

## SX3H15-AU

### Surface Mount Ultra Low $I_R$ Schottky Barrier Rectifier

|                |              |                |            |
|----------------|--------------|----------------|------------|
| <b>Voltage</b> | <b>150 V</b> | <b>Current</b> | <b>3 A</b> |
|----------------|--------------|----------------|------------|

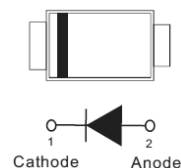
#### Features

- Low leakage current
- Ideal for automated placement
- Low power loss, high efficiency
- High surge current capability
- AEC-Q101 qualified
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

#### Mechanical Data

- Case : SMA Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.0679 grams

SMA



### Maximum Ratings and Thermal Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

| PARAMETER                                                                            |          | SYMBOL          | LIMIT   | UNITS              |
|--------------------------------------------------------------------------------------|----------|-----------------|---------|--------------------|
| Maximum Repetitive Peak Reverse Voltage                                              |          | $V_{RRM}$       | 150     | V                  |
| Maximum RMS Voltage                                                                  |          | $V_{RMS}$       | 105     | V                  |
| Maximum DC Blocking Voltage                                                          |          | $V_{DC}$        | 150     | V                  |
| Maximum Average Forward Current                                                      |          | $I_{F(AV)}$     | 3       | A                  |
| Peak Forward Surge Current : 8.3 ms Single Half Sine-Wave Superimposed On Rated Load |          | $I_{FSM}$       | 80      | A                  |
| Typical Junction Capacitance<br>Measured at 1 MHz And Applied $V_R = 4\text{ V}$     |          | $C_J$           | 95      | pF                 |
| Typical Thermal Resistance                                                           | (Note 1) | $R_{\theta JA}$ | 150     | $^\circ\text{C/W}$ |
|                                                                                      | (Note 2) | $R_{\theta JC}$ | 22      |                    |
|                                                                                      | (Note 2) | $R_{\theta JL}$ | 15      |                    |
| Operating Junction Temperature Range                                                 |          | $T_J$           | -55~175 | $^\circ\text{C}$   |
| Storage Temperature Range                                                            |          | $T_{STG}$       | -55~175 | $^\circ\text{C}$   |



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### Electrical Characteristics ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

| PARAMETER                           | SYMBOL | TEST CONDITION                                | MIN. | TYP.  | MAX. | UNITS         |
|-------------------------------------|--------|-----------------------------------------------|------|-------|------|---------------|
| Forward Voltage                     | $V_F$  | $I_F = 1\text{ A}, T_J = 25^\circ\text{C}$    | -    | 0.7   | -    | V             |
|                                     |        | $I_F = 1.5\text{ A}, T_J = 25^\circ\text{C}$  | -    | 0.73  | -    | V             |
|                                     |        | $I_F = 3\text{ A}, T_J = 25^\circ\text{C}$    | -    | -     | 0.85 | V             |
|                                     |        | $I_F = 1\text{ A}, T_J = 125^\circ\text{C}$   | -    | 0.56  | -    | V             |
|                                     |        | $I_F = 1.5\text{ A}, T_J = 125^\circ\text{C}$ | -    | 0.59  | -    | V             |
|                                     |        | $I_F = 3\text{ A}, T_J = 125^\circ\text{C}$   | -    | 0.65  | -    | V             |
| Reverse Current <sup>(Note 3)</sup> | $I_R$  | $V_R = 120\text{ V}, T_J = 25^\circ\text{C}$  | -    | 0.039 | -    | $\mu\text{A}$ |
|                                     |        | $V_R = 150\text{ V}, T_J = 25^\circ\text{C}$  | -    | -     | 0.5  |               |
|                                     |        | $V_R = 150\text{ V}, T_J = 125^\circ\text{C}$ | -    | -     | 1    | mA            |

#### NOTES :

1. Mounted on a FR4 PCB, single-sided copper, standard footprint.
2. Mounted on a FR4 PCB, single-sided copper, with 100 cm<sup>2</sup> copper pad area.
3. Short duration pulse test used to minimize self-heating effect.



