



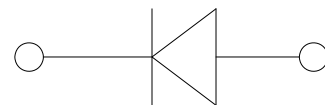
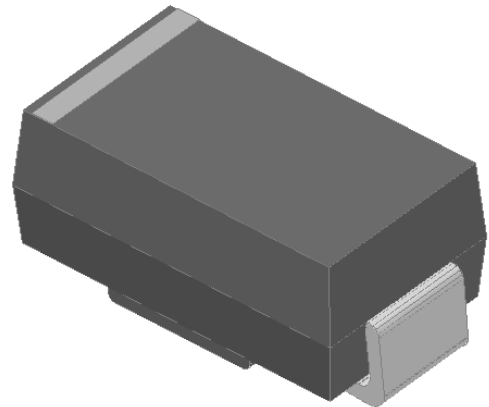
**Express recovery diode**  
**Reverse Voltage 50V-600v**  
**Forward current-1A**

## Features

Glass passivated chip  
High surge current capability  
Ideal for surface mounted applications  
Low power loss, high efficiency  
Plastic Case Material has UL Flammability

## Mechanical Data

Package: SMA  
Terminals: Tin Plated leads, solderable per  
Mil-STD-750 Method 2026  
Polarity: As marked  
Molding compound meets UL 94 V-0 flammability rating,  
ROHS-compliant



## Maximum Ratings (Ta=25°C Unless otherwise specified)

| Type Number                                                                                                 | SYMBOL           | ES1       |     |     |     |     |      |
|-------------------------------------------------------------------------------------------------------------|------------------|-----------|-----|-----|-----|-----|------|
|                                                                                                             |                  | A         | B   | D   | G   | J   | Umit |
| Maximum Recurrent Peak Reverse Voltage                                                                      | V <sub>RRM</sub> | 50        | 100 | 200 | 400 | 600 | V    |
| Maximum RMS Voltage                                                                                         | V <sub>RMS</sub> | 35        | 70  | 140 | 280 | 420 | V    |
| Maximum DC Blocking Voltage                                                                                 | V <sub>DC</sub>  | 50        | 100 | 200 | 400 | 600 | V    |
| Maximum Average Forward Rectified Current at TL = 100 °C                                                    | IO(AV)           | 1.0       |     |     |     |     | A    |
| Peak Forward Surge Current<br>8.3ms Single half-sine-wave superimposed on rated load(JEDEC Method) on rated | IFSM             | 30.0      |     |     |     |     | A    |
| Forward Surge Current (Non-repetitive)<br>@1ms, square wave, 1 cycle, Tj=25°C                               |                  | 60.0      |     |     |     |     | A    |
| Current squared time<br>@1ms≤t≤8.3≤ms Tj=25°C, Rating of per diode                                          | I²t              | 3.7       |     |     |     |     | A²S  |
| Maximum Forward Voltage at 1.0A DC                                                                          | V <sub>FM</sub>  | 0.95      |     |     | 1.3 | 1.7 | V    |
| Maximum Reverse Current TA = 25°C                                                                           | IR               | 5.0       |     |     |     |     | uA   |
| at Rated DC Blocking Voltage TA = 100°C                                                                     |                  | 100.0     |     |     |     |     |      |
| Maximum reverse recovery time                                                                               | Trr              | 35.0      |     |     |     |     | ns   |
| Typical Thermal Resistance Between junction and                                                             | R <sub>QJa</sub> | 65.0      |     |     |     |     | °C/W |
| Operating Junction Temperature Range                                                                        | T <sub>J</sub>   | —55to+150 |     |     |     |     | °C   |
| Storage Temperature Range                                                                                   | T <sub>STG</sub> | —55to+150 |     |     |     |     | °C   |



