



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



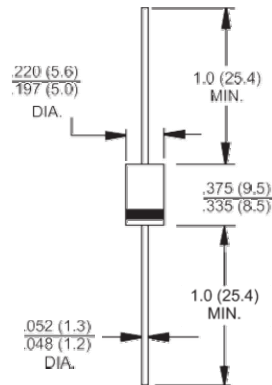
DO-201AD

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, free wheeling, 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", (9.5mm) 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 51	SF 52	SF 53	SF 54	SF 55	SF 56	SF 57	SF 58	SF 59	SF 510	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 @ $T_A = 55^\circ C$	$I_{(AV)}$	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 @ $T_A = 25^\circ C$ at Rated DC Blocking Voltage @ $T_A = 100^\circ C$	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)	$R_{\theta JA}$ $R_{\theta JL}$	20					5.0					$^\circ C/W$ $^\circ C/W$	
Operating Temperature Range	T_J	-65 to +150										$^\circ C$	
Storage Temperature Range	T_{STG}	-65 to +150										$^\circ C$	

- 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

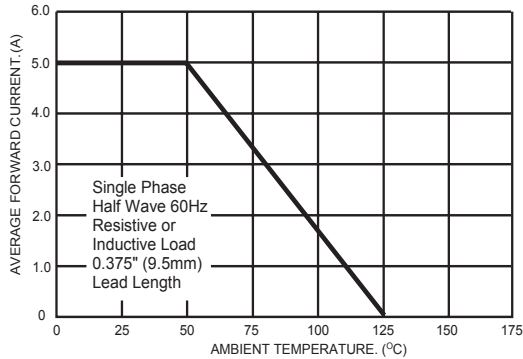


FIG.2- TYPICAL REVERSE CHARACTERISTICS

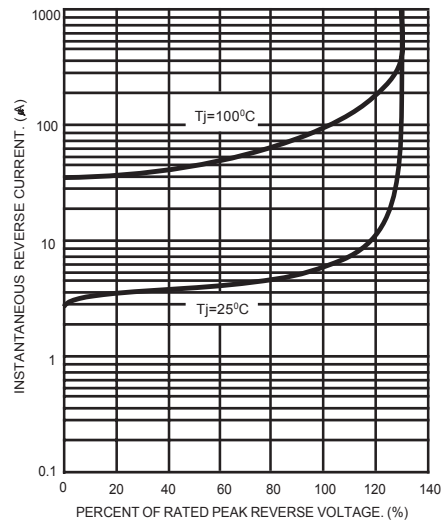


FIG.3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

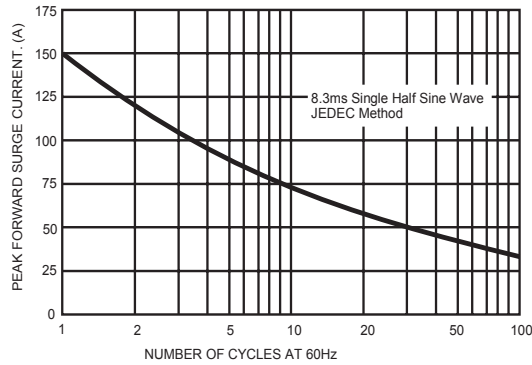


FIG.5- TYPICAL FORWARD CHARACTERISTICS

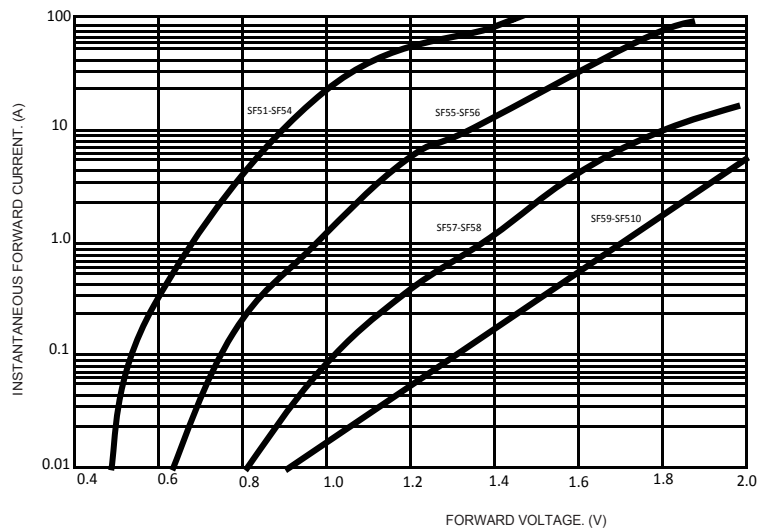


FIG.4- TYPICAL JUNCTION CAPACITANCE

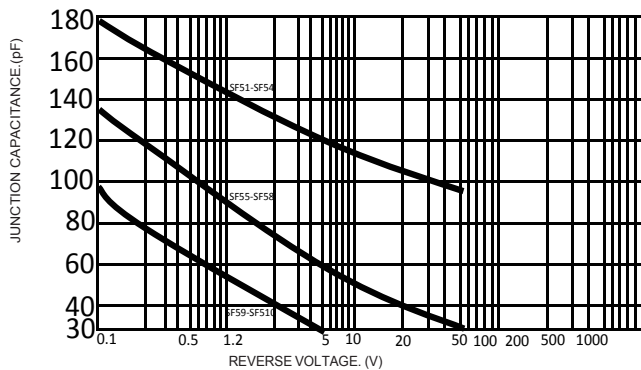
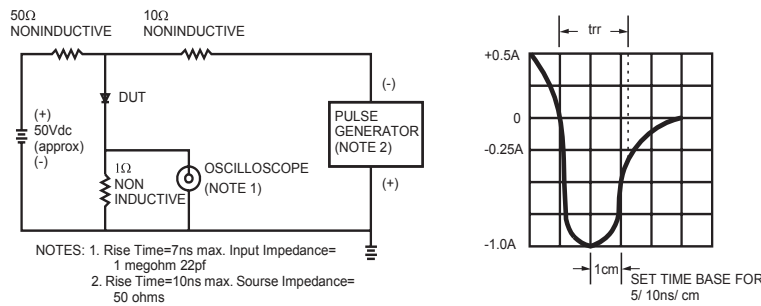


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



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