

Surface Mount Super fast Recovery Rectifier

Reverse Voltage – 800 V

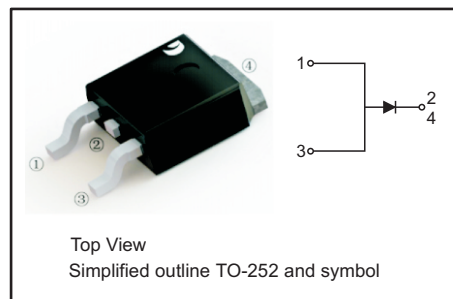
Forward Current – 8.0 A

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	SF808DYC	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	$I_{F(AV)}$	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	2.5	V
Maximum DC Reverse Current at Rated DC Reverse Voltage	I_R	1 300	μA
Typical Junction Capacitance ⁽¹⁾	C_j	109	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

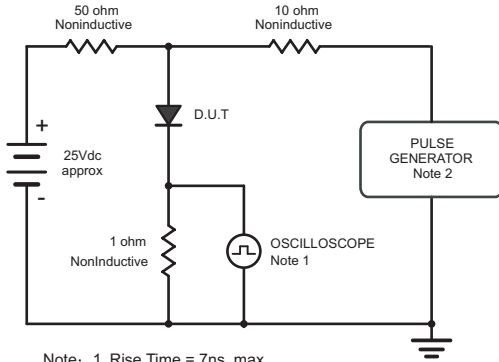
(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(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.

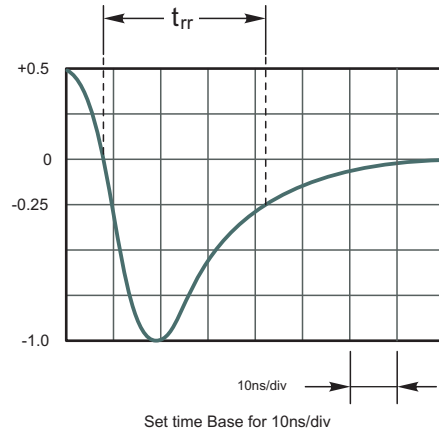


Fig.1 Maximum Average Forward Current Rating

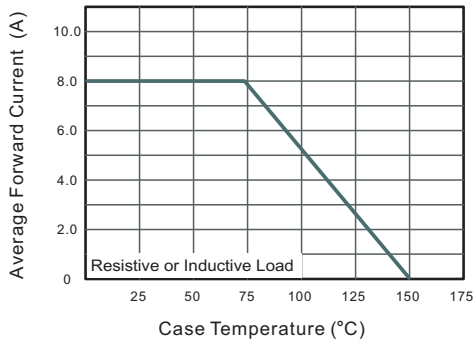


Fig.2 Typical Reverse Characteristics

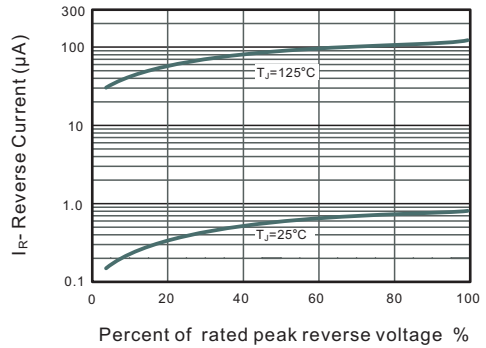


Fig.4 Typical Forward Characteristics

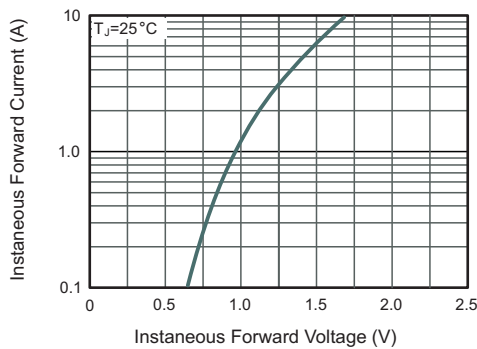


Fig.5 Typical Junction Capacitance

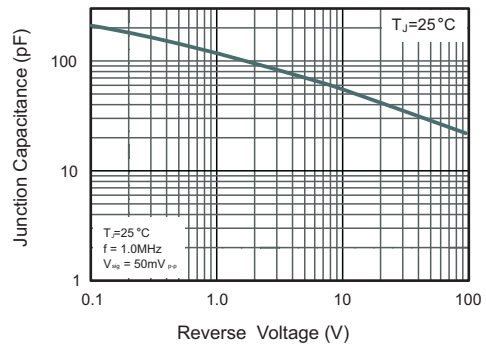
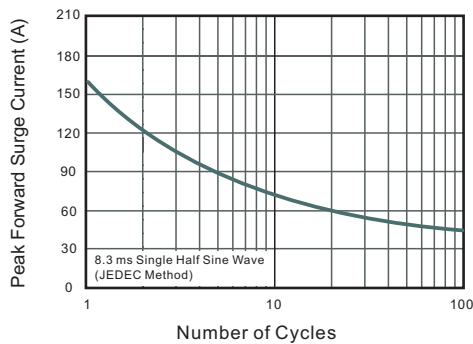


