DACO SEMICONDUCTOR CO., LTD.

SF51 THRU SF57

SUPER FAST RECOVERY SILICON RECTIFIERS

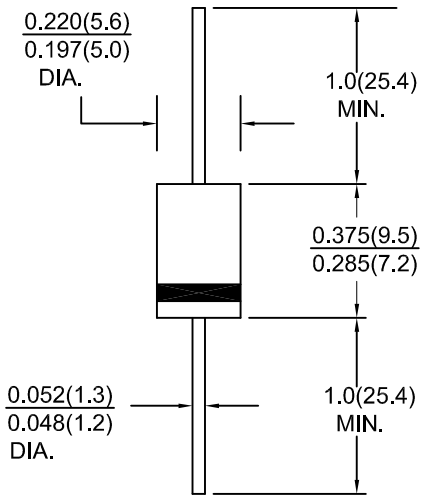
FEATURES:

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

MECHANICAL DATA

Case : Molded plastic
Epoxy: UL 94V-0 rate flame retardant
Lead : Axial leads, solderable per MIL-STD-202,
Method 208 guranteed
Polarity : Color band denotes cathode end
Mounting Position : Any
Weight : 1.10 grams

DO-201AD



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

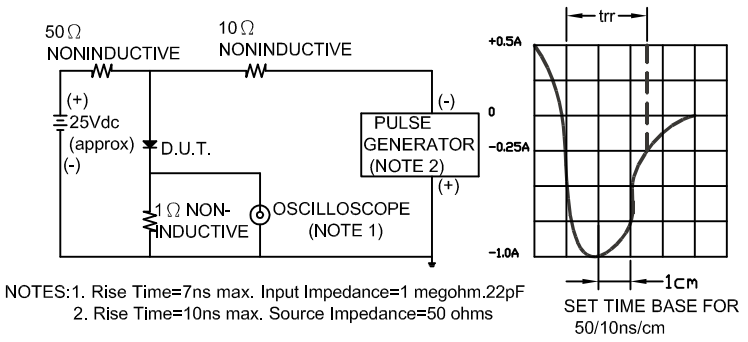
Rating at 25℃ ambient temp. unless otherwise specified.
Single phase, half sine wave, 60 Hz, resistive or inductive load.
For capacitive load, derate current by 20 %.

Characteristic	Symbol	SF 51	SF 52	SF 53	SF 54	SF 55	SF 56	SF 57	Units
Maximum recurrent peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	Volts
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	Volts
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	Volts
Maximum average forward rectified current .375"(9.5mm) lead length at Ta=55℃	$I_{(AV)}$	5.0							Amps
Peak forward surge current ,8.3ms single half sine-wave superimposed on rated load(JEDEC Method)	I_{FSM}	150							Amps
Maximum instantaneous forward voltage at 5.0 A	V_F	1.00				1.30		1.70	Volts
Maximum DC reverse current Ta=25℃ / Ta=100℃ at rated DC blocking voltage	I_R	5.0 / 100							μA
Maximum reverse recovery time (note 1)	trr	35							nS
Typical junction capacitance (note 2)	C_j	50							pF
Operating and storage temperature range	T_j, T_{stg}	-65 to +150							℃

Notes : 1. Reverse recovery test condition : I_F=0.5A ; I_R=1.0A ; I_{RR}=0.25A
2. Measured 1MHz and applied reverse voltage of 4.0V DC

