



# Super Fast Rectifier Diodes

## SF31 THRU SF38 50 to 600 V 3.0A

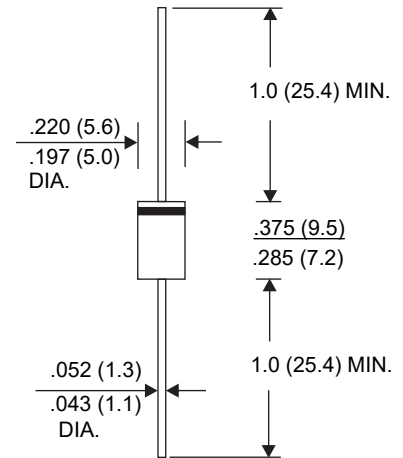
### FEATURES

DO-27(DO-201AD)

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Fast Recovery times for high efficiency
- Plastic package has Underwriters Laboratory
- Flammability Classification 94V-O
- High temperature soldering : 260°C /10 seconds at terminals

### MECHANICAL DATA

- Case: Molded plastic, DO-27 or DO-201AD
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number



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%.

Type Number or marks	Symbols	SF31	SF32	SF33	SF34	SF35	SF36	SF38	Units
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage	VRMS	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	VDC	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current, Lead Length @Ta(Fig 1)	I(AV)	3.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	IFSM	100							Amp
Maximum Forward Voltage @3.0A	VF	0.95				1.3		1.7	Volts
Maximum DC reverse current at rated DC blocking voltage per	IR	5.0 100							uAmp
Typical Thermal Resistance T <sub>J</sub> =25°C	R <sub>θJA</sub>	45							°C/W
Maximum Reverse Recovery Time (Note 1)	TRR	35							nS
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	80				60			pF
Operating Temperature Range T <sub>J</sub>	T <sub>J</sub>	-55 to +150							°C
Storage Temperature Range T <sub>STG</sub>	T <sub>STG</sub>	-55 to +150							°C