## SX3H15-AU

### TYPICAL CHARACTERISTIC CURVES

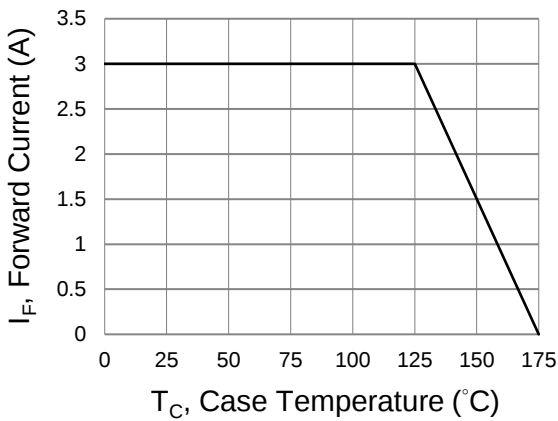


Fig.1 Forward Current Derating Curve

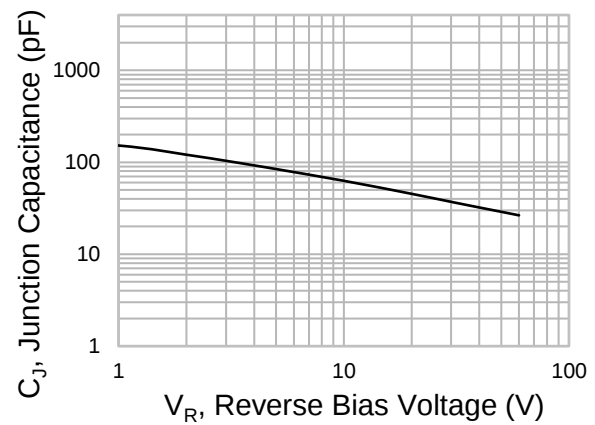


Fig.2 Typical Junction Capacitance

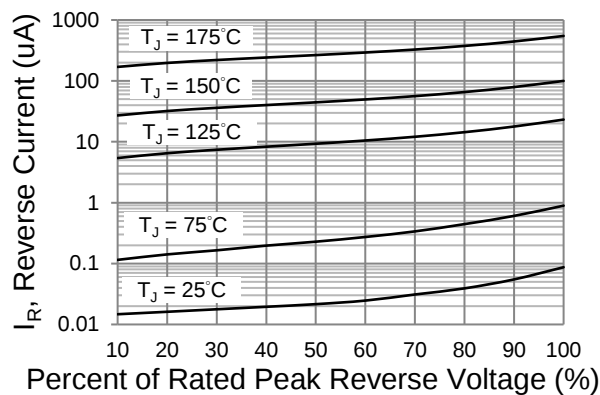


Fig.3 Typical Reverse Characteristics

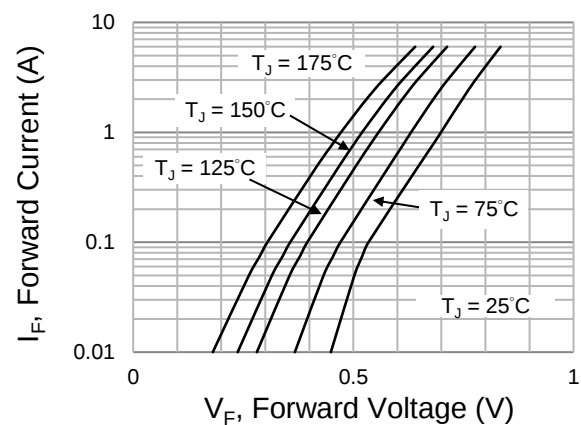


Fig.4 Typical Forward Characteristics

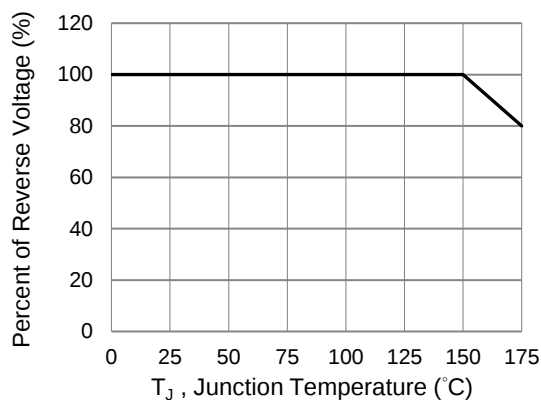


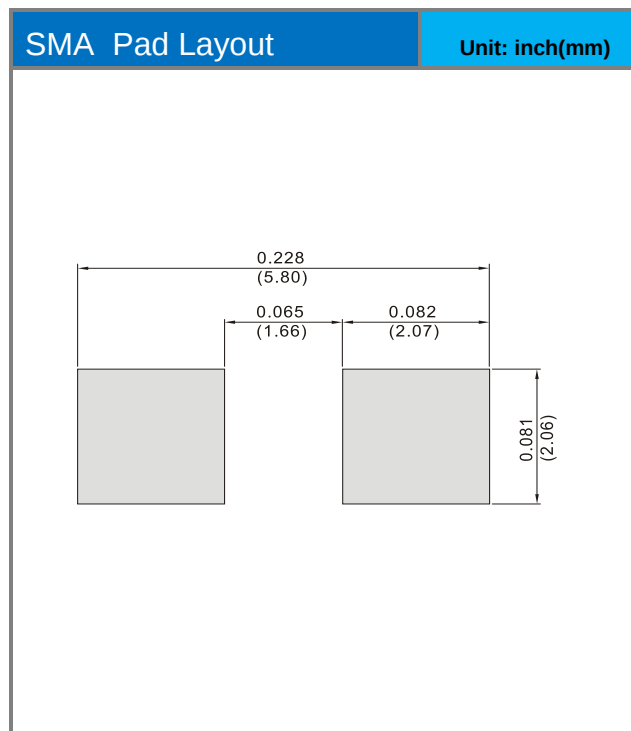
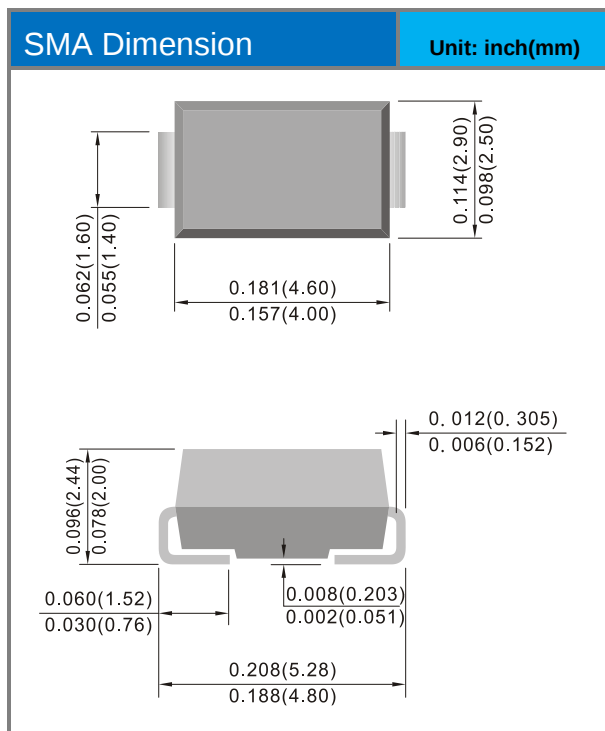
Fig.5 Operating Temperature Derating Curve

## SX3H15-AU

### Part No. Packing Code Version

| Part No. Packing Code | Package Type | Packing Type        | Marking | Version                        |
|-----------------------|--------------|---------------------|---------|--------------------------------|
| SX3H15-AU             | SMA          | 7.5K pcs / 13" reel | SX3H15  | Halogen free<br>RoHS compliant |

### Packaging Information & Mounting Pad Layout





## SX3H15-AU

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