

CURRENT 5.0 Ampere
 VOLTAGE RANG 50 to 600 Volts

SF51 THRU SF58

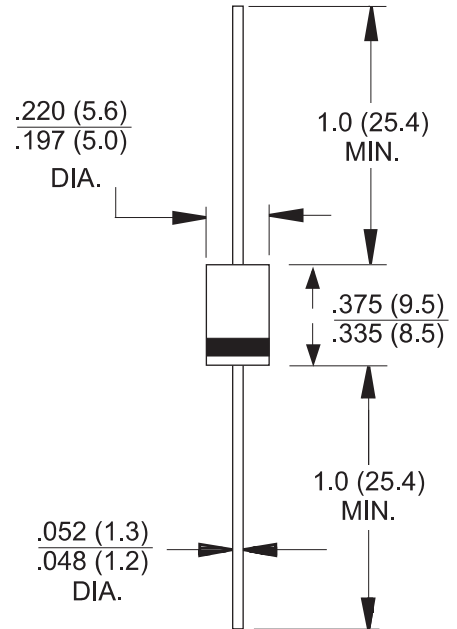
FEATURES

- Low coat construction
- Fast switching for high efficiency.
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:
 260 /10 secods/.375 (9.5mm)lead length at 5 lbs(2.3kg)
 tension

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-O rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.042ounce, 1.19g

DO-27 / DO-201AD



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

	SYMBOLS	SF 51	SF 52	SF 53	SF 54	SF 55	SF 56	SF 57	SF 58	UNITS
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	500	600	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	350	420	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	500	600	Volts
Maximum Average Forward Rectified Current 0.375 (9.5mm) lead length at $T_A=55$	$I_{(AV)}$	5.0								Amp
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method)	I_{FSM}	125								Amps
Maximum Instantaneous Forward Voltage @ 5.0A	V_F	0.95			1.25		1.7			Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	$T_A = 25$								μA
		5.0								
Maximum Reverse Recovery Time Test conditions $I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$	t_{rr}	35								ns
Typical Thermal Capavitance (Measured at 1.0MHz and applied rever voltage of 4.0V)	C_J	50				30				PF
Typical Thermal Resistance(NOTE 1)	$R_{\theta JA}$	30								/W
Operating Junction Temperature Range	T_J	(-55 to +150)								
Storage Temperature Range	T_{STG}	(-55 to +150)								

Notes:

1. Thermal resistance from junction to ambient with .375 (9.5mm)lead length, PCB. mounted. .

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RATING AND CHARACTERISTIC CURVES SF51 Thru SF58

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

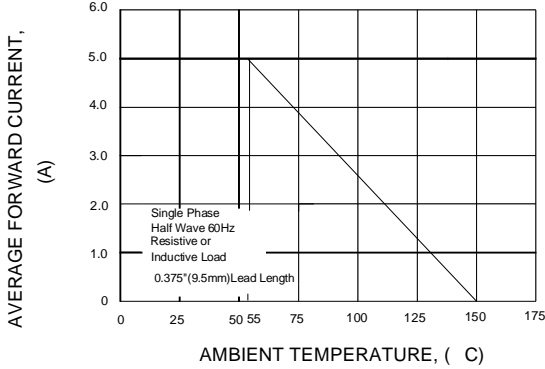


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

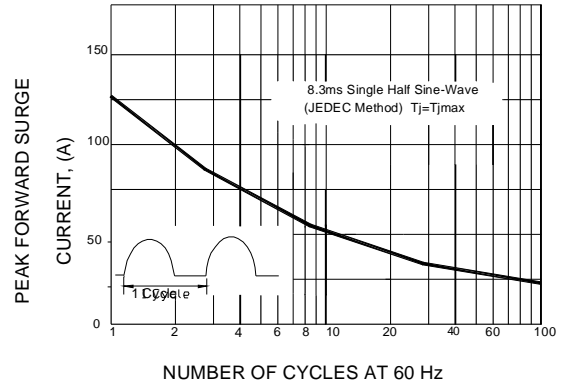


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

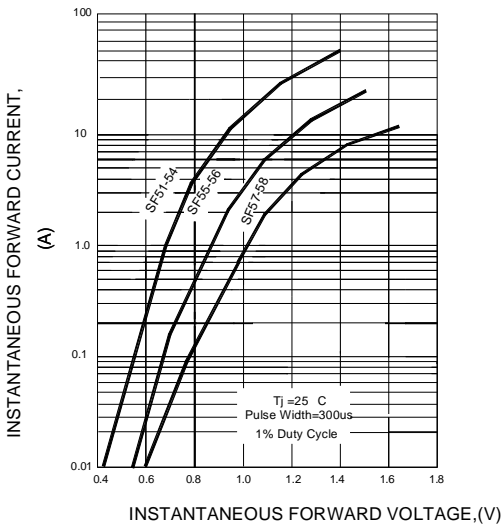


FIG.5-TYPICAL JUNCTION CAPACITANCE

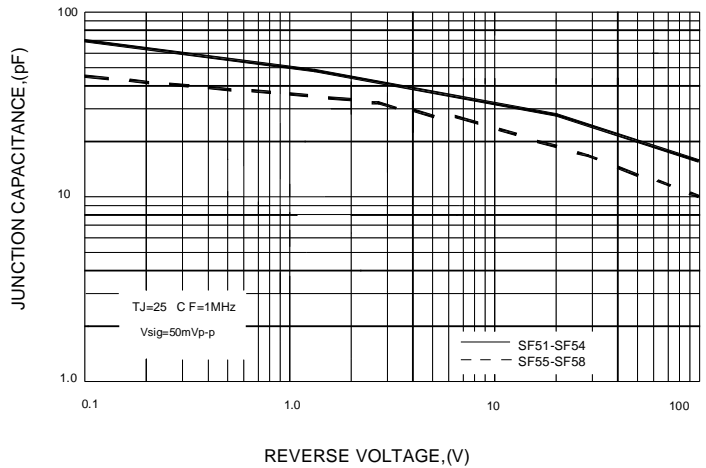


FIG.4-TYPICAL REVERSE CHARACTERISTICS

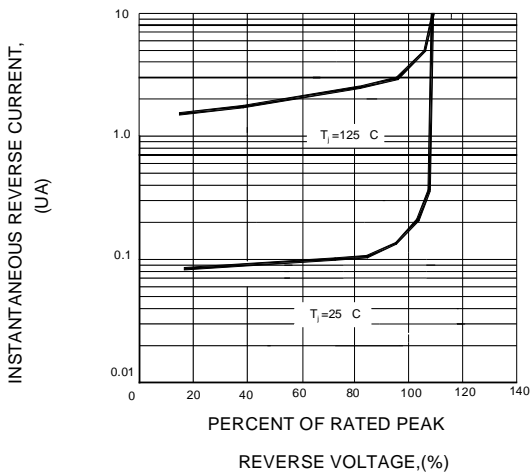


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