FIG. 1 MAXIMUM AVERAGE FORWARD CURRENT DERATING

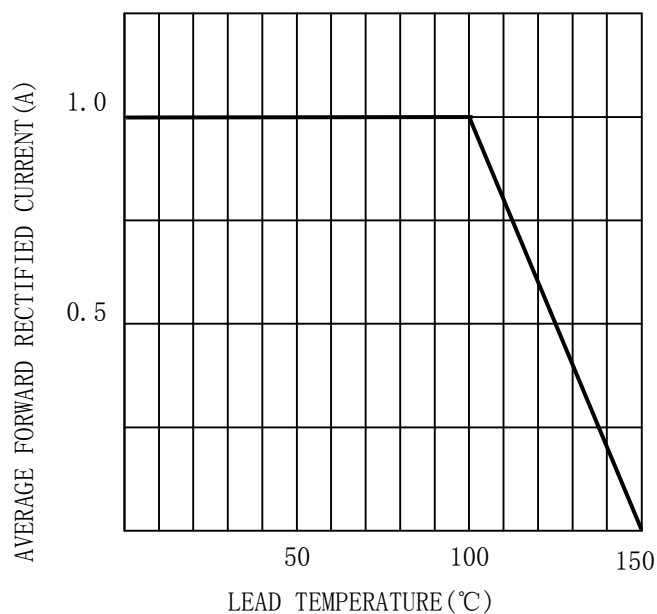


FIG. 2 TYPICAL FORWARD CHARACTERISTICS

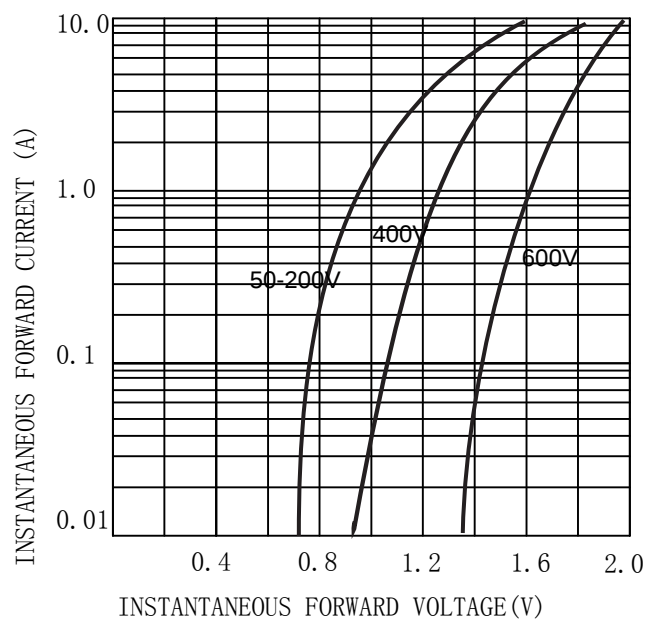


FIG. 3 MAXIMUM NON-REPEITIVE SURGE CURRENT

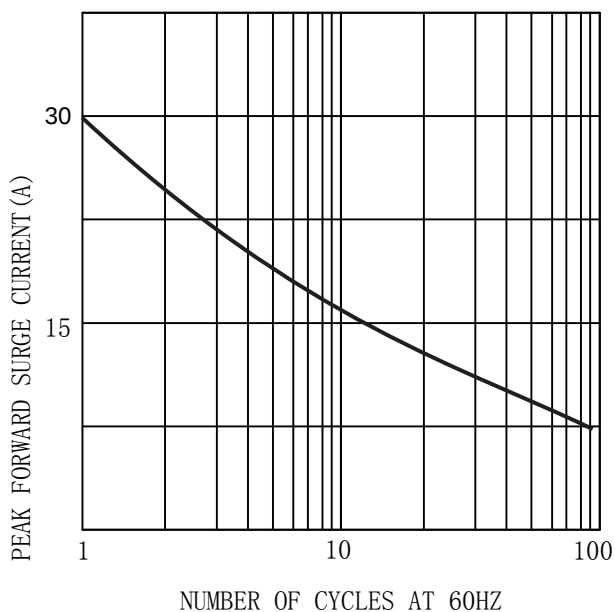
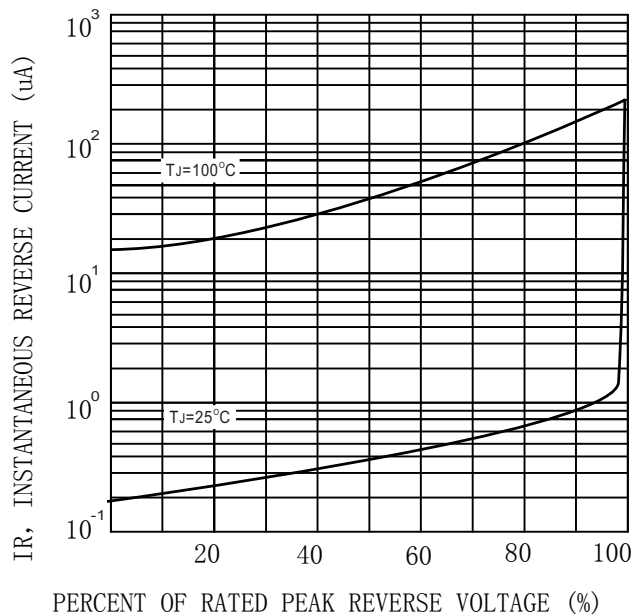


