

## Surface Mount General Purpose Silicon Rectifiers

**Reverse Voltage - 50 to 1000 V**

**Forward Current - 1 A**

### FEATURES

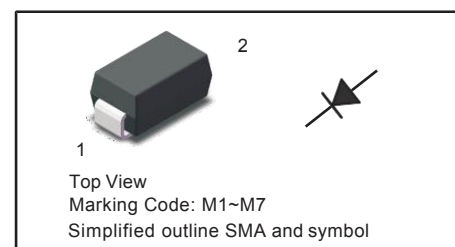
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Lead free in comply with EU RoHS 2011/65/EU directives

### MECHANICAL DATA

- Case: SMA
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.055g / 0.002oz

### PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |



### Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

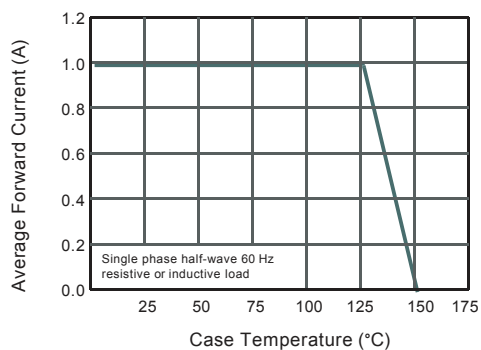
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

| Parameter                                                                                          | Symbols                            | 50T        | 100T | 200T | 400T | 600T | 800T | 1000T | Units   |
|----------------------------------------------------------------------------------------------------|------------------------------------|------------|------|------|------|------|------|-------|---------|
| Maximum Repetitive Peak Reverse Voltage                                                            | $V_{RRM}$                          | 50         | 100  | 200  | 400  | 600  | 800  | 1000  | V       |
| Maximum RMS voltage                                                                                | $V_{RMS}$                          | 35         | 70   | 140  | 280  | 420  | 560  | 700   | V       |
| Maximum DC Blocking Voltage                                                                        | $V_{DC}$                           | 50         | 100  | 200  | 400  | 600  | 800  | 1000  | V       |
| Maximum Average Forward Rectified Current                                                          | $I_{F(AV)}$                        | 1          |      |      |      |      |      |       | A       |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load                 | $I_{FSM}$                          | 30         |      |      |      |      |      |       | A       |
| Maximum Instantaneous Forward Voltage at 1 A                                                       | $V_F$                              | 1.1        |      |      |      |      |      |       | V       |
| Maximum DC Reverse Current $T_a = 25\text{ °C}$ at Rated DC Blocking Voltage $T_a = 125\text{ °C}$ | $I_R$                              | 5<br>50    |      |      |      |      |      |       | $\mu A$ |
| Typical Junction Capacitance <sup>(1)</sup>                                                        | $C_j$                              | 15         |      |      |      |      |      |       | pF      |
| Typical Thermal Resistance <sup>(2)</sup>                                                          | $R_{\theta JA}$<br>$R_{\theta JC}$ | 75<br>25   |      |      |      |      |      |       | °C/W    |
| Operating and Storage Temperature Range                                                            | $T_j, T_{stg}$                     | -55 ~ +150 |      |      |      |      |      |       | °C      |

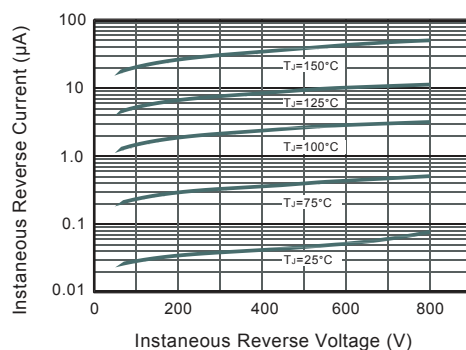
(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 8\*8mm copper pad areas.

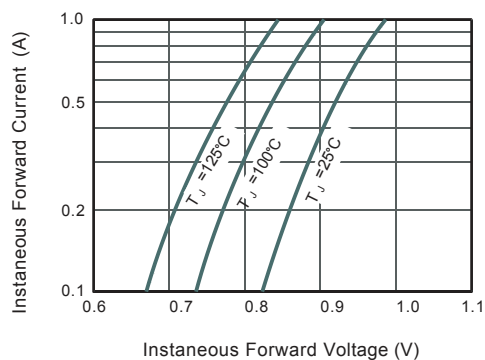
**Fig.1 Forward Current Derating Curve**



