

SUPER FAST GLASS PASSIVATED RECTIFIERS

Reverse Voltage – 800 V

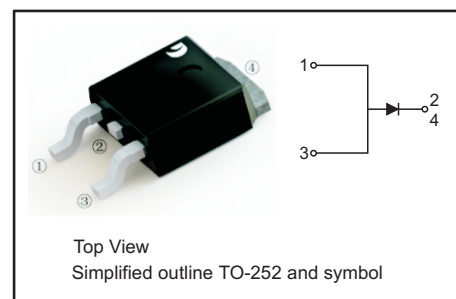
Forward Current – 10 A

FEATURES

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

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 2,4 | Cathode |
| 1,3 | Anode |



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified

| Parameter | Symbols | SF1008DYC | Units |
|---|---|---------------|--------------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 800 | V |
| Maximum RMS voltage | V_{RMS} | 560 | V |
| Maximum DC Blocking Voltage | V_{DC} | 800 | V |
| Maximum Average Forward Rectified Current @ Fig.1 | $I_{F(AV)}$ | 10 | A |
| Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 160 | A |
| Peak Forward Surge Current,1.0ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 320 | A |
| I^2t Rating for fusing (3ms≤t≤8.3ms) | I^2t | 106.2 | A ² S |
| Max Instantaneous Forward Voltage at 10 A | V_F | 2.8 | V |
| Maximum DC Reverse Current at Rated DC Reverse Voltage $T_a = 25^\circ\text{C}$ $T_a = 125^\circ\text{C}$ | I_R | 1 300 | μA |
| Typical Junction Capacitance ⁽¹⁾ | C_j | 77 | pF |
| Maximum Reverse Recovery Time ⁽²⁾ | t_{rr} | 35 | ns |
| Typical Thermal Resistance ⁽³⁾ | $R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$ | 55 6 10 | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range | T_j, T_{stg} | -55 ~ +150 | $^\circ\text{C}$ |

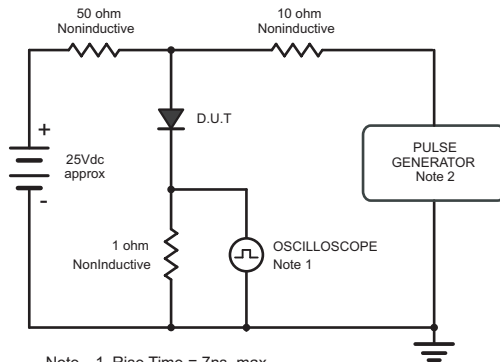
(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

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

(3) P.C.B. mounted with 0.3" X 0.3" (8mm X 8mm) copper pad areas.



Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



Note: 1. Rise Time = 7ns, max.
Input Impedance = 1megohm, 22pF.
2. Fall Time = 10ns, max.
Source Impedance = 50 ohms.

