SF21 - SF24

2.0A SUPER-FAST RECOVERY RECTIFIER

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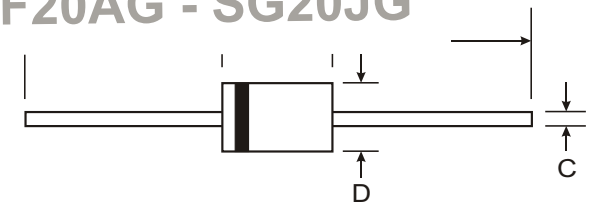
Features

- 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.

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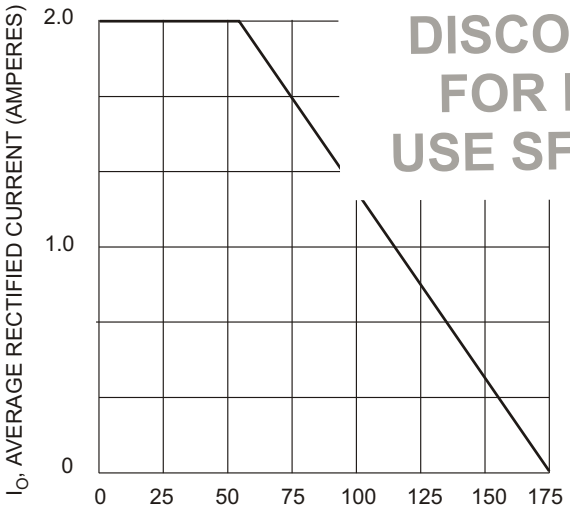
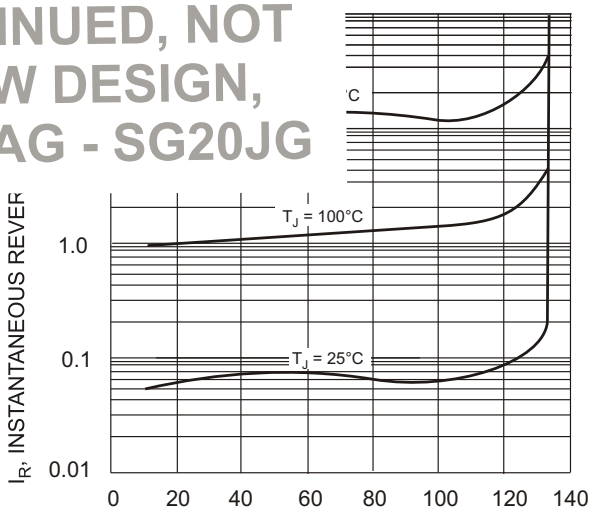
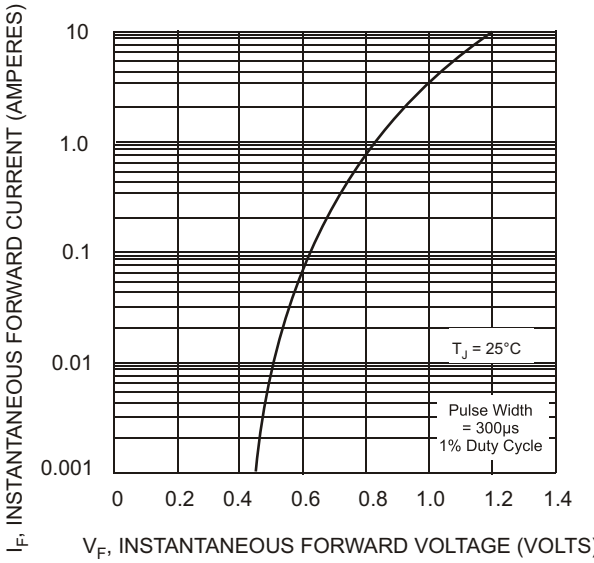


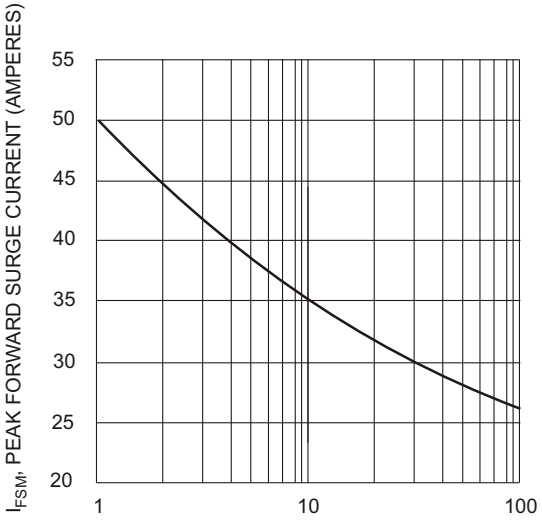
T_A, AMBIENT TEMPERATURE (°C)
Fig. 1, Typical Fwd Current Derating Curve



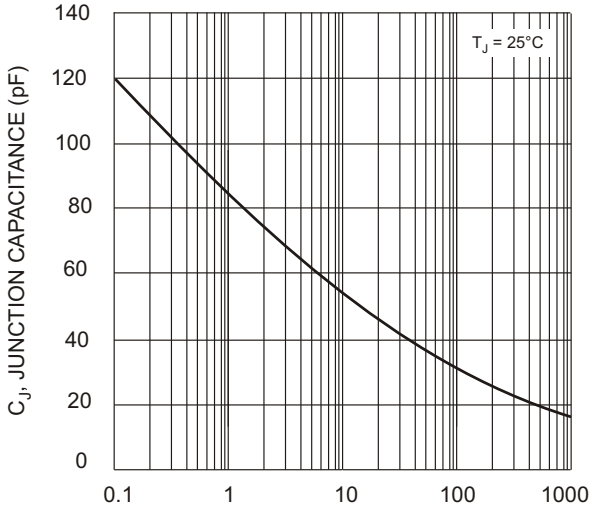
PERCENT OF RATED PEAK REVERSE VOLTAGE (%)
Fig. 2, Typical Reverse Characteristics



V_F, INSTANTANEOUS FORWARD VOLTAGE (VOLTS)
Fig. 3, Typical Instantaneous Fwd Characteristics



NUMBER OF CYCLES AT 60 Hz
Fig. 4, Max Non-Repetitive Peak Fwd Surge Current



V_R, REVERSE VOLTAGE (VOLTS)
Fig. 5, Typical Junction Capacitance

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