FIG. 4 TYPICAL REVERSE CHARACTERISTICS (per element)





## MARKING INFORMATION



 = Logo

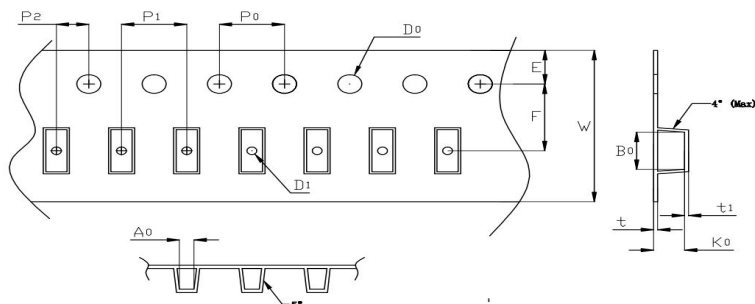
\*\*\*\* = Date Code Marking

ES1\* = Marking Code

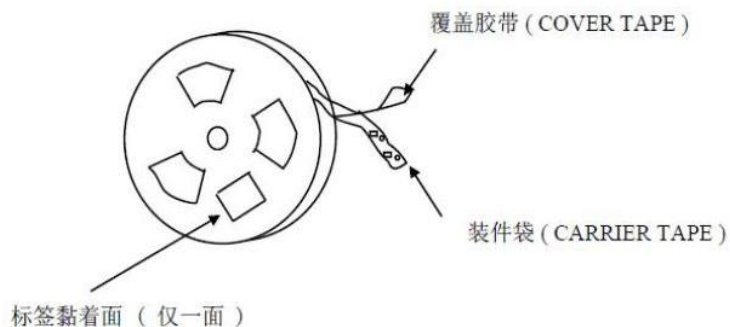
Print according to customer request

## PACKING REQUIRMENTS

- Carrier tape packing



| Specificati<br>ons | Carrier<br>tape type | Ao         | Bo         | Ko         | Po         | W          | t          | Explain |
|--------------------|----------------------|------------|------------|------------|------------|------------|------------|---------|
| SMA                | Anti-static          | 2.65± 0.10 | 5.20± 0.10 | 2.30± 0.10 | 4.00± 0.10 | 12.0± 0.10 | 0.20± 0.05 |         |

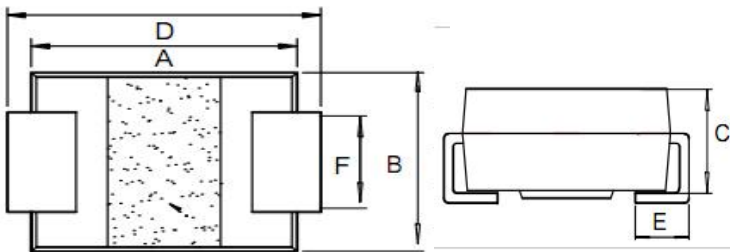


| DEVICE<br>TYPE | Tape<br>width | 11"Reel            |                 |                    | 11"Reel            |                 |                    |
|----------------|---------------|--------------------|-----------------|--------------------|--------------------|-----------------|--------------------|
|                |               | Q'TY/REEL<br>(pcs) | BOX/CAR<br>TOON | Q'TY/REEL<br>(pcs) | Q'TY/REEL<br>(pcs) | BOX/CAR<br>TOON | Q'TY/REEL<br>(pcs) |
| SMA            | 12mm          | 5000               | 20              | 100000             | 5000               | 18              | 90000              |



## Outline Dimensions

SMA



| SMA |        |      |      |      |
|-----|--------|------|------|------|
| DIM | INCHES |      | MM   |      |
|     | MIN    | MAX  | MIN  | MAX  |
| A   | 0.16   | 0.18 | 4.05 | 4.65 |
| B   | 0.09   | 0.11 | 2.4  | 2.8  |
| C   | 0.07   | 0.09 | 1.8  | 2.3  |
| D   | 0.18   | 0.21 | 4.67 | 5.27 |
| E   | 0.04   | 0.06 | 1    | 1.4  |
| F   | 0.05   | 0.06 | 1.2  | 1.6  |



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