



SUPER FAST GLASS PASSIVATED RECTIFIERS

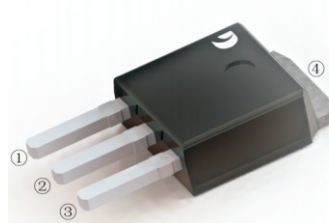
Reverse Voltage – 100 to 600 V

Forward Current – 10 A

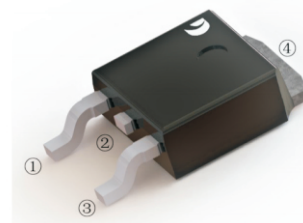
FEATURES

- High current capability
- Low forward voltage drop
- Low power loss, high efficiency
- High surge capability
- High temperature soldering guaranteed
- Mounting position: any

TO-251(I-PAK)



TO-252(D-PAK)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

| CHARACTERISTICS | TO-251 | SF1001VS | SF1002VS | SF1003VS | SF1004VS | SF1005VS | SF1006VS | Units |
|---|-----------------|------------|----------|----------|----------|----------|----------|--------------------|
| | TO-252 | SF1001DS | SF1002DS | SF1003DS | SF1004DS | SF1005DS | SF1006DS | |
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 100 | 200 | 300 | 400 | 500 | 600 | V |
| Maximum RMS voltage | V_{RMS} | 70 | 140 | 210 | 280 | 350 | 420 | V |
| Maximum DC Blocking Voltage | V_{DC} | 700 | 200 | 300 | 400 | 500 | 600 | V |
| Maximum Average Forward Rectified Current | $I_{F(AV)}$ | 10 | | | | | | A |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 170 | | | | | | A |
| Max Instantaneous Forward Voltage at 10 A DC | V_F | 0.95 | | 1.30 | | 1.70 | | V |
| Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a = 125^\circ\text{C}$ | I_R | 1 300 | | | | | | μA |
| Typical Junction Capacitance $f = 1\text{MHz}, 4\text{V DC}$ | C_j | 45 | | | | | | pF |
| Typical Thermal Resistance ⁽¹⁾ | $R_{\theta JA}$ | 15 | | | | | | $^\circ\text{C/W}$ |
| Maximum Reverse Recovery Time ⁽²⁾ | t_{rr} | 35 | | | | | | ns |
| Operating Junction Temperature Range | T_j | -55 ~ +150 | | | | | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | -55 ~ +150 | | | | | | $^\circ\text{C}$ |

(1) P.C.B. mounted with 10cm x 10cm x 1mm copper pad areas.

(2) Measured with $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$.



