

VOLTAGE RANGE: 50-1000V
FORWARD CURRENT: 5.0A



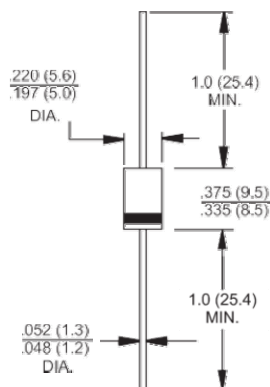
DO-201AD/DO-27

Features

- ◇ High efficiency, low VF
- ◇ High current capability
- ◇ High reliability
- ◇ High surge current capability
- ◇ Low power loss.
- ◇ For use in low voltage, high frequency inverter, freewheeling, and polarity protection application

Mechanical Data

- ◇ Case: Molded plastic
- ◇ Epoxy: UL 94V-0 rate flame retardant
- ◇ Polarity: Color band denotes cathode
- ◇ High temperature soldering guaranteed:
260°C/10 seconds/.375"(.95mm) lead lengths at 5 lbs., (2.3kg) tension
- ◇ Mounting position: Any
- ◇ Weight: 1.2 grams



Dimensions in inches and (millimeters)

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	Symbol	SF 51G	SF 52G	SF 53G	SF 54G	SF 55G	SF 56G	SF 57G	SF 58G	SF 59G	SF 510G	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	500	600	800	1000	V
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	350	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	500	600	800	1000	V
Maximum Average Forward Rectified Current .375 (9.5mm) Lead Length @T _A = 55 C °	I _(AV)	5.0										A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	150										A
Maximum Instantaneous Forward Voltage @ 5.0A	V _F	0.975				1.25		1.7		2.5		V
Maximum DC Reverse Current @ T _A =25 C ° at Rated DC Blocking Voltage @ T _A =100 C °	I _R	5.0 100										uA uA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	35										nS
Typical Junction Capacitance (Note 2)	C _j	120				60				30		pF
Typical Thermal Resistance (Note 3)	R _{θJA} R _{θJL}	20 5.0										°C/ W
Operating Temperature Range	T _J	-65 to +150										°C
Storage Temperature Range	T _{STG}	-65 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 V D.C.
3. Mount on Cu-Pad Size 16mm x 16mm on P.C.B

RATINGS AND CHARACTERISTIC CURVES (SF51 THRU SF510)