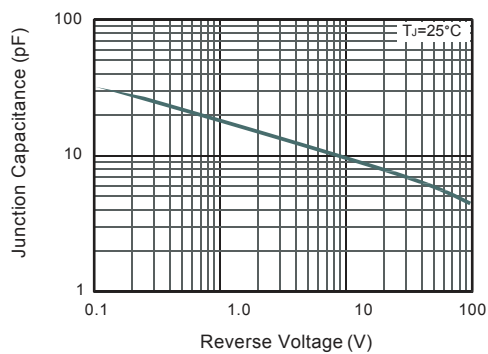
**Fig.2 Typical Instantaneous Reverse Characteristics**



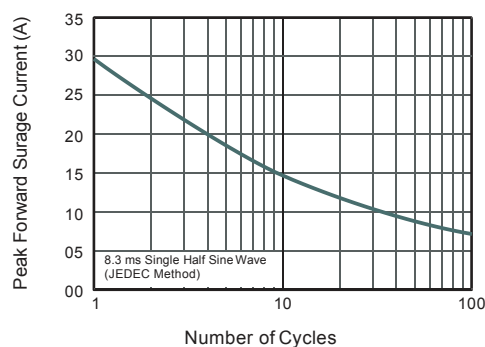
**Fig.3 Typical Forward Characteristic**



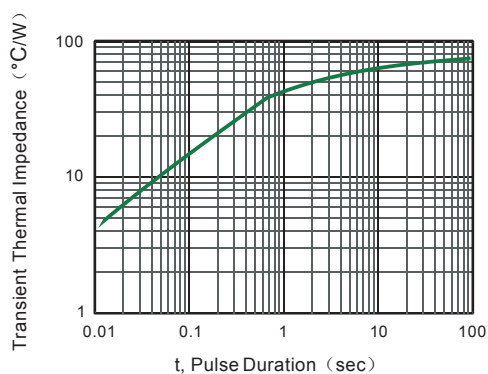
**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**

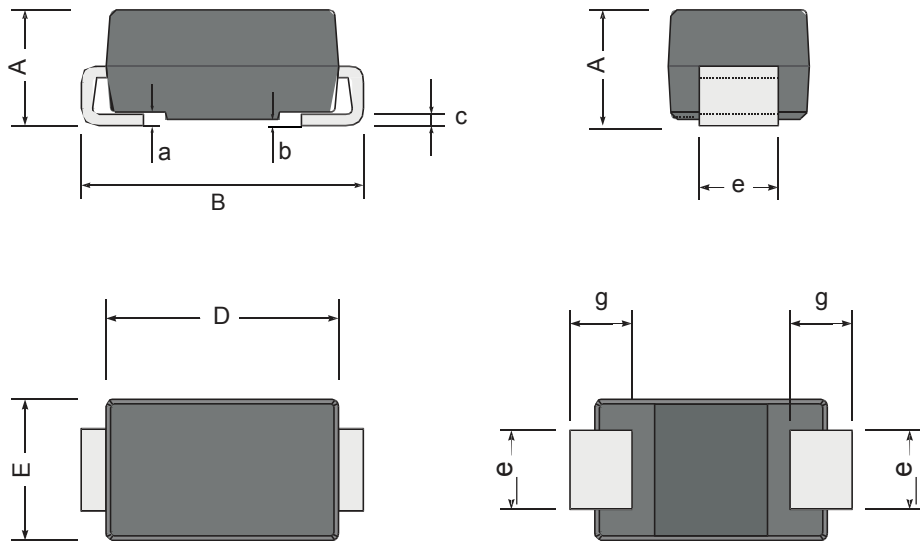


**Fig.6- Typical Transient Thermal Impedance**



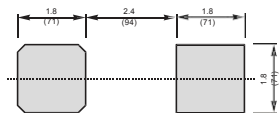
PACKAGE OUTLINE  
Plastic surface mounted package; 2 leads

SMA



| UNIT |     | A   | D   | E   | B   | c    | e   | g   | b    | a   |
|------|-----|-----|-----|-----|-----|------|-----|-----|------|-----|
| mm   | max | 2.2 | 4.5 | 2.8 | 5.3 | 0.31 | 1.6 | 1.5 | 0.2  | 0.3 |
|      | min | 1.9 | 4.0 | 2.4 | 4.8 | 0.15 | 1.3 | 0.9 | 0.05 |     |
| mil  | max | 87  | 181 | 110 | 209 | 12   | 63  | 59  | 7.9  | 12  |
|      | min | 75  | 157 | 94  | 189 | 6    | 51  | 35  | 2    |     |

The recommended mounting pad size



Unit : mm  
(mil)