

CURRENT 10 Ampere  
VOLTAGE RANG 200 to 1000 Volts

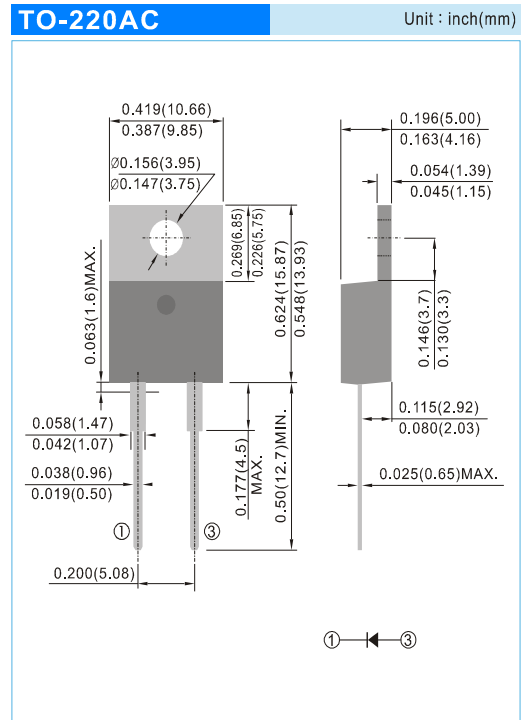
## SF1002A THRU SF1010A

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Low power loss, high efficiency.
- Low forward voltage, high current capability
- High surge capacity.
- Super fast recovery times, high voltage.
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

- Case: TO-220AC Molded plastic
- Terminals: Lead solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Standard packaging: Any
- Weight: 0.067 ounces, 1.89 grams.



### MAXIMUM RATING AND ELECTRICAL CHARACTERISTICS

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

PARAMETER	SYMBOL	SF1002A	SF1004A	SF1006A	SF1008A	SF1010A	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	200	400	600	800	1000	V
Maximum Average Forward Current at $T_c = 100^\circ\text{C}$	$I_{F(AV)}$	10					A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load	$I_{FSM}$	150					A
Maximum Forward Voltage at 10A, per element	$V_F$	0.95	1.3	1.5	1.7	1.9	V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_J = 25^\circ\text{C}$ $T_J = 100^\circ\text{C}$	$I_R$	10 500					$\mu\text{A}$
Maximum Reverse Recovery Time (Note 2)	$t_{rr}$	35			50		ns
Typical Junction Capacitance (Note 1)	$C_J$	62					pF
Typical Thermal Resistance	$R_{\theta JC}$	3					$^\circ\text{C} / \text{W}$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150					$^\circ\text{C}$

#### NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4 VDC.
2. Reverse Recovery Test Conditions:  $I_F = 0.5\text{A}$ ,  $I_R = 1\text{A}$ ,  $I_{rr} = 0.25\text{A}$ .
3. Both Bonding and Chip structure are available.

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RATING AND CHARACTERISTIC CURVES