FIG.1- MAXIMUM AVERAGE FORWARD CURRENT DERATING

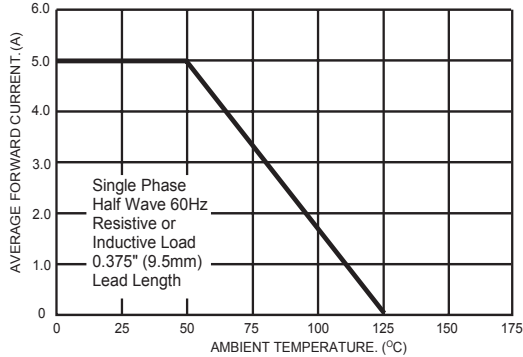


FIG.2- TYPICAL REVERSE CHARACTERISTICS

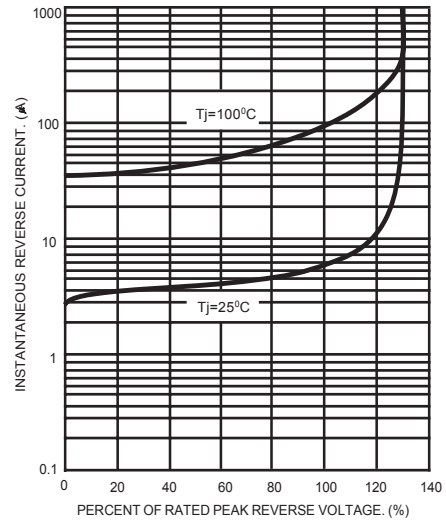


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

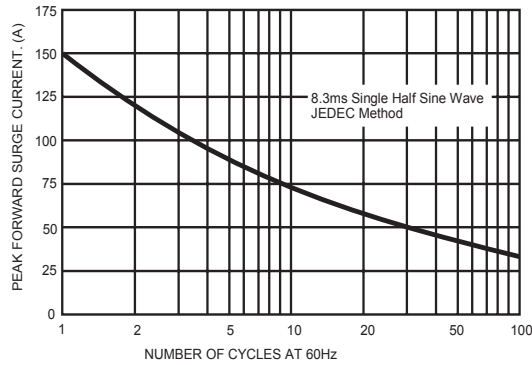


FIG.5- TYPICAL FORWARD CHARACTERISTICS

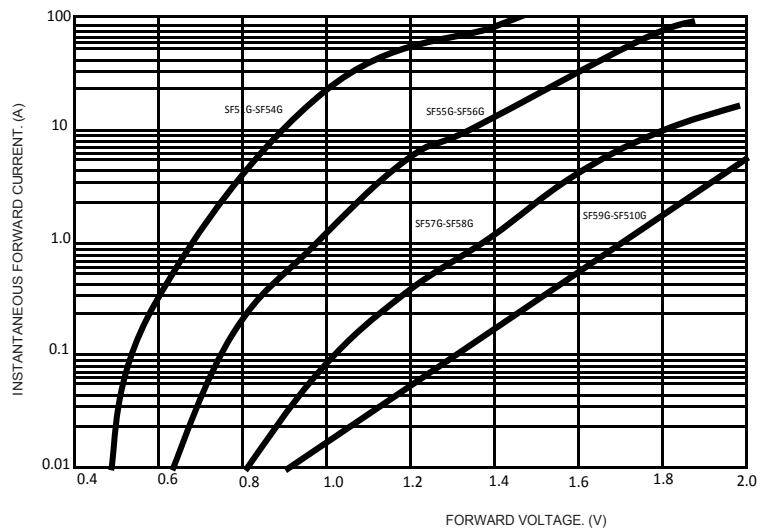


FIG.4- TYPICAL JUNCTION CAPACITANCE

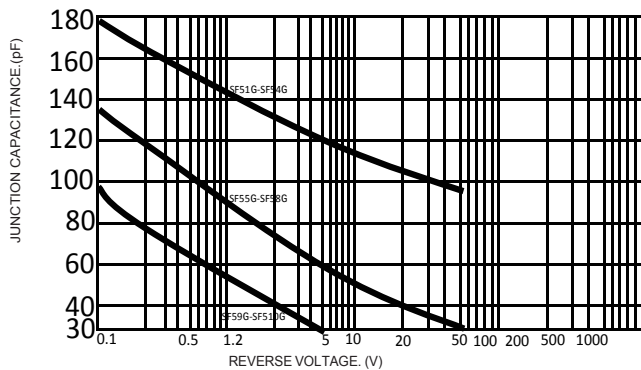
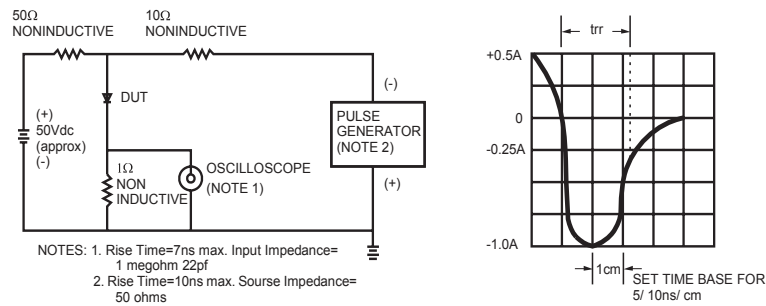


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



PACKAGE	SPQ/PCS	CARTON SPQ/PCS	CARTON SIZE/CM	CARTON GW/KG	CARTON NW/KG
DO-27	1250/TAPE	12500	40X26.5X30	14.00	12.00