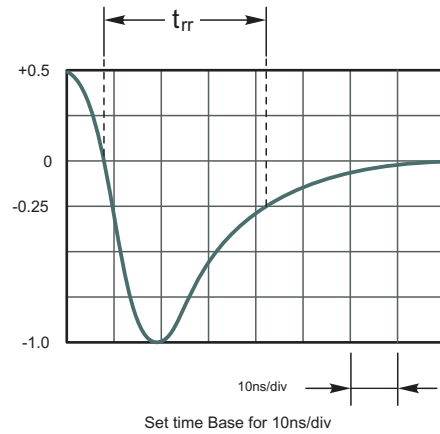


Fig.2 Maximum Average Forward Current Rating

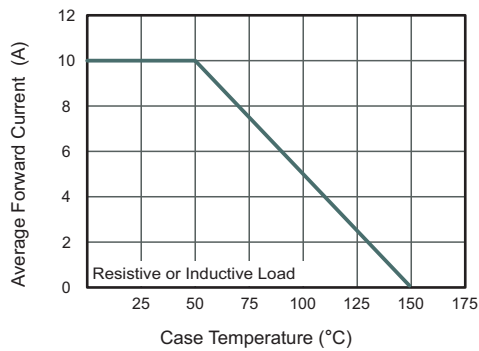


Fig.3 Typical Reverse Characteristics

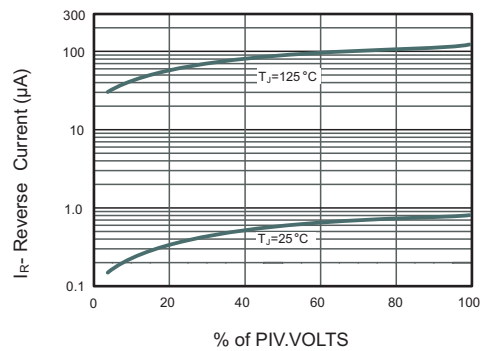


Fig.4 Typical Forward Characteristics

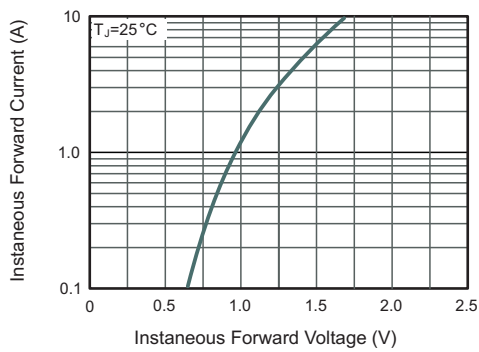


Fig.5 Typical Junction Capacitance

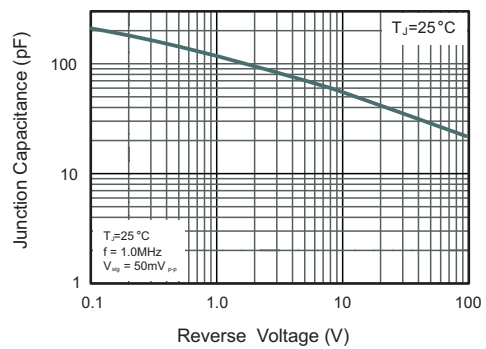
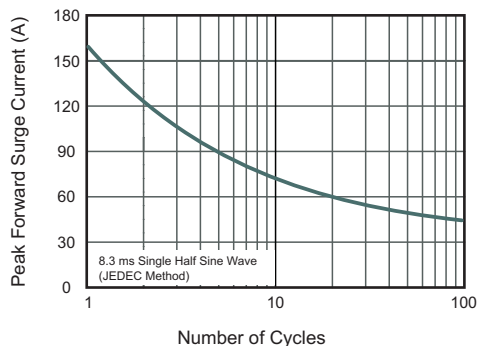


