

## UFA15M

### SURFACE MOUNT ULTRAFAST RECTIFIER

**Voltage** 1000 V **Current** 1.5 A

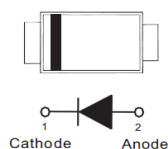
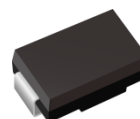
#### Features

- Glass passivated chip junction
- Ultrafast reverse recovery time
- Low forward voltage drop
- Low switching losses, high efficiency
- High forward surge capability
- 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: 0.0024 ounces, 0.068 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                                            | $V_{RRM}$             | 1000    | V                           |
| Maximum Rms Voltage                                                                | $V_{RMS}$             | 700     | V                           |
| Maximum Dc Blocking Voltage                                                        | $V_{DC}$              | 1000    | V                           |
| Maximum Average Forward Current                                                    | $I_{F(AV)}$           | 1.5     | A                           |
| Peak Forward Surge Current: 8.3ms Single Half Sine-Wave Superimposed On Rated Load | $I_{FSM}$             | 50      | A                           |
| Typical Junction Capacitance<br>Measured at 1 MHz And Applied $V_R = 4\text{ V}$   | $C_J$                 | 10.7    | pF                          |
| Typical Thermal Resistance                                                         | $R_{\theta JA}^{(1)}$ | 150     | $^{\circ}\text{C}/\text{W}$ |
|                                                                                    | $R_{\theta JC}^{(2)}$ | 24      |                             |
| Operating Junction Temperature Range                                               | $T_J$                 | -55~150 | $^{\circ}\text{C}$          |
| Storage Temperature Range                                                          | $T_{STG}$             | -55~150 | $^{\circ}\text{C}$          |



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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       | $V_F$    | $I_F = 0.5\text{ A}, T_J = 25^\circ\text{C}$                                                | -    | 1.11 | -    | V     |
|                       |          | $I_F = 1.5\text{ A}, T_J = 25^\circ\text{C}$                                                | -    | 1.31 | 1.7  |       |
|                       |          | $I_F = 0.5\text{ A}, T_J = 125^\circ\text{C}$                                               | -    | 0.85 | -    |       |
|                       |          | $I_F = 1.5\text{ A}, T_J = 125^\circ\text{C}$                                               | -    | 1.07 | -    |       |
| Reverse Current       | $I_R$    | $V_R = 1000\text{ V}, T_J = 25^\circ\text{C}$                                               | -    | -    | 1    | uA    |
|                       |          | $V_R = 1000\text{ V}, T_J = 125^\circ\text{C}$                                              | -    | 13   | -    |       |
| Reverse Recovery Time | $T_{RR}$ | $I_F = 0.5\text{ A}, I_R = 1\text{ A},$<br>$I_{RR} = 0.25\text{ A}, T_J = 25^\circ\text{C}$ | -    | -    | 100  | ns    |

#### NOTES:

1. Mounted on a FR4 PCB, single-sided copper, mini pad.
2. Mounted on a FR4 PCB, single-sided copper, with 10cm\*10cm copper pad area.

