SF31 THRU SF38

SUPERFAST RECOVERY RECTIFIER

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HORNBY ELECTRONIC

REVERSE VOLTAGE: **50 to 600 VOLTS**

FORWARD CURRENT: **3.0 AMPERE**

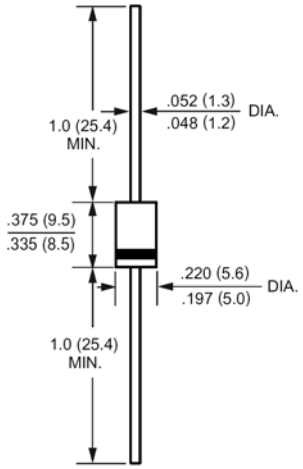
FEATURES

· High surge capabillty
· Low forward voltage, high current capability
· Hermetically sealed
· Superfast recovery times
· Low leakage.
· Suffix "H" indicates Halogen-free parts, ex. SF31H

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

DO-201AD



Dimensions in inchs 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%.

Parameter	Symbols	*SF31*	*SF32*	*SF33*	*SF34*	*SF35*	*SF36*	*SF38*	Units
Maximum Recerrent 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}	125.0							**Amp**
Maximum Forward Voltage at 3.0A DC and 25℃	V_F	0.95				1.3		1.7	**Volts**
Maximum Reverse Current at T_A=25℃ at Rated DC Blocking Voltage T_A=100℃	I_R	5.0 100							**uAmp**
Typical Junction Capacitance (Note 1)	C_J	80				70			**pF**
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	20.0							**℃/W**
Maximum Reverse Recovery Time (Note 3)	T_{RR}	35							**nS**
Operating and Storage Temperature Range	T_J, Tstg	-65 to +150							**℃**

NOTES:

1- Measured at 1 MH_Z and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance Junction to Ambient and form junction to lead at 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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RATINGS AND CHARACTERISTIC CURVES

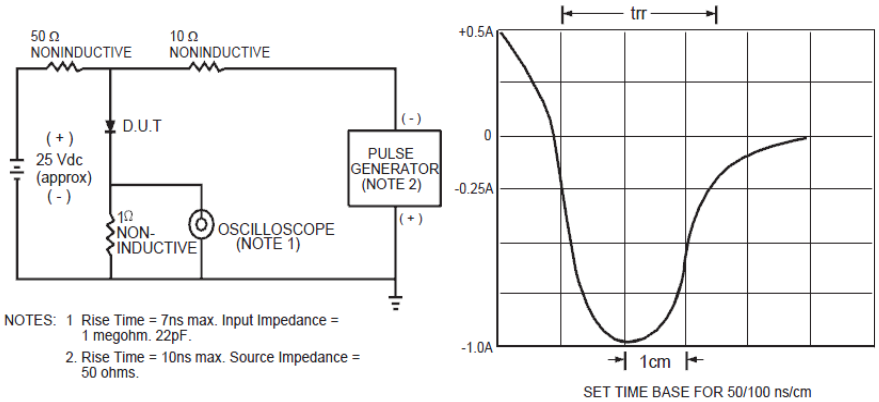

FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

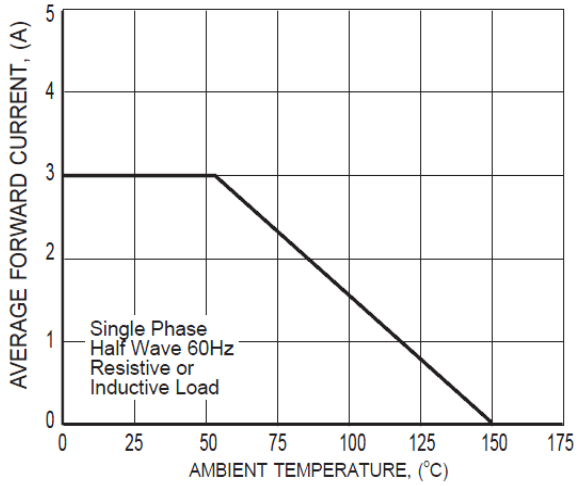

FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

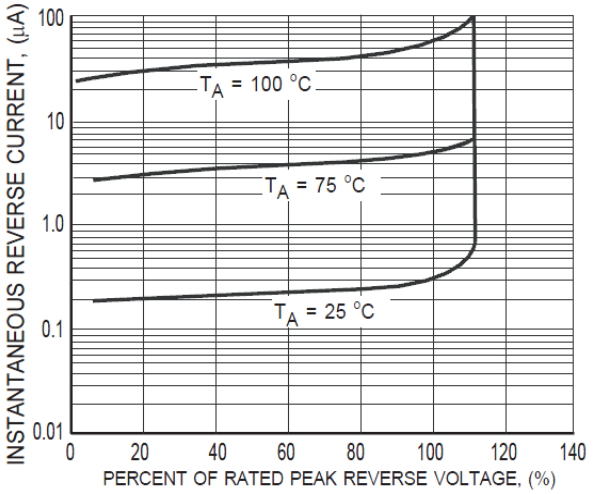

FIG.3 TYPICAL REVERSE CHARACTERISTICS

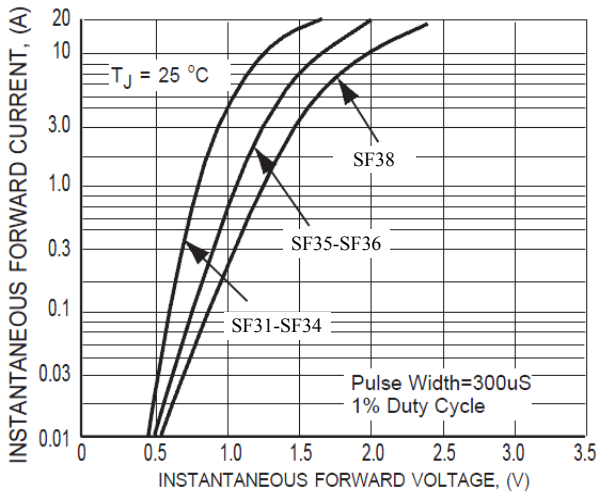

FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

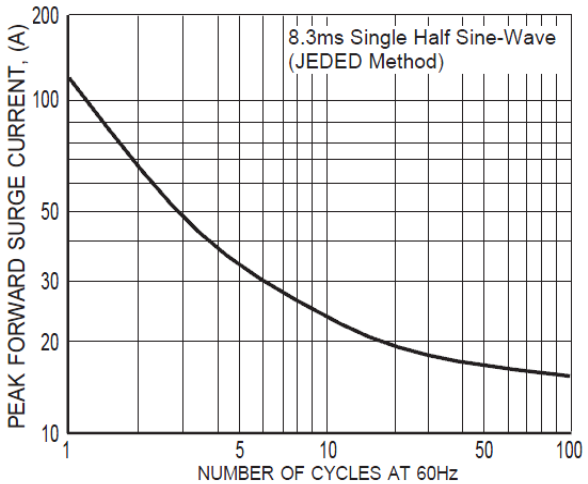

FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT