

SF51G~SF58G

SUPERFAST RECOVERY RECTIFIER

VOLTAGE 50 to 600 Volt **CURRENT** 5.0 Ampere

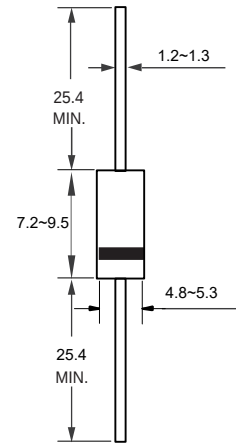
DO-201AD Unit:mm

FEATURES

- Glass Passivated Junction
- Low Forward Voltage Drop
- High Current Capability
- High reliability
- High Surge Current Capability
- Lead free in compliance with EU RoHS

MECHANICAL DATA

- Case Material: Molded Plastic.
- UL Flammability Classification Rating 94V-0



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	SF51G	SF52G	SF54G	SF55G	SF56G	SF58G	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	300	400	600	V
Maximum RMS Voltage	V _{RMS}	35	70	140	210	280	420	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	300	400	600	V
Maximum Average Forward Current (see FIG.1)	I _{F(AV)}	5.0						A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load	I _{FSM}	150						A
Maximum Forward Voltage at 5.0 A	V _F	0.95			1.27		1.70	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	5.0 100						μA
Maximum Reverse Recovery Time(Note 1)	t _{rr}	35						ns
Thermal Resistance	R _{θJA}	25						°C / W
Typical Junction Capacitance (Note2)	C _J	50			30			pF
Operating Junction Temperature Range	T _J	-55 to +150						°C
Storage Temperature Range	T _{STG}	-55 to +150						°C

NOTES:

1. Reverse Recovery Test Conditions: $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$
2. Measured at 1.0MHz and applied reverse voltage of 4.0 volt

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RATING AND CHARACTERISTIC CURVES

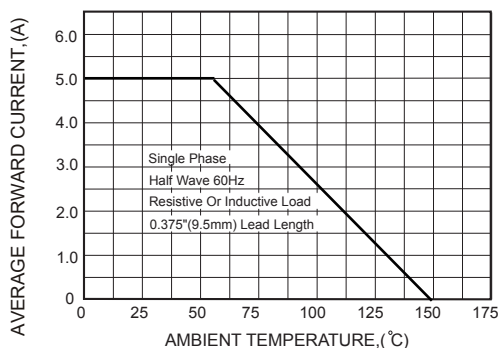


Fig. 1 Forward Current Derating Curve

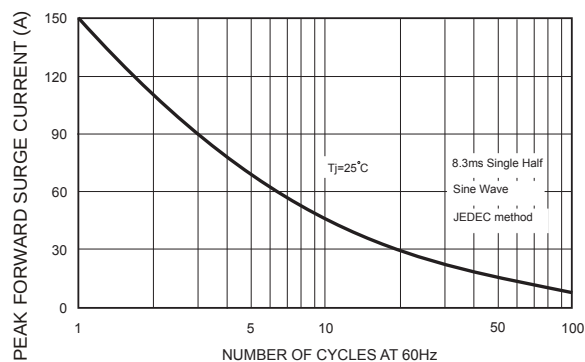


Fig. 2 Surge Current Derating Curve

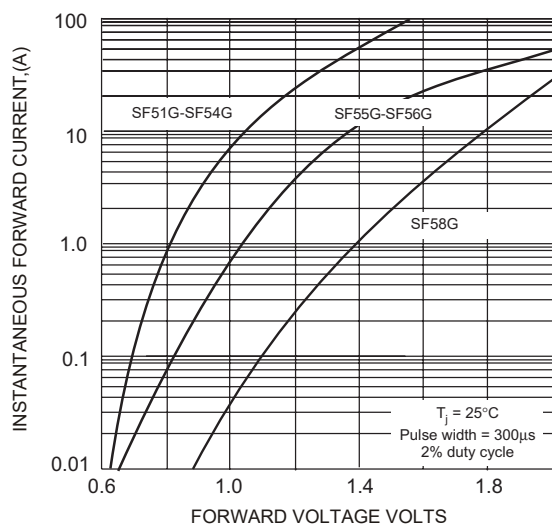


Fig. 3 Typical Forward Characteristics

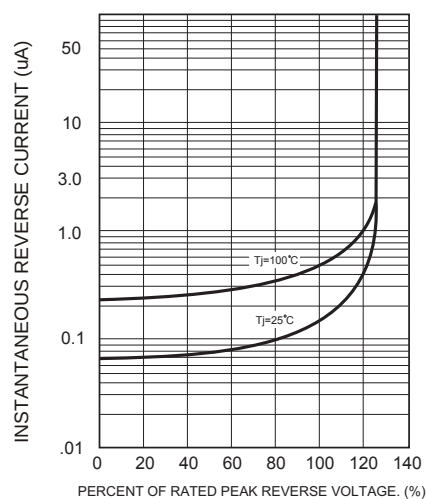


Fig. 4 Typical Reverse Characteristics

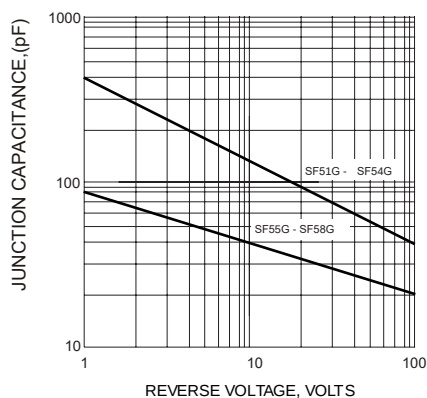
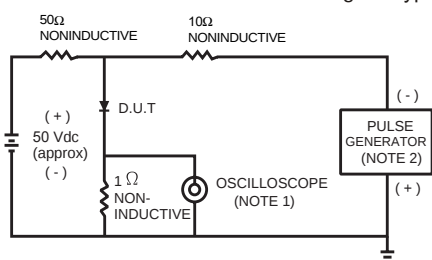


Fig. 5 Typical Junction Capacitance



NOTES:
3. Rise time = 7.0 ns max; Input impedance = 1.0 megaohm 22 pf.
4. Rise time = 10 ns max; Source impedance = 50 ohms.

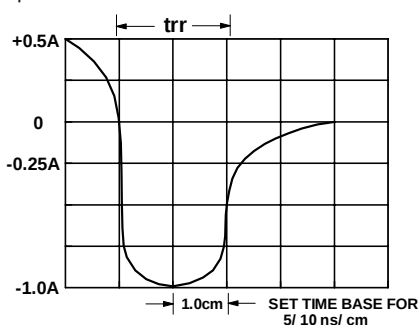


Fig. 6 Reverse Recovery Time Characteristic and Test Circuit

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ORDER INFORMATION

- Packing information

Part Number	Case	Reel Size	QUANTITY
SF51G~SF58G	DO-201AD	13 Inch	1200