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

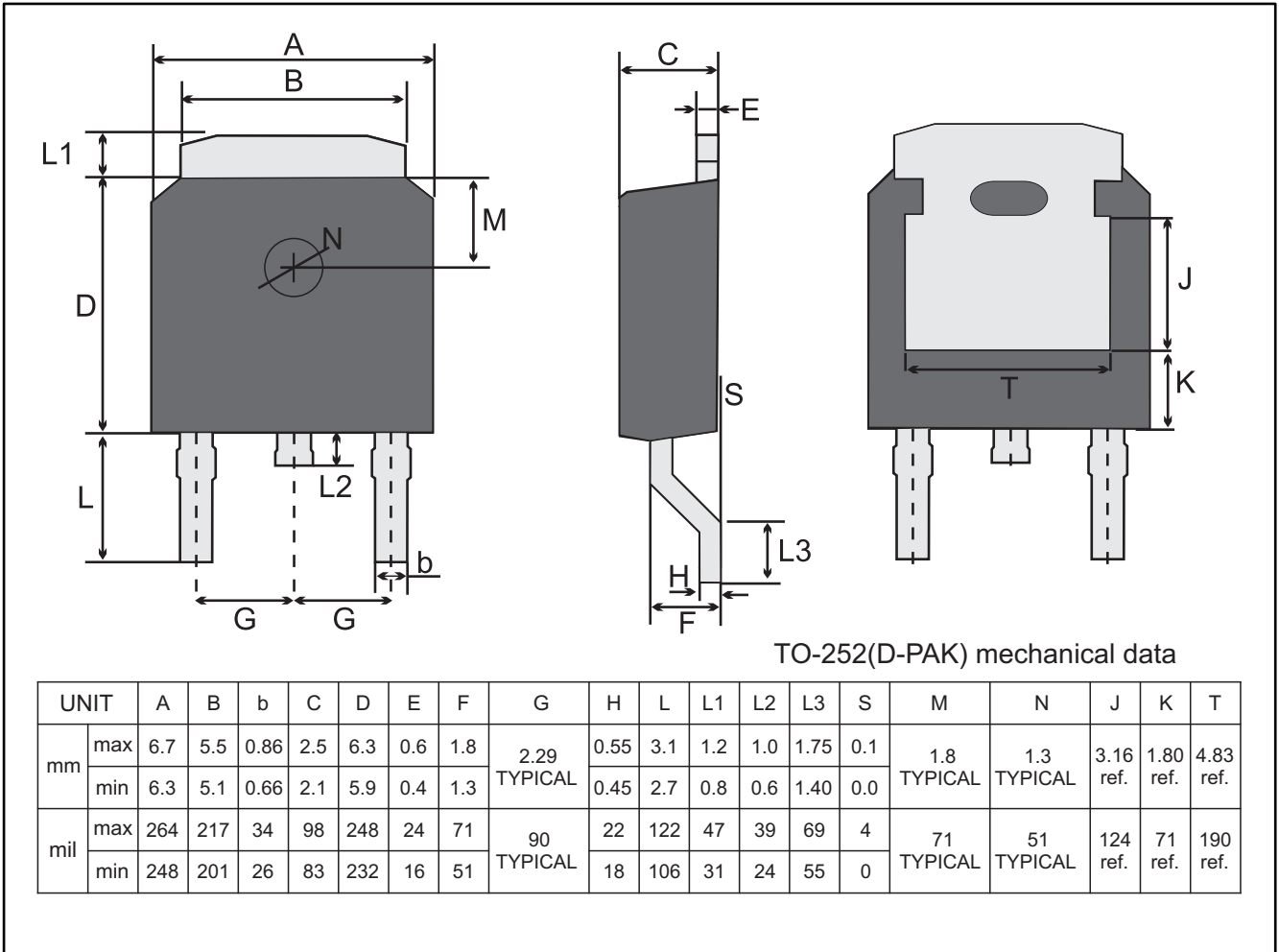




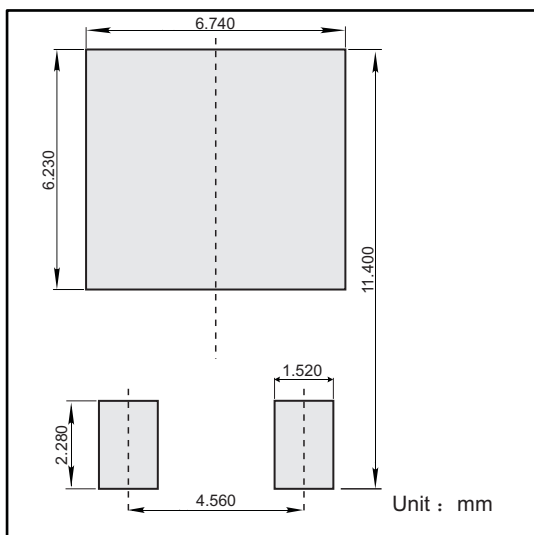
PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

TO-252



The recommended mounting pad size



Marking

Type number	Marking code
SF808DYC	SF808DY



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