

SF3X SERIES

SUPERFAST RECOVERY RECTIFIER

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SF31 THRU SF38

SUPERFAST RECOVERY RECTIFIER



康 比 電 子
HORNBY ELECTRONIC

REVERSE VOLTAGE: 50 to 600 VOLTS

FORWARD CURRENT: 3.0 AMPERE

FEATURES

- High surge capability
- Low forward voltage, high current capability
- Hermetically sealed
- Superfast recovery times
- Exceeds environmental standards of MIL-S-19500/228
- Low leakage.

MECHANICAL DATA

Case: Molded plastic, DO-201AD

Epoxy: UL 94V-O rate flame retardant

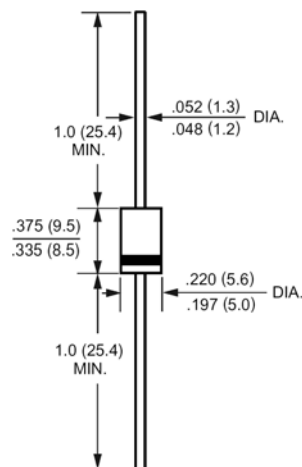
Lead: Axial leads, solderable per MIL-STD-202,
method 208 guaranteed

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°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

	Symbols	SF31	SF32	SF33	SF34	SF35	SF36	SF38	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°C	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°C	V _F	0.95				1.25		1.7	Volts
Maximum Reverse Current at T _A =25°C at Rated DC Blocking Voltage T _A =100°C	I _R	5.0 50							uAmp
Typical Junction Capacitance (Note 1)	C _J	100				80			pF
Typical Thermal Resistance (Note 2)	R _{0JA}	20							°C/W
Maximum Reverse Recovery Time (Note 3)	T _{RR}	35						50	nS
Operating Junction Temperature Range	T _J	-55 to +125							°C
Storage Temperature Range	T _{stg}	-55 to +150							°C

NOTES:

1- Measured at 1 MHz 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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RATINGS AND CHARACTERISTIC CURVES

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

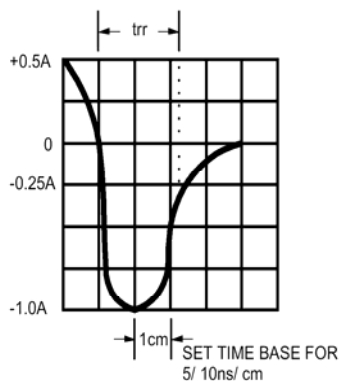
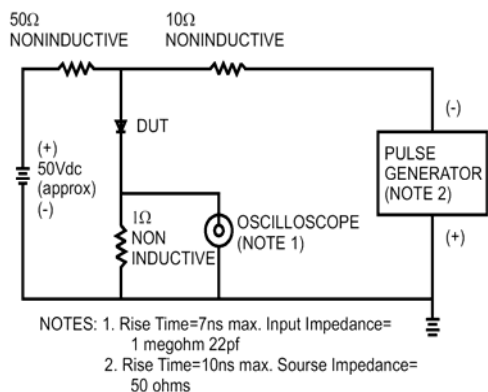


FIG.2- MAXIMUM AVERAGE FORWARD CURRENT DERATING

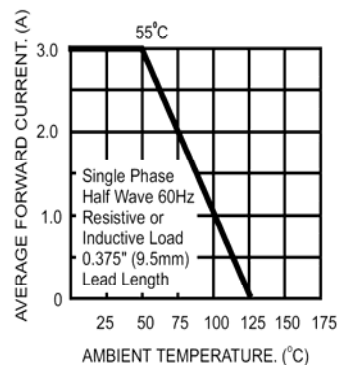


FIG.3- TYPICAL REVERSE CHARACTERISTICS

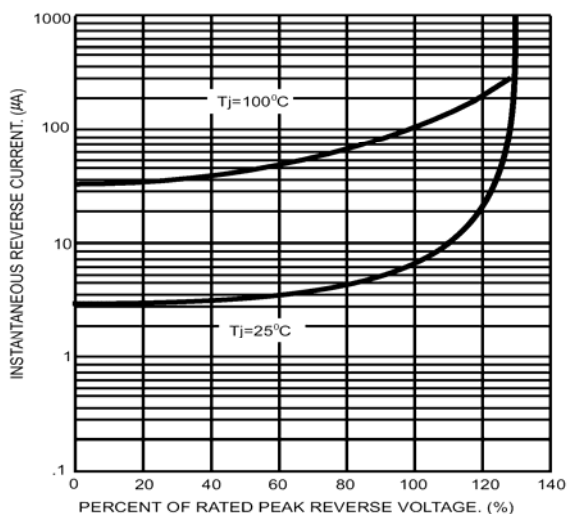


FIG.4- TYPICAL FORWARD CHARACTERISTICS

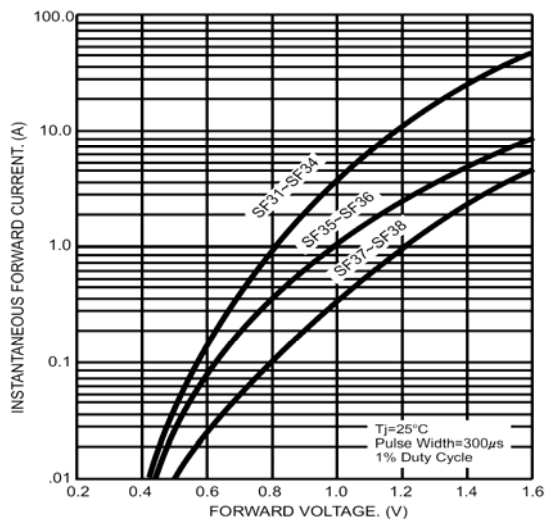


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

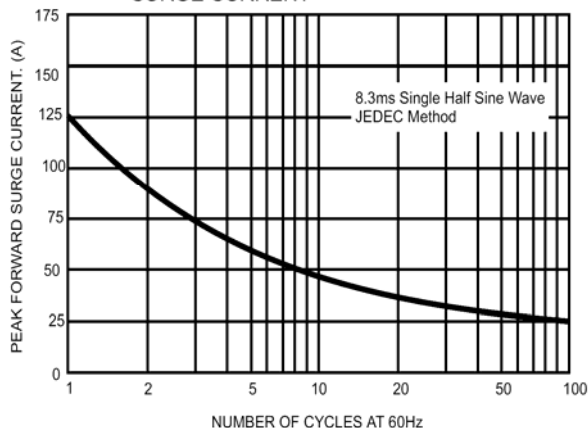


FIG.6- TYPICAL JUNCTION CAPACITANCE

