

Reverse Voltage - 50 to 1000 V

Forward Current - 1 A

### FEATURES

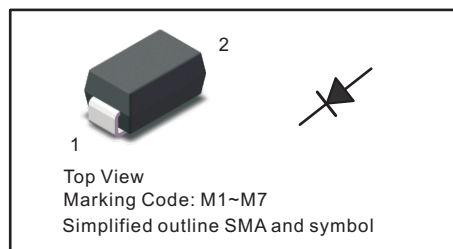
- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Lead free in comply with EU RoHS 2011/65/EU directives

### 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.

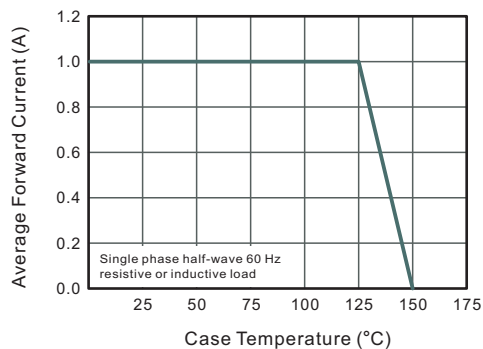
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

| Parameter                                                                                                                         | Symbols                            | 1N4001     | 1N4002 | 1N4003 | 1N4004 | 1N4005 | 1N4006 | 1N4007 | 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                                                | $I_{FSM}$                          | 32         |        |        |        |        |        |        | A                    |
| Maximum Instantaneous Forward Voltage at 1 A                                                                                      | $V_F$                              | 1.0        |        |        |        |        |        |        | V                    |
| Maximum DC Reverse Current $T_a = 25\text{ }^{\circ}\text{C}$<br>at Rated DC Blocking Voltage $T_a = 125\text{ }^{\circ}\text{C}$ | $I_R$                              | 1<br>50    |        |        |        |        |        |        | $\mu\text{A}$        |
| 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   |        |        |        |        |        |        | $^{\circ}\text{C/W}$ |
| Operating and Storage Temperature Range                                                                                           | $T_j, T_{stg}$                     | -55 ~ +150 |        |        |        |        |        |        | $^{\circ}\text{C}$   |

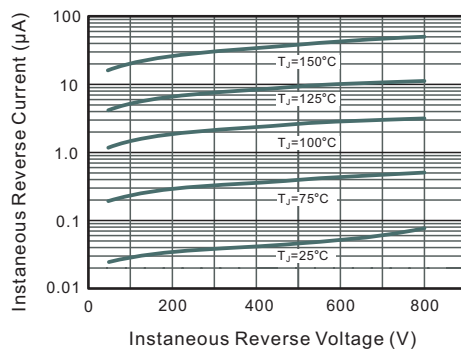
(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

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

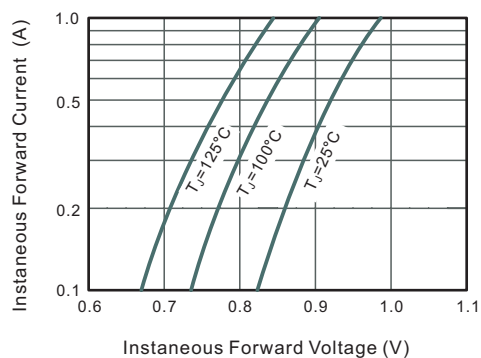
**Fig.1 Forward Current Derating Curve**



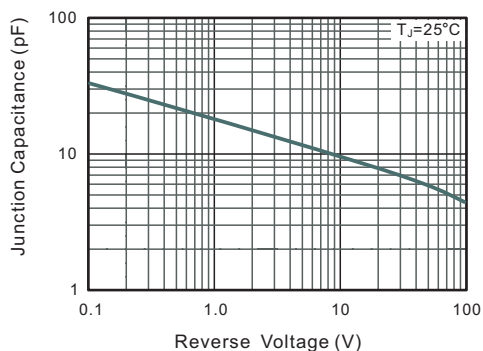
**Fig.2 Typical Instantaneous Reverse Characteristics**



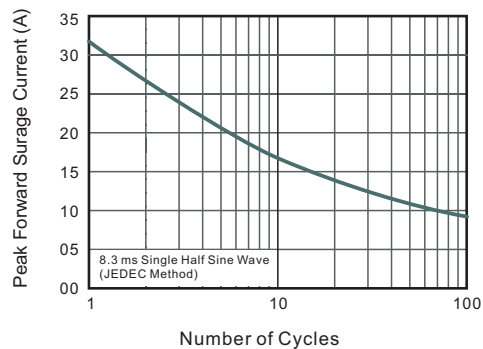
**Fig.3 Typical Forward Characteristic**