Fig.1 Maximum Average Forward Current Rating

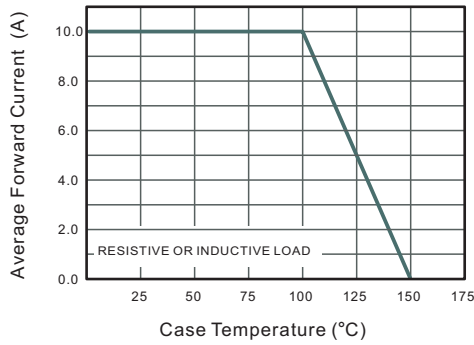


Fig.2 Typical Reverse Characteristics

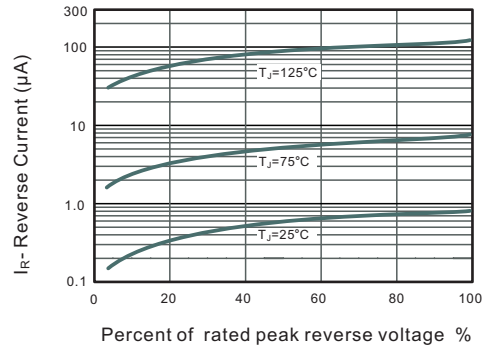


Fig.4 Typical Forward Characteristics

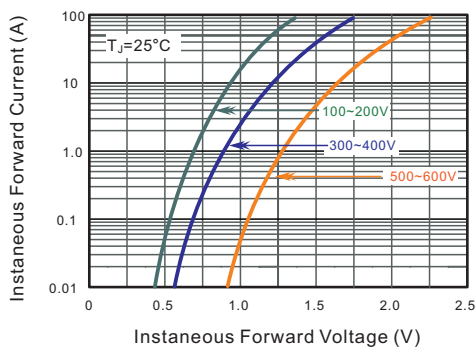


Fig.4 Typical Junction Capacitance

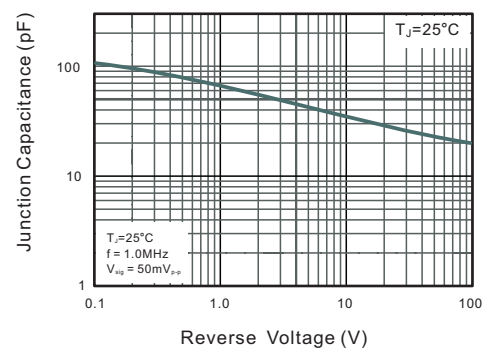
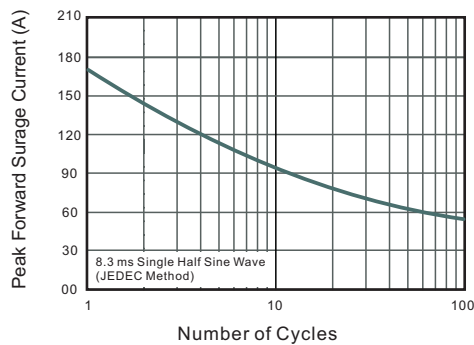
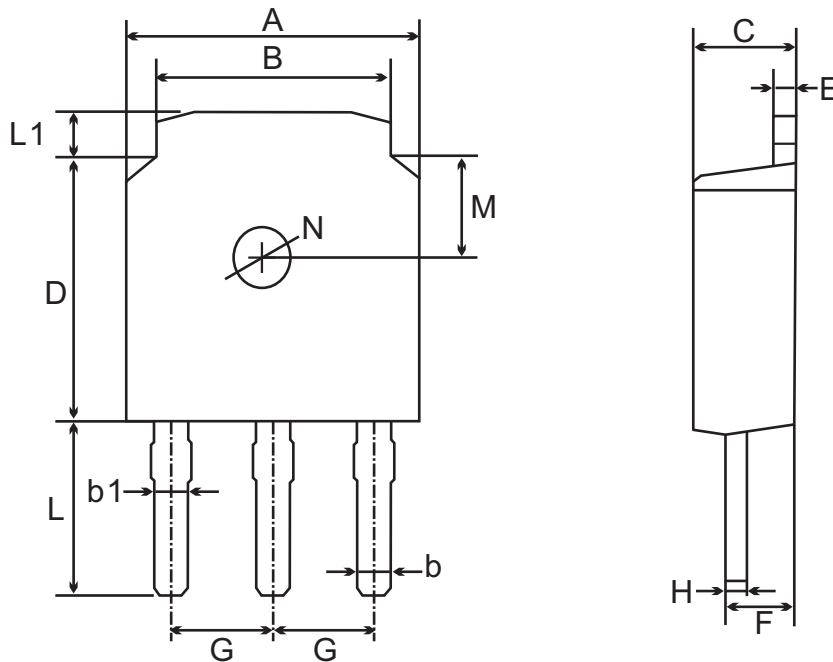


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current





TO-251(D-PAK) Package Outline Dimensions



TO-251(I-PAK) mechanical data

| UNIT | | A | B | b | b1 | C | D | E | F | G | H | L | L1 | M | N |
|------|-----|-----|-----|-----|------|-----|-----|-----|-----|-----------------|------|-----|-----|----------------|----------------|
| mm | max | 6.7 | 5.5 | 0.8 | 0.9 | 2.5 | 6.3 | 0.6 | 1.8 | 2.29 TYPICAL | 0.55 | 4.3 | 1.2 | 1.8 TYPICAL | 1.3 TYPICAL |
| | min | 6.3 | 5.1 | 0.3 | 0.76 | 2.1 | 5.9 | 0.4 | 1.3 | | 0.45 | 3.9 | 0.8 | | |
| mil | max | 264 | 217 | 31 | 35 | 98 | 248 | 24 | 71 | 90 TYPICAL | 22 | 169 | 47 | 71 TYPICAL | 51 TYPICAL |
| | min | 248 | 201 | 12 | 30 | 83 | 232 | 16 | 51 | | 18 | 154 | 31 | | |

