World Internation (China) Limited

SUPERFAST RECOVERY RECTIFIER

SF31G THRU SF38G

REVERSE VOLTAGE: 50 to 800 VOLTS
FORWARD CURRENT: 3.0 AMPERE

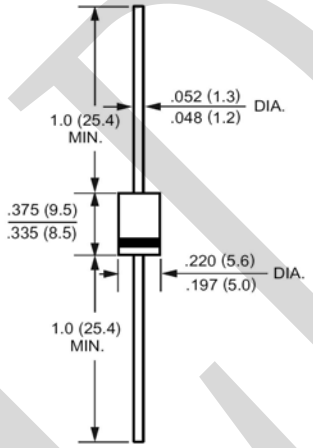
FEATURES

· Low forward voltage drop
· Low leakage
· High current capability
· Super fast switching speed
· High forward surge capability
· High reliability.

MECHANICAL DATA

Case: Molded plastic, DO-201AD
Epoxy: UL 94V-O rate flame retardant
Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
Polarity: Color band denotes cathode end
Mounting position: Any
Weight: 0.04ounce, 1.1gram

DO-201AD



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase, half wave, 60H_Z, resistive or inductive load.
For capacitive load, derate current by 20%.

	Symbols	SF31G	SF32G	SF33G	SF34G	SF35G	SF36G	SF38G	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 T_A=55℃	$I_{(AV)}$	3.0							**Amp**
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	125							**Amp**
Maximum Forward Voltage at 3.0A DC and 25℃	V_F	0.95				1.25		1.7	**Volts**
Maximum Reverse Current at T_A=25℃ at Rated DC Blocking Voltage T_A=100℃	I_R	5.0 500							**uAmp**
Typical Junction Capacitance (Note 1)	C_J	100				80			**pF**
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	20							**℃/W**
Maximum Reverse Recovery Time (Note 3)	T_{RR}	35							**nS**
Operating Junction Temperature Range	T_J	-55 to +125							**℃**
Storage Temperature Range	Tstg	-55 to +150							**℃**

NOTES:

1- Measured at 1 MH_Z and applied reverse voltage of 4.0 VDC.
2- Thermal Resistance from Junction to Ambient 0.375"(9.5mm) lead length P.C.B. Mounted.
3- Reverse Recovery Test Conditions：I_F=.5A，I_R=1A，I_{RR}=.25A.

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

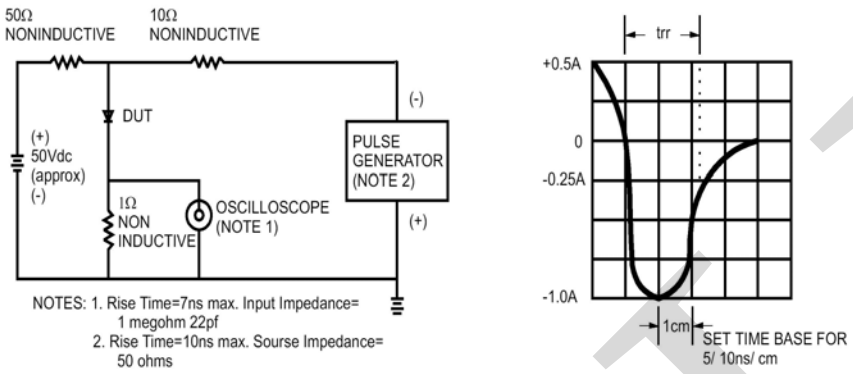

FIG.2- MAXIMUM AVERAGE FORWARD CURRENT DERATING

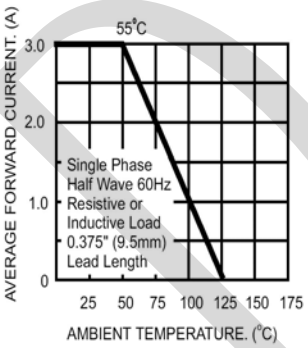

FIG.3- TYPICAL REVERSE CHARACTERISTICS

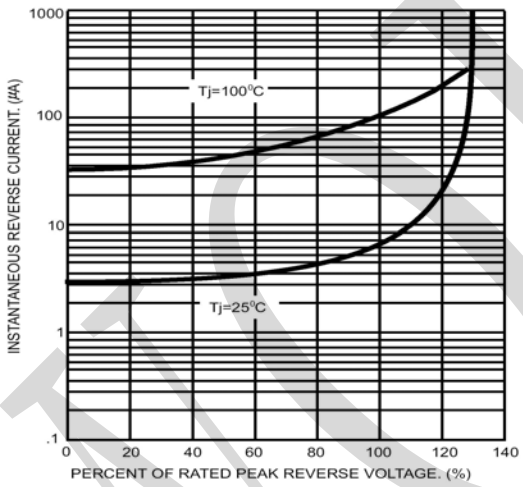

FIG.4- TYPICAL FORWARD CHARACTERISTICS

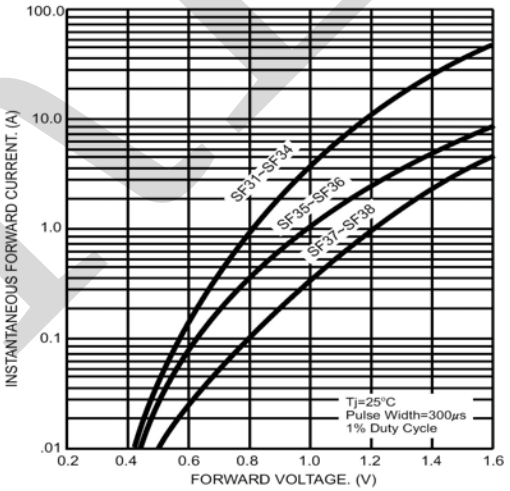

FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

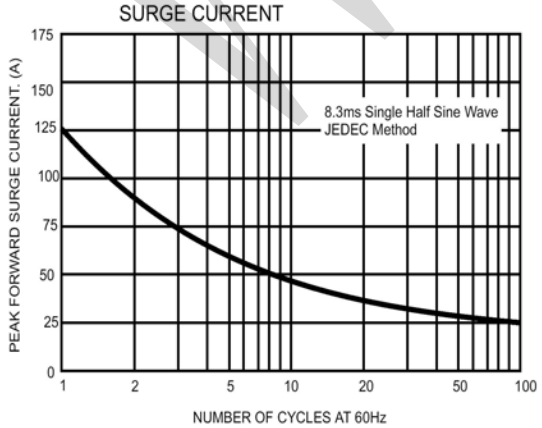

FIG.6- TYPICAL JUNCTION CAPACITANCE