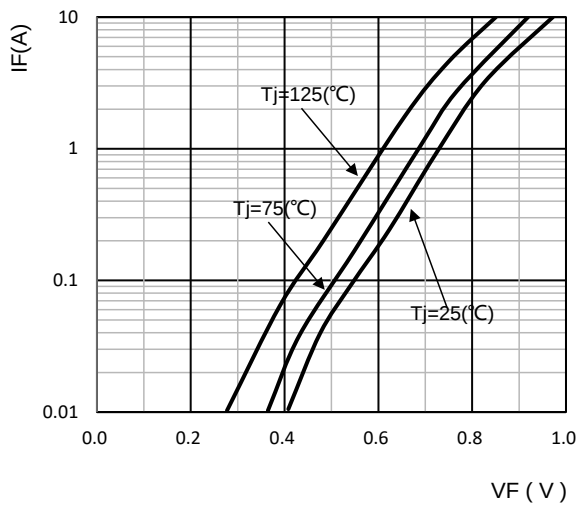
SK315

Fig.10 Typical Reverse Characteristics



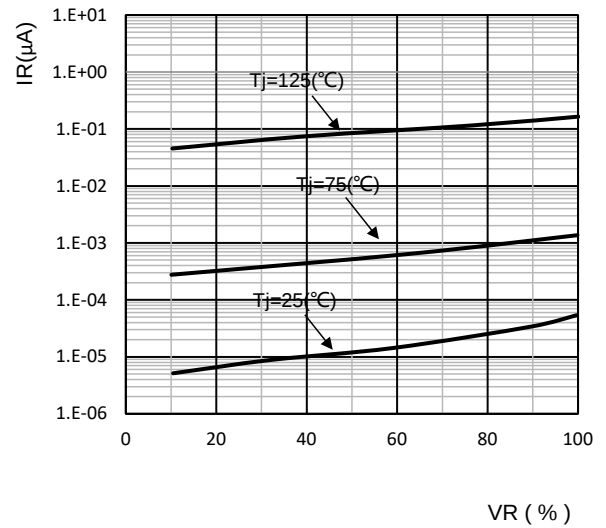
SK320

Fig.11 Typical Forward Characteristics



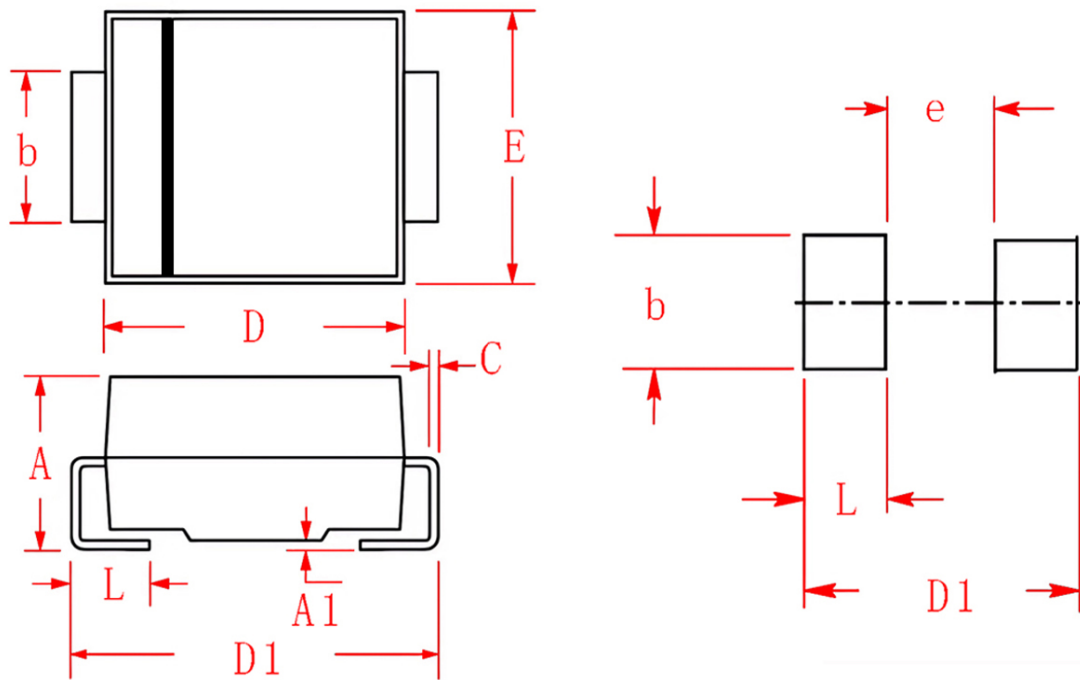
SK320

Fig.12 Typical Reverse Characteristics



**SMB Package information**

**SMB (DO-214AA)**



| Symbol | Dimensions in Millimeters(mm) |       | Dimensions In Inches |       |
|--------|-------------------------------|-------|----------------------|-------|
|        | Min                           | Max   | Min                  | Max   |
| A      | 2.130                         | 2.440 | 0.084                | 0.096 |
| A1     | 0.050                         | 0.200 | 0.002                | 0.008 |
| b      | 1.900                         | 2.200 | 0.075                | 0.087 |
| C      | 0.152                         | 0.305 | 0.006                | 0.012 |
| D      | 4.060                         | 4.700 | 0.160                | 0.185 |
| D1     | 5.080                         | 5.590 | 0.200                | 0.220 |
| E      | 3.300                         | 3.940 | 0.130                | 0.155 |
| e      | -                             | 2.159 | -                    | 0.085 |
| L      | 0.800                         | 1.500 | 0.031                | 0.059 |