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current

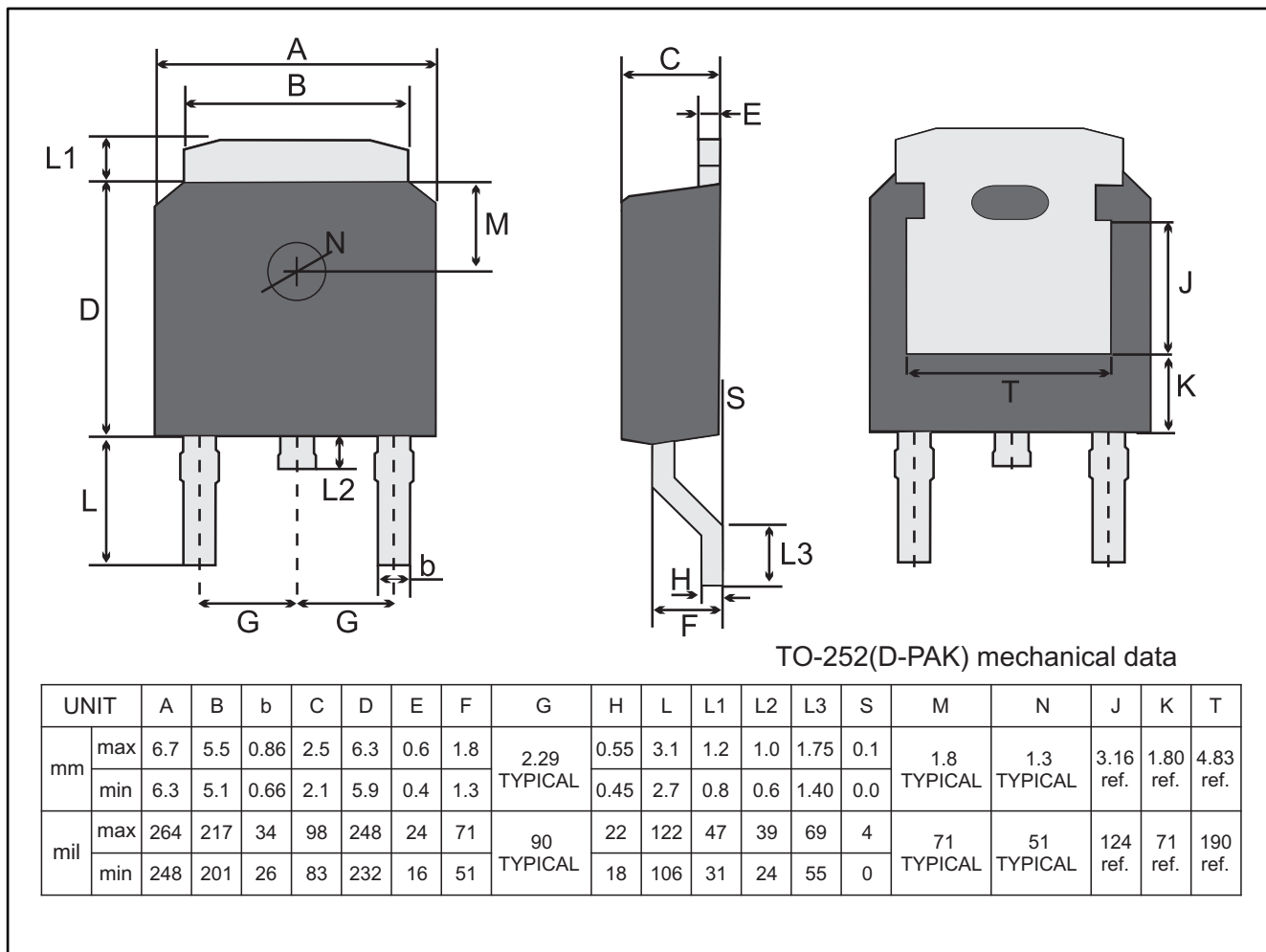




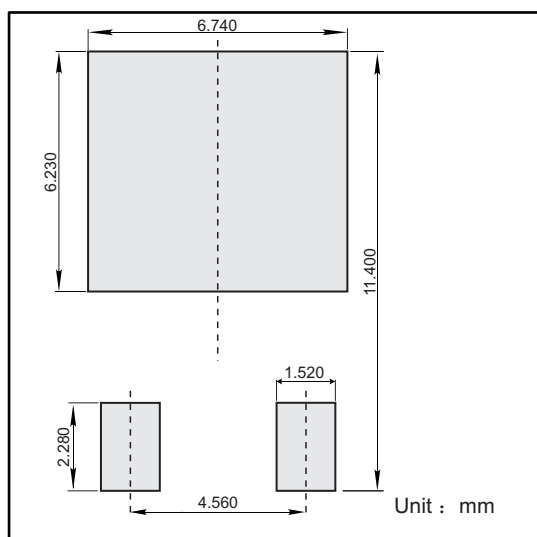
PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

TO-252



The recommended mounting pad size



Marking

| | |
|-------------|--------------|
| Type number | Marking code |
| SF1008DYC | SF1008DY |



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