RATINGS AND CHARACTERISTIC CURVES

FIG.1-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



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

SET TIME BASE FOR
50/10ns/cm

FIG.2 - TYPICAL FORWARD CURRENT DERATING CURVE

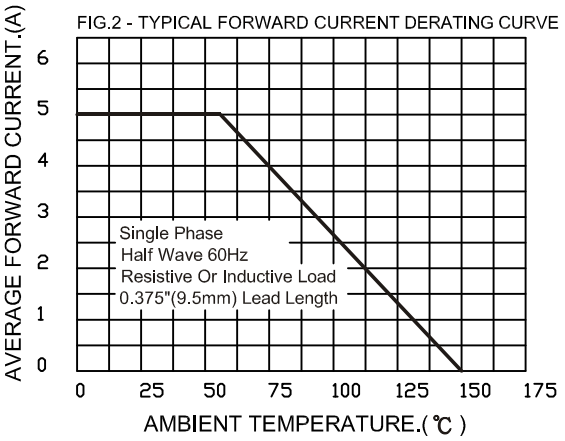


FIG.3-TYPICAL FORWARD CHARACTERISTICS

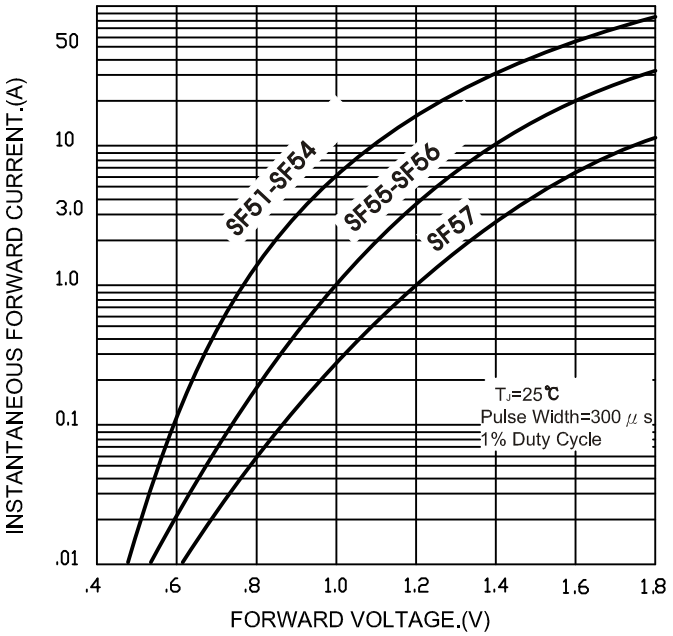


FIG.4-TYPICAL REVERSE CHARACTERISTICS

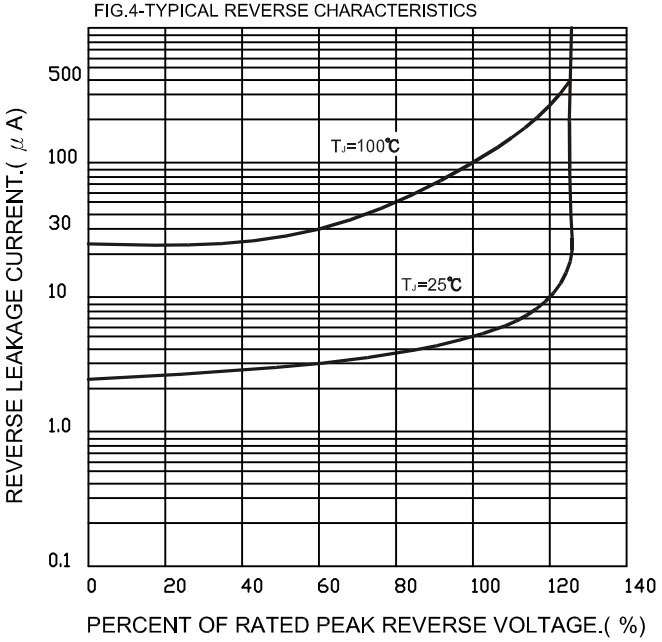


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

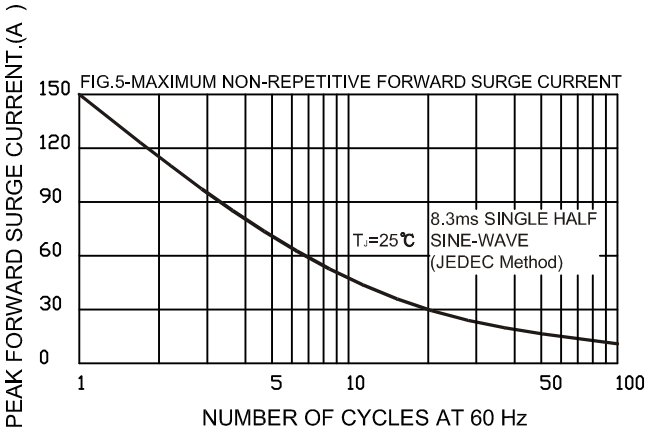
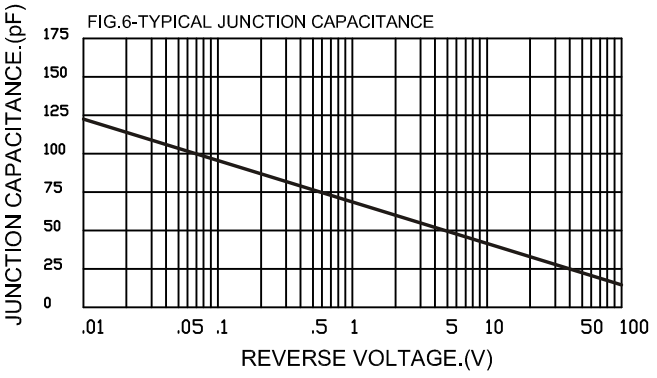


FIG.6-TYPICAL JUNCTION CAPACITANCE



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