## UFA15M

### TYPICAL CHARACTERISTIC CURVES

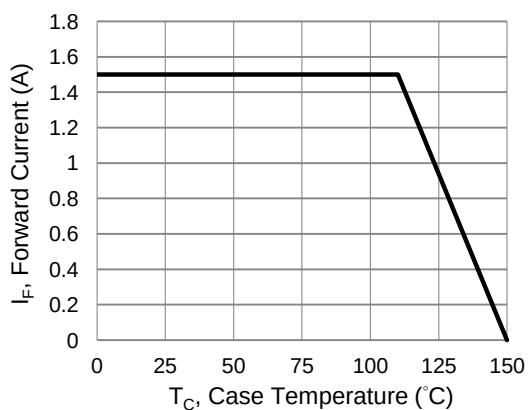


Fig.1 Forward Current Derating Curve

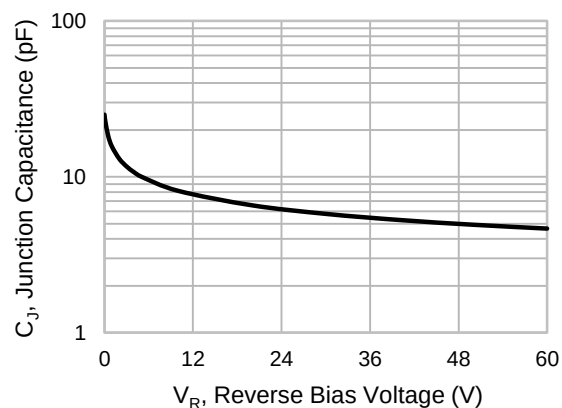


Fig.2 Typical Junction Capacitance

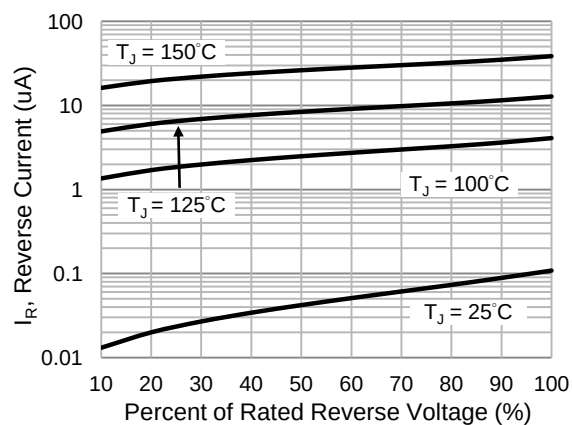


Fig.3 Typical Reverse Characteristics

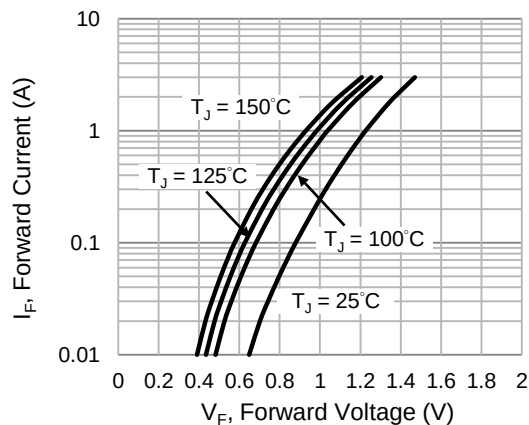


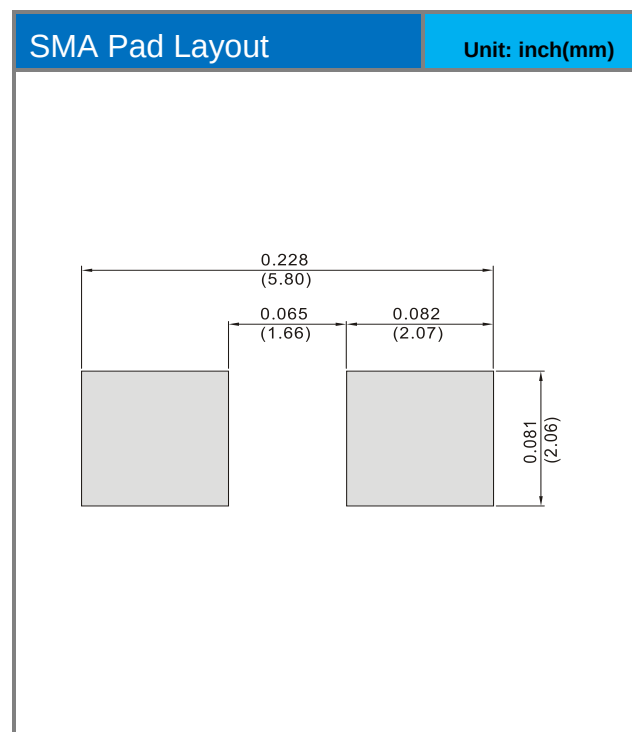
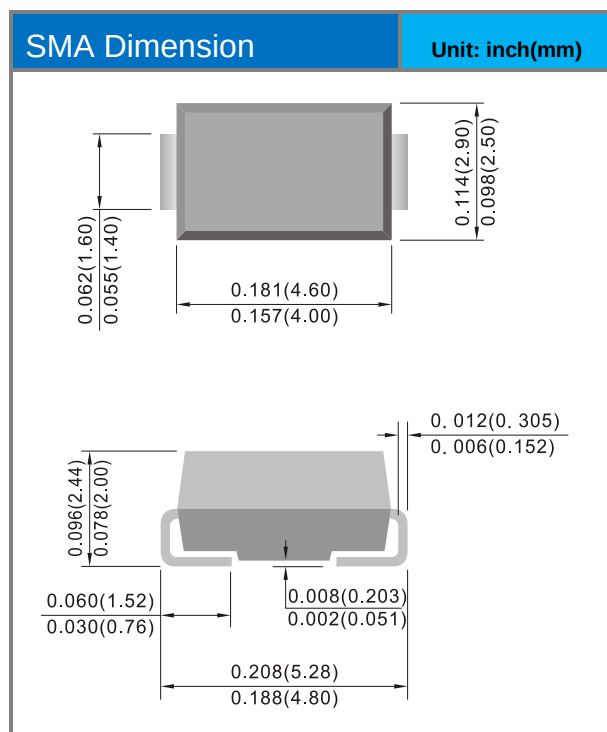
Fig.4 Typical Forward Characteristics

# UFA15M

## Part No Packing Code Version

| Part No Packing Code | Package Type | Packing Type        | Marking | Version      |
|----------------------|--------------|---------------------|---------|--------------|
| UFA15M_R2_00001      | SMA          | 7.5K pcs / 13" reel | UFA15M  | Halogen free |

## Packaging Information & Mounting Pad Layout





## UFA15M

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