



SUPER FAST GLASS PASSIVATED RECTIFIERS

Reverse Voltage – 100 to 600 V

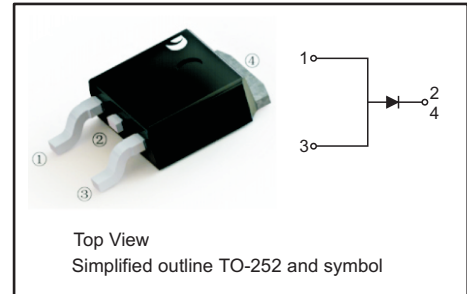
Forward Current – 8.0 A

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	SF801DYC	SF802DYC	SF803DYC	SF804DYC	SF805DYC	SF806DYC	Units
Maximum Repetitive 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}	100	200	300	400	500	600	V
Maximum Average Forward Rectified Current @ Fig.1	$I_{F(AV)}$	8						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 8 A	V_F	1		1.3		1.7		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	154		104		69		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						°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150						°C

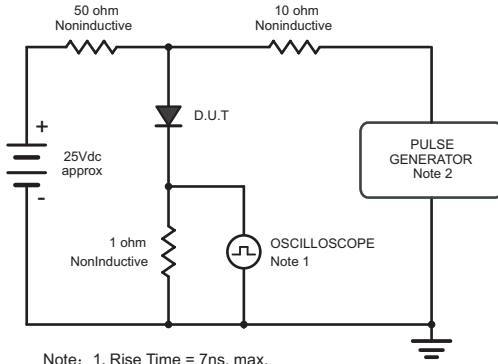
(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) Measured with $I_F = 0.5$ A, $I_R = 1$ A, $I_{rr} = 0.25$ 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. Rise Time = 10ns, max.
Source Impedance = 50 ohms.

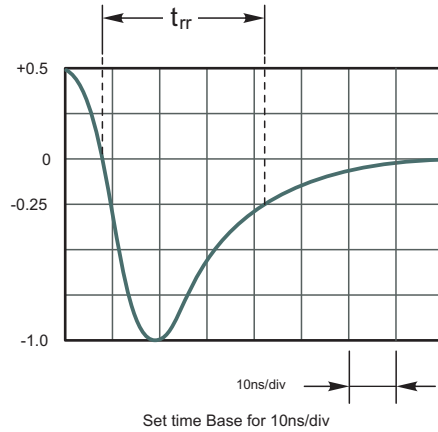


Fig.1 Forward Current Derating Curve

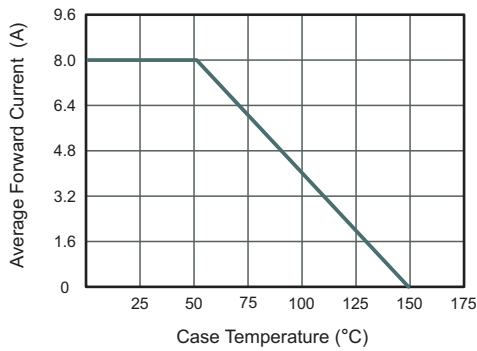


Fig.3 Typical Forward Characteristics

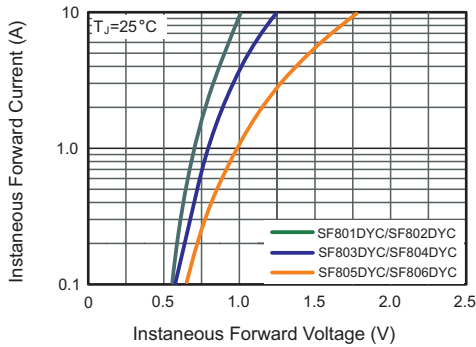


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

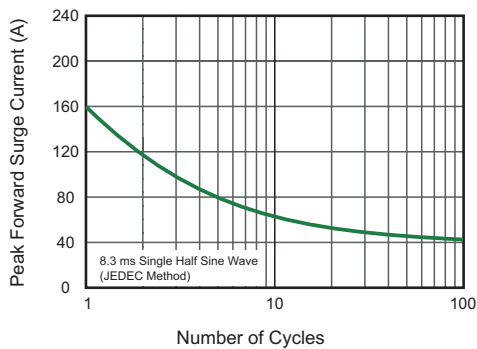


Fig.2 Typical Reverse Characteristics

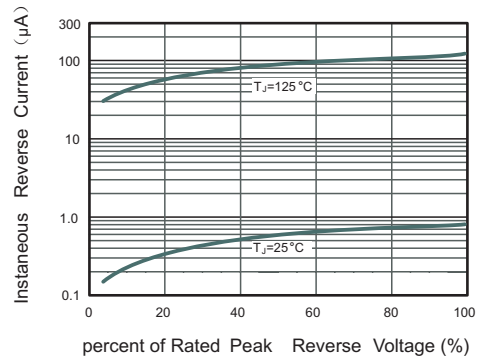
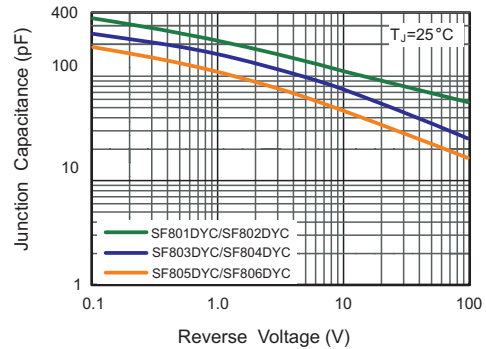