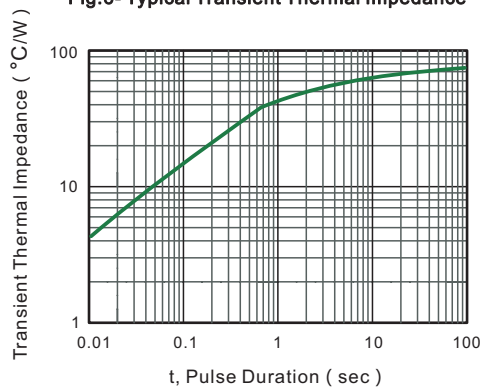
**Fig.4 Typical Junction Capacitance**



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

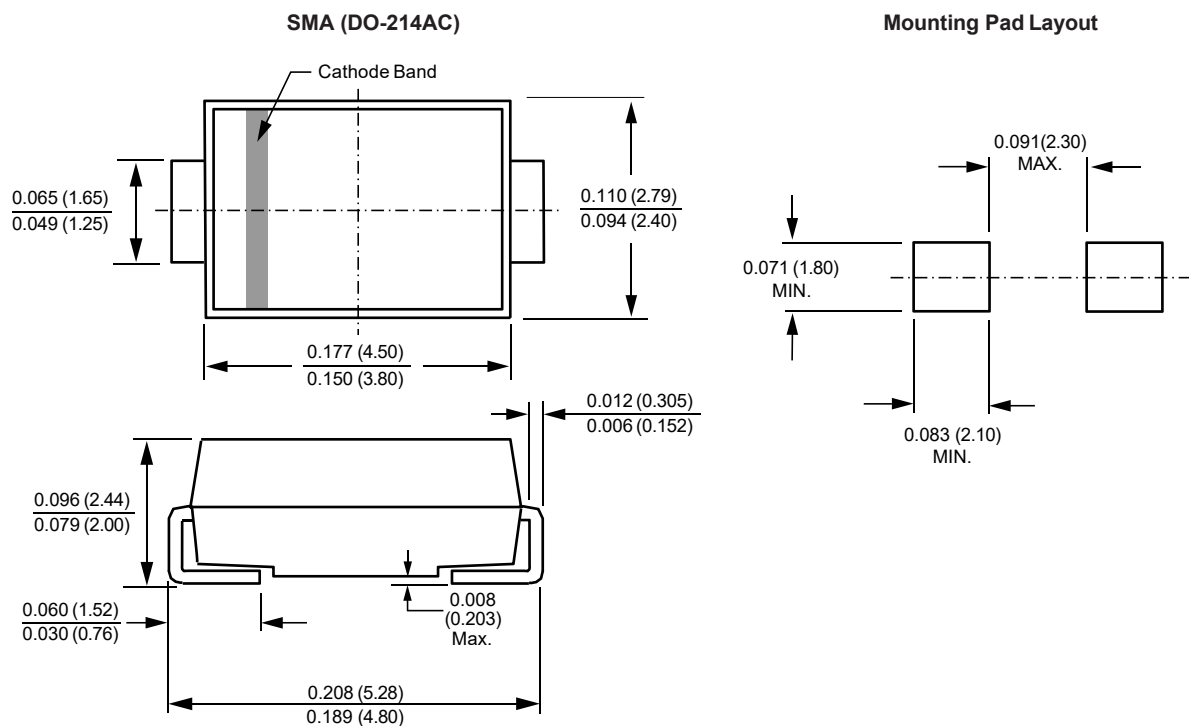


**Fig.6- Typical Transient Thermal Impedance**



### PACKAGE OUTLINE

Plastic surface mounted package; 2 leads



### Ordering Information (Example)

| PREFERED P/N       | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|--------------------|----------------------|-------------------------|----------------------------|---------------|
| 1N4001 THRU 1N4007 | 5000                 | 10000                   | 80000                      | 13" reel      |
| 1N4001 THRU 1N4007 | 2000                 | 8000                    | 80000                      | 7" reel       |

### Marking

| Type number | Marking code |
|-------------|--------------|
| 1N4001      | M1           |
| 1N4002      | M2           |
| 1N4003      | M3           |
| 1N4004      | M4           |
| 1N4005      | M5           |
| 1N4006      | M6           |
| 1N4007      | M7           |