Important Notice and Disclaimer

Jingdao Microelectronics reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

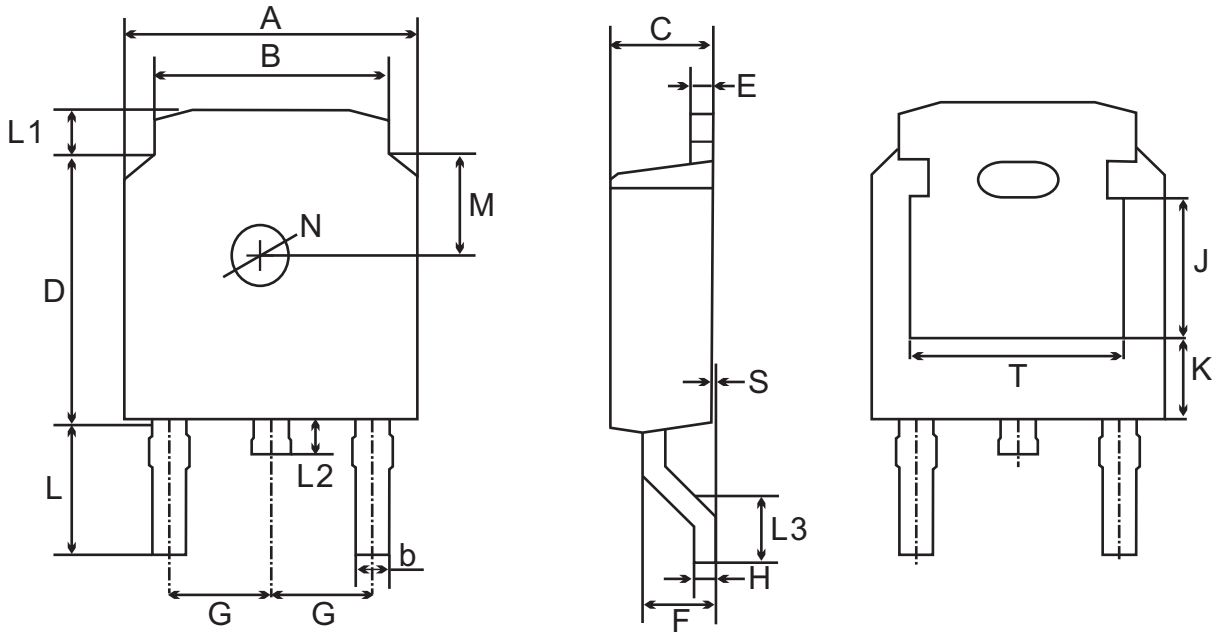
Jingdao Microelectronics makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, not does Jingdao Microelectronics assume any liability for application assistance or customer product design. Jingdao Microelectronics does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of Jingdao Microelectronics.

Jingdao Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of Jingdao Microelectronics.



TO-252(D-PAK) Package Outline Dimensions



TO-252(D-PAK) mechanical data

| UNIT | | A | B | b | C | D | E | F | G | H | L | L1 | L2 | L3 | S | M | N | J | K | T |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----------------|------|-----|-----|-----|------|-----|----------------|----------------|------|------|------|
| mm | max | 6.7 | 5.5 | 0.8 | 2.5 | 6.3 | 0.6 | 1.8 | 2.29 TYPICAL | 0.55 | 3.1 | 1.2 | 1.0 | 1.75 | 0.1 | 1.8 TYPICAL | 1.3 TYPICAL | 3.16 | 1.80 | 4.83 |
| | min | 6.3 | 5.1 | 0.3 | 2.1 | 5.9 | 0.4 | 1.3 | | 0.45 | 2.7 | 0.8 | 0.6 | 1.40 | 0.0 | | | ref. | ref. | ref. |
| mil | max | 264 | 217 | 31 | 98 | 248 | 24 | 71 | 90 TYPICAL | 22 | 122 | 47 | 39 | 69 | 4 | 71 TYPICAL | 51 TYPICAL | 124 | 71 | 190 |
| | min | 248 | 201 | 12 | 83 | 232 | 16 | 51 | | 18 | 106 | 31 | 24 | 55 | 0 | | | ref. | ref. | ref. |

Important Notice and Disclaimer

Jingdao Microelectronics reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

Jingdao Microelectronics makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does Jingdao Microelectronics assume any liability for application assistance or customer product design. Jingdao Microelectronics does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of Jingdao Microelectronics.

Jingdao Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of Jingdao Microelectronics.

单击下面可查看定价，库存，交付和生命周期等信息

[>>JINGDAO\(晶导微\)](#)