Fig.4 Typical Junction Capacitance

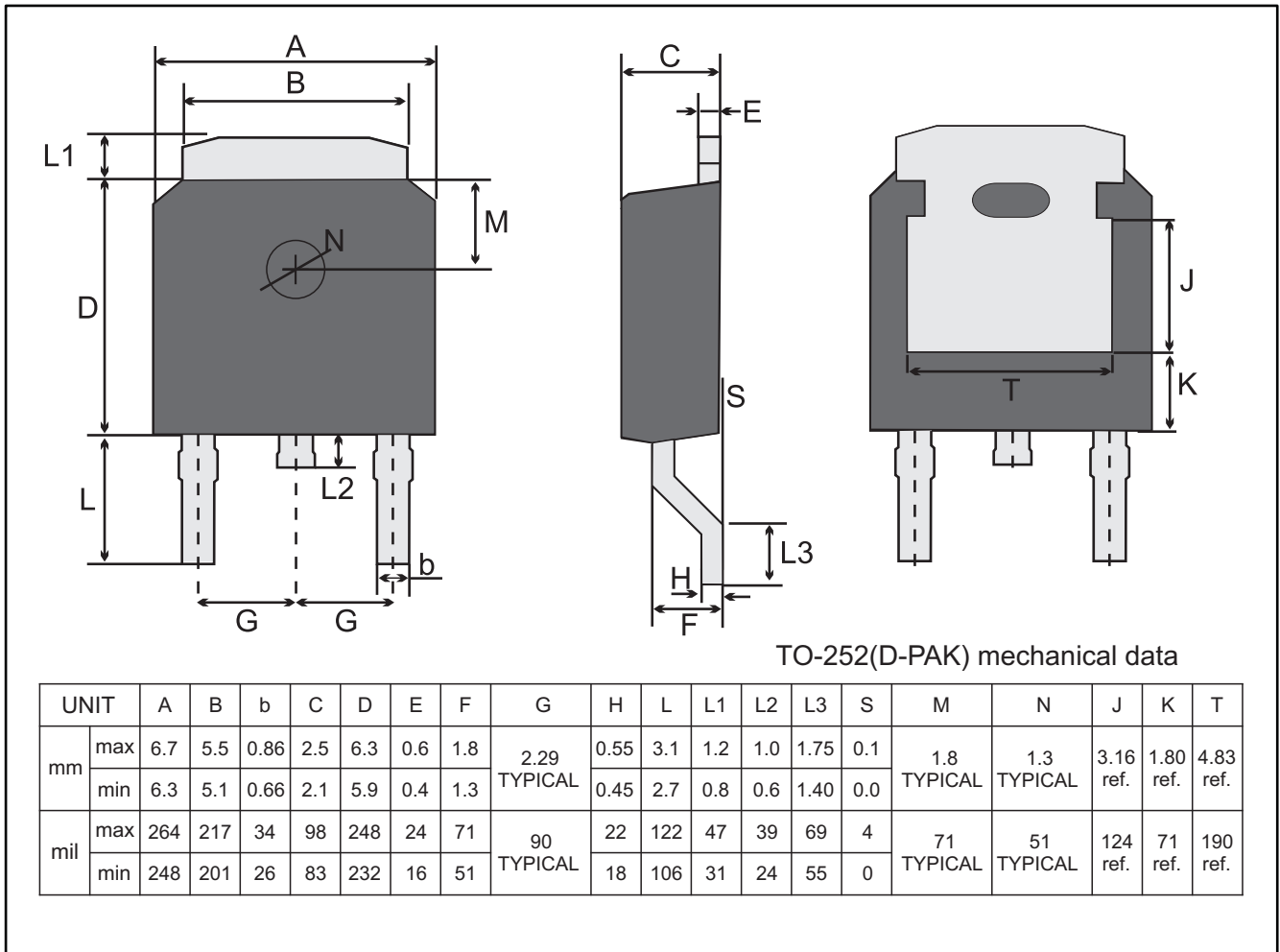




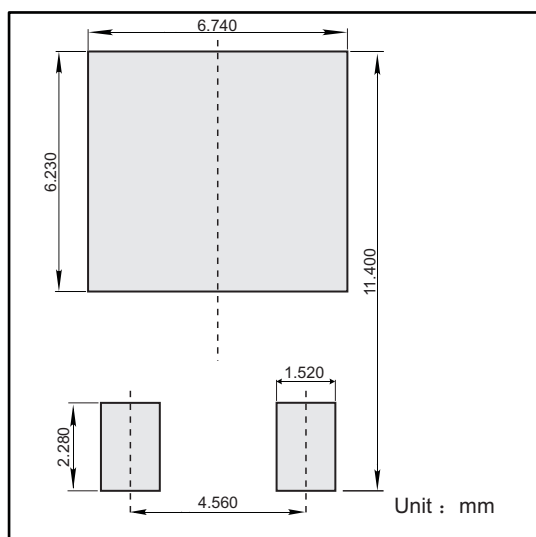
PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

TO-252



The recommended mounting pad size



Marking

Type number	Marking code
SF801DYC	SF801DY
SF802DYC	SF802DY
SF803DYC	SF803DY
SF804DYC	SF804DY
SF805DYC	SF805DY
SF806DYC	SF806DY



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.