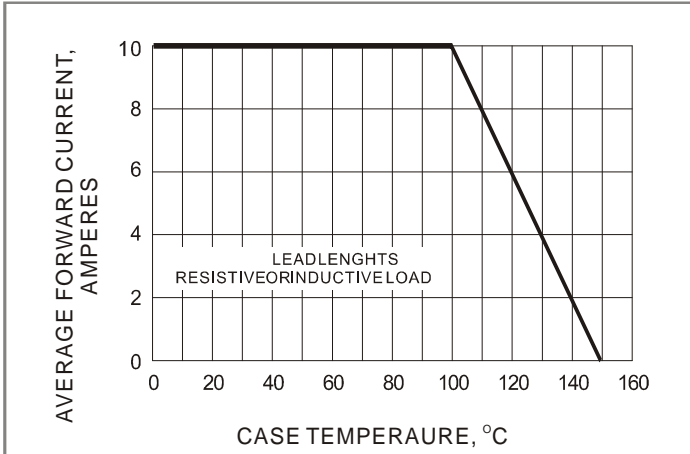


Fig.1- FORWARD CURRENT DERATING CURVE

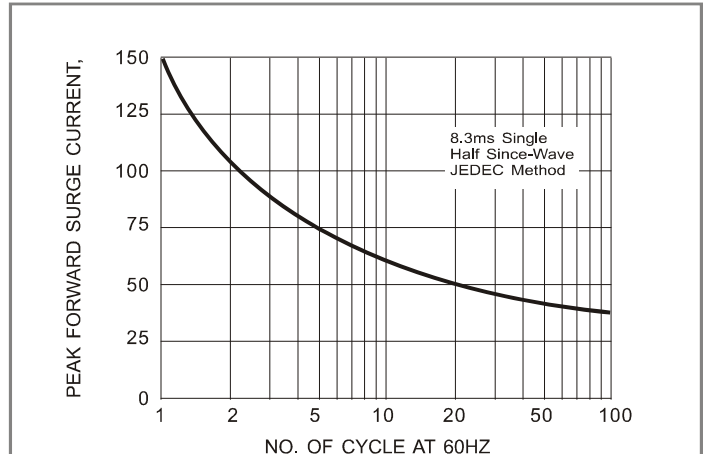


Fig.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

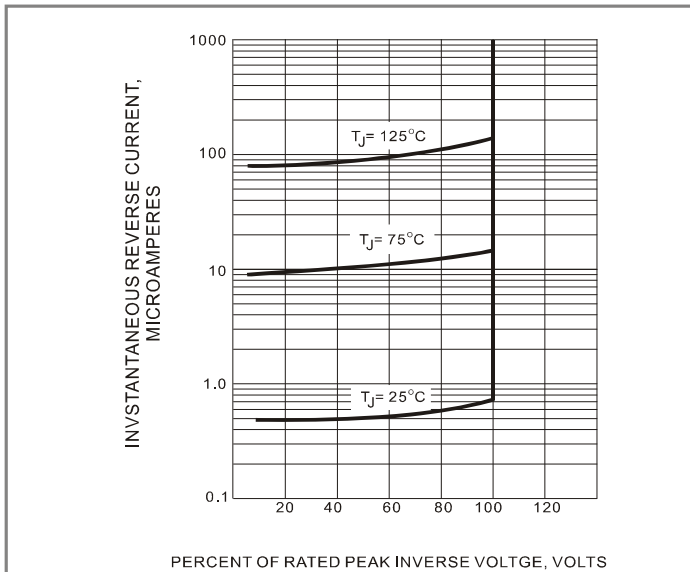


Fig.3- TYPICAL REVERSE CHARACTERISTIC

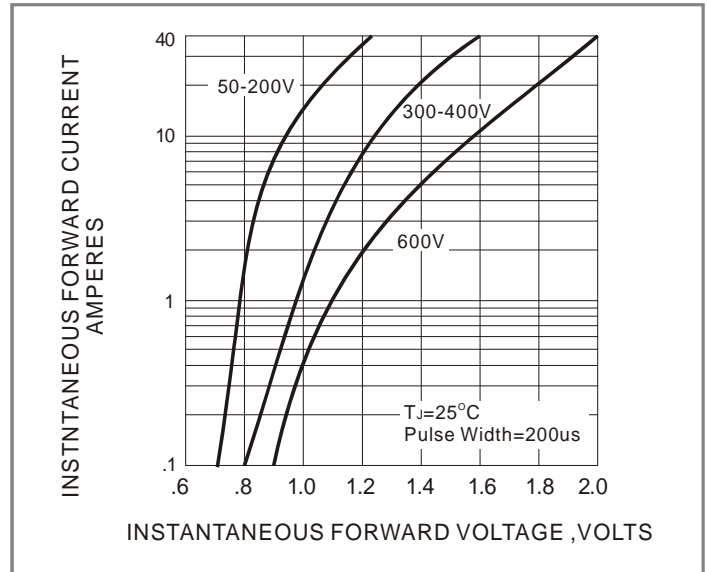


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC