SF21 - SF24

2.0A SUPER-FAST RECOVERY RECTIFIER

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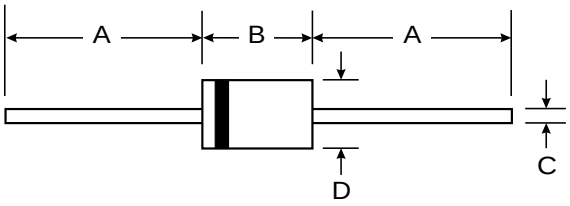
Features

- Low Leakage Current
- Low Forward Voltage Drop
- High Current Capability
- Super-fast Switching Speed < 35ns
- Plastic Material - UL Flammability Rating 94V-0



Mechanical Data

- Case: DO-15, Molded Plastic
- Terminals: Plated Axial Leads, Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Approx. Weight: 0.4 grams

DO-15		
Dim	**Min**	**Max**
A	25.40	—
B	5.50	7.62
C	0.686	0.889
D	2.60	3.60
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ T_A = 25°C unless otherwise specified

Single phase, halfwave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	SF21	SF22	SF23	SF24	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	150	200	V
Maximum RMS Voltage	$V_{R(RMS)}$	35	70	105	140	V
Average Rectified Output Current @ T_L=55°C	I_O	2.0				A
Non-Repetitive Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	50				A
Forward Voltage @ I_F=2.0	V_F	0.975				V
Reverse Current at Rated DC Blocking Voltage @ T_A= 25°C @ T_A=150°C	I_R	5 50				μA
Maximum Reverse Recovery Time (Note 2)	t_{RR}	35				ns
Typical Junction Capacitance (Note 3)	C_j	70				pF
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to + 175				°C

Notes: 1. Valid provided that leads are kept at ambient temperature at a distance of 9.5mm from the case.
2. Reverse Recovery Test Conditions: I_F =0.5 A, I_R =1.0 A, I_{RR}=0.25A
3. Measured at 1.0MHz and applied reverse voltage of 4.0V.

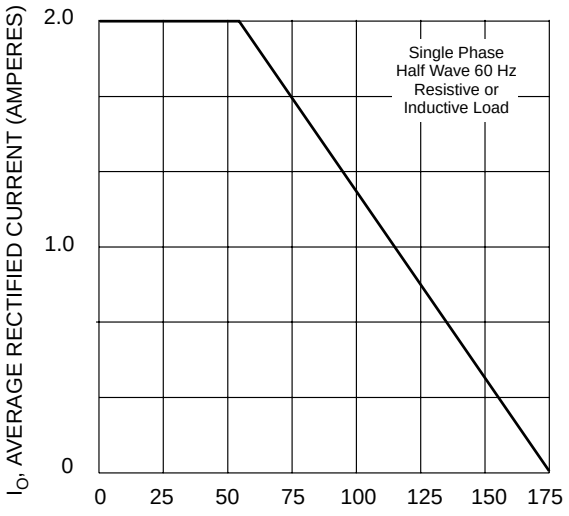


Fig. 1, Typical Fwd Current Derating Curve

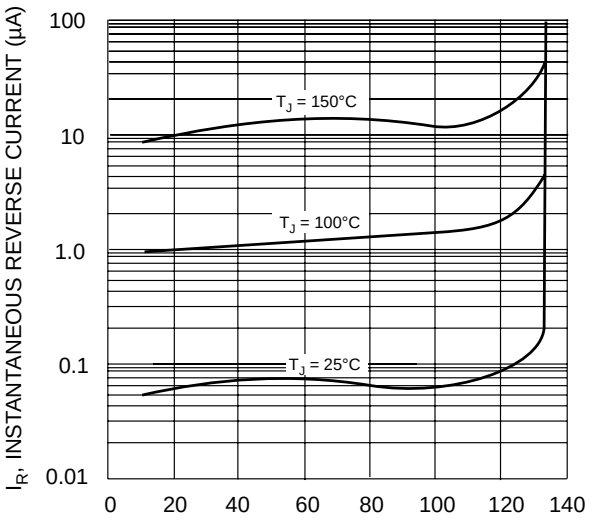


Fig. 2, Typical Reverse Characteristics

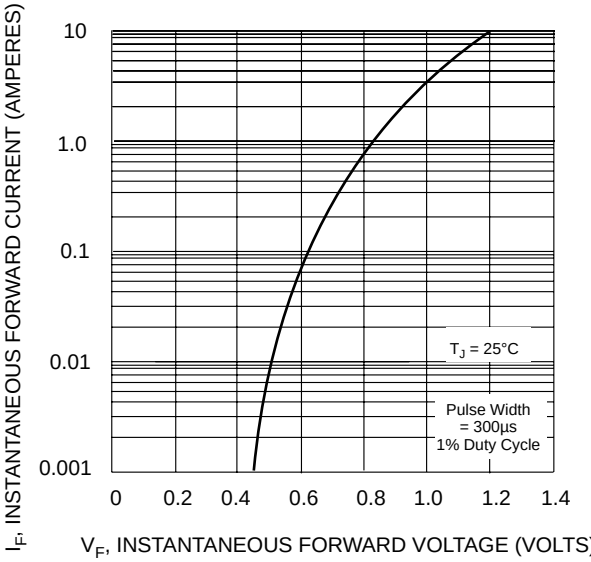


Fig. 3, Typical Instantaneous Fwd Characteristics

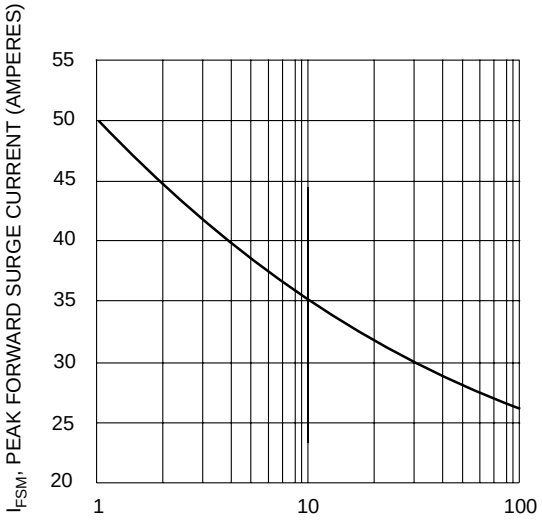


Fig. 4, Max Non-Repetitive Peak Fwd Surge Current

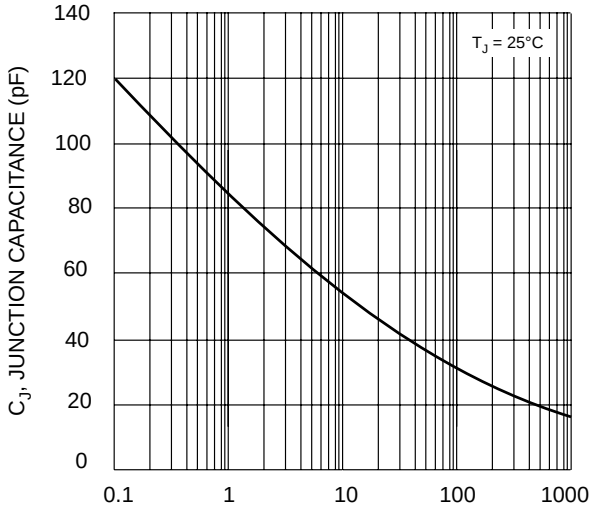


Fig. 5, Typical Junction Capacitance

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