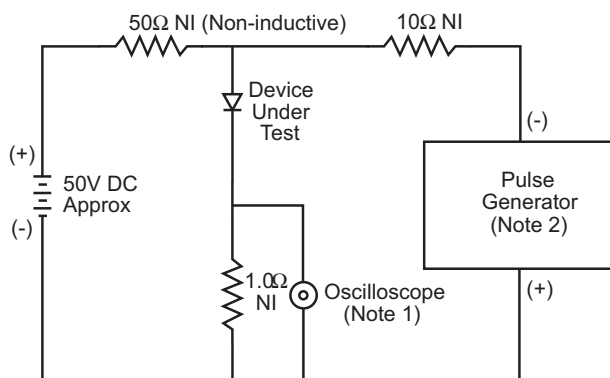
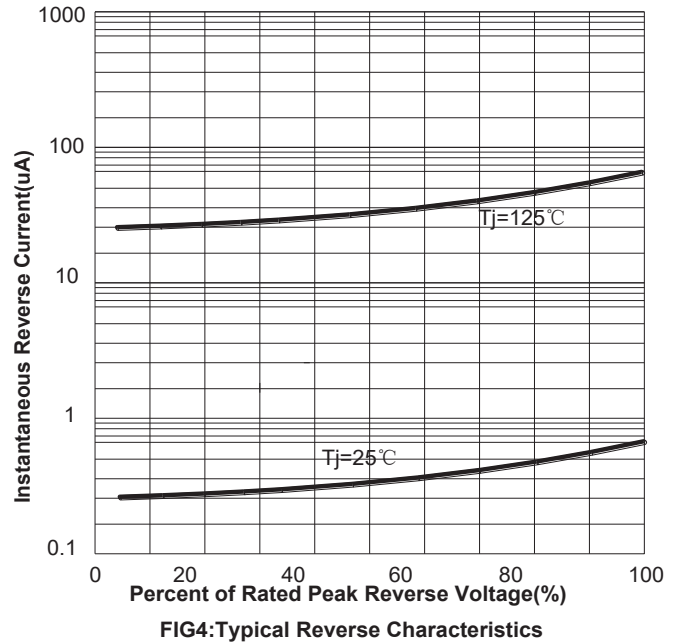
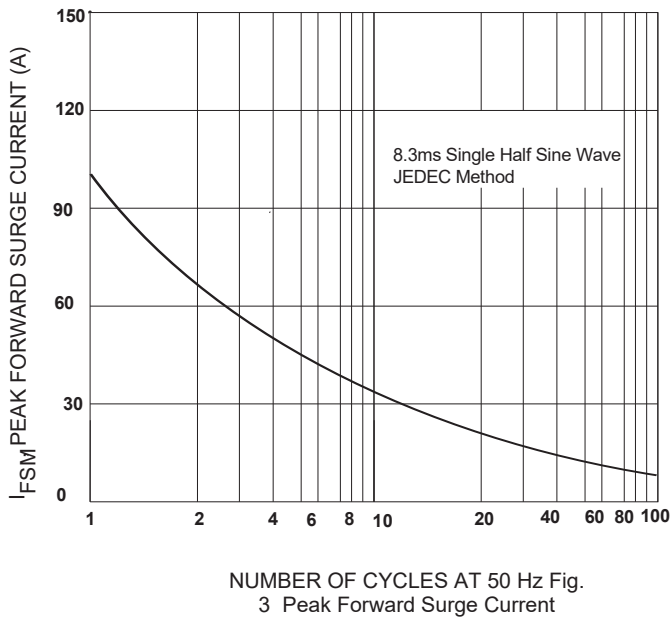
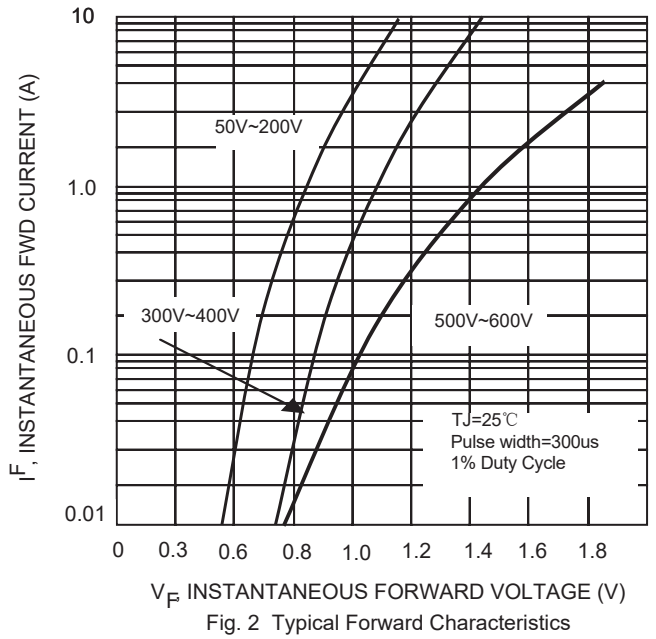
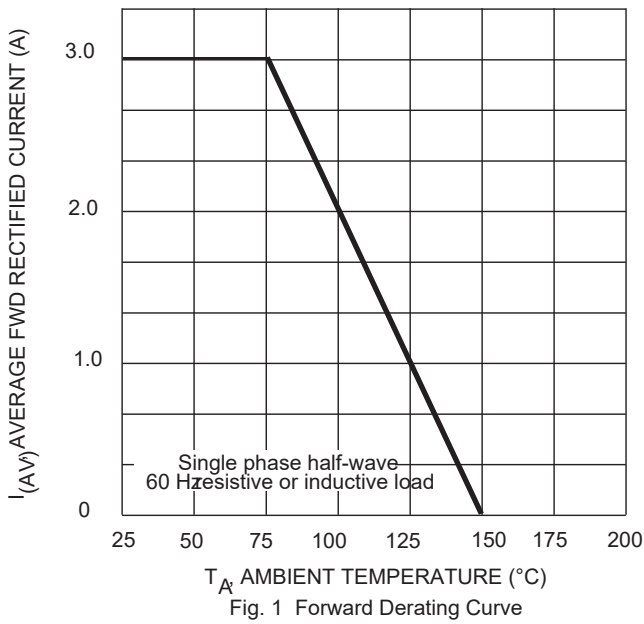
### NOTES:

1. Measured with I<sub>F</sub> =0.5A, I<sub>R</sub> =1A, IRR =0.25A.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.
3. The typical data above is for reference only.



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- Notes:
1. Rise Time=7ns max .Input Impedance=1MΩ 22pf
  2. Rise Time=10ns max.Source Impedance=50Ω

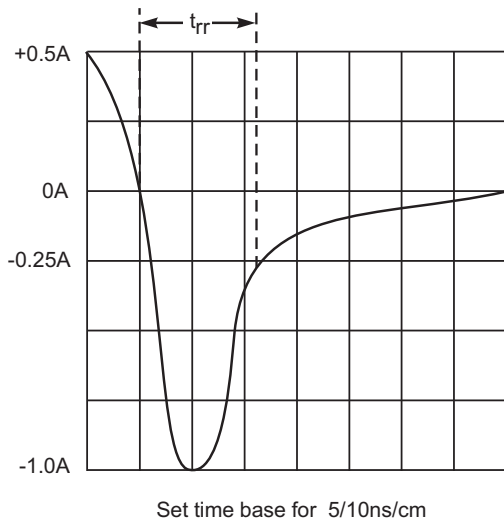


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit