

5 A Super Fast Rectifiers

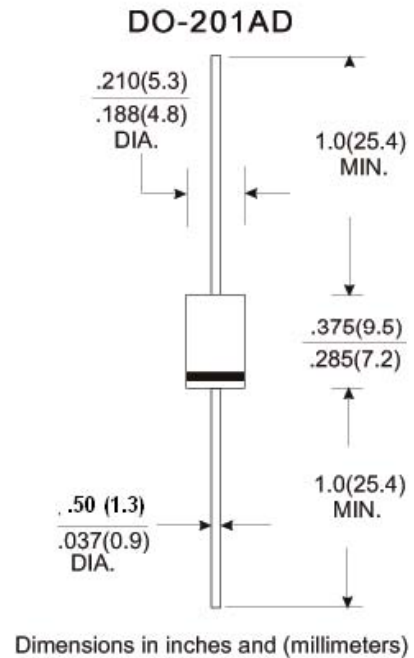
SF51G THRU SF58G 50 to 600 V 5.0 A

FEATURES

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Good for switching mode application
- Glass passivated chip junction

MECHANICAL DATA

- Case: Molded plastic
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Axial leads, solder able per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting position: Any
- Weight: 1.2 grams
- INK:SF57=SF58 of 600V



Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, Resistive or inductive load. For capacitive load, derate current by 20%

Type Number	Symbols	SF51G	SF52G	SF53G	SF54G	SF55G	SF56G	SF58G	Units	
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	150	200	300	400	600	Volts	
Maximum RMS Voltage	VRMS	35	70	105	140	210	280	420	Volts	
Maximum DC Blocking Voltage	VDC	50	100	150	200	300	400	600	Volts	
Maximum Average Forward Rectified Current. 375" (9.5mm) Lead Length @ T _A =55°C	I(AV)	5.0								Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	IFSM	150								Amp
Maximum Instantaneous Forward Voltage @ 5.0A	VF	0.95				1.25		1.7	Volts	
Maximum Reverse Current @ T _A =25°C at Rated DC Blocking Voltage @ T _A =125°C	IR	10 100								uAmp
Maximum Reverse Recovery Time (Note 1)	TRR	50								nS
Typical Junction Capacitance (Note 2)	CJ	50								pF
Operating Temperature Range T _J	T _J	-55 to +150								°C
Storage Temperature Range T _{STG}	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 MHz and Applied Reverse Voltage of 4.0 Volts D.C.

RATINGS AND CHARACTERISTIC CURVES (SF51G THRU SF58G)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

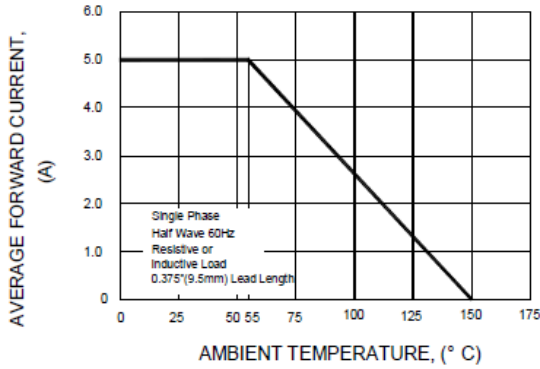


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

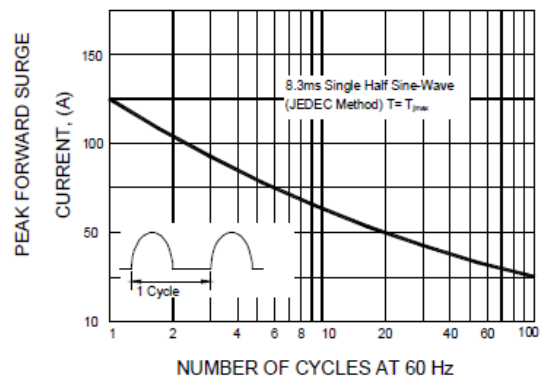


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

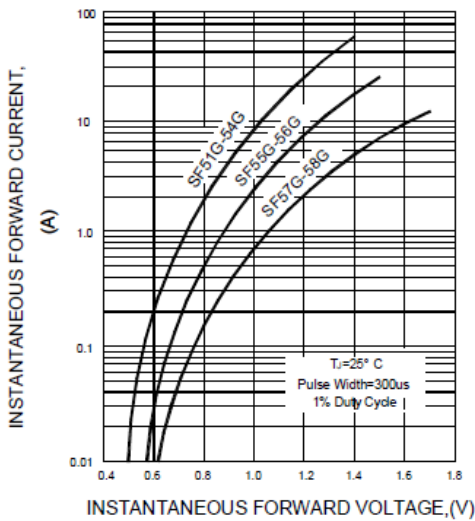


FIG.4-TYPICAL REVERSE CHARACTERISTICS

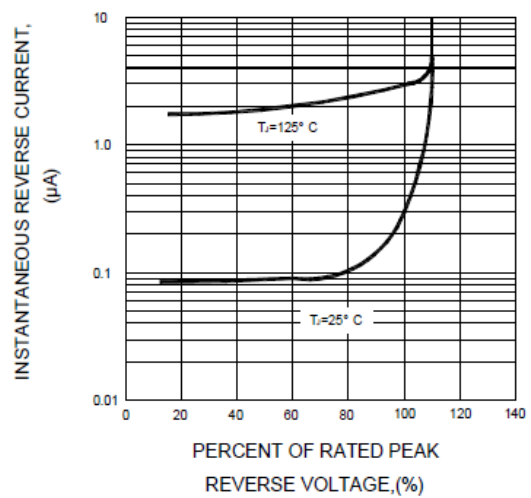


FIG.5-TYPICAL JUNCTION CAPACITANCE

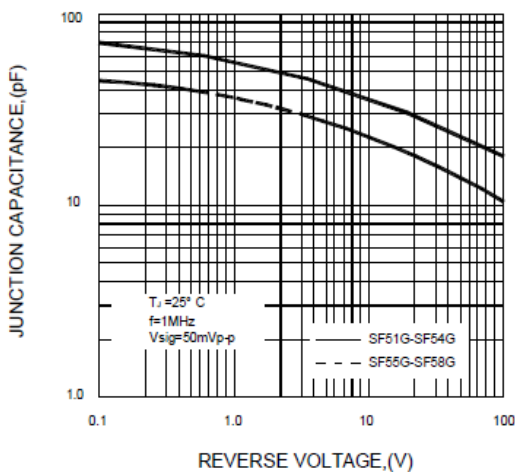
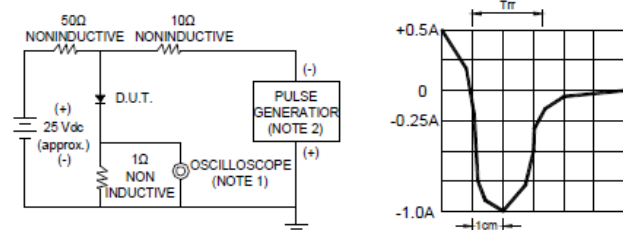


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



- NOTES : 1. Rise Time=7ns max. Input Impedance= 1 magohm. 22pF
2. Rise time=10ns max. Source Impedance= 50 ohms