

SF161 THRU SF168

GLASS PASSIVATED SUPER FAST RECTIFIER



REVERSE VOLTAGE: 50 to 600 VOLTS

FORWARD CURRENT: 16.0 AMPERE

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Superfast switching time for high efficiency
- Low forward voltage drop and high current capability
- High surge capacity.
- Low reverse leakage current

MECHANICAL DATA

Case: Molded plastic, TO-220A

Epoxy: UL 94V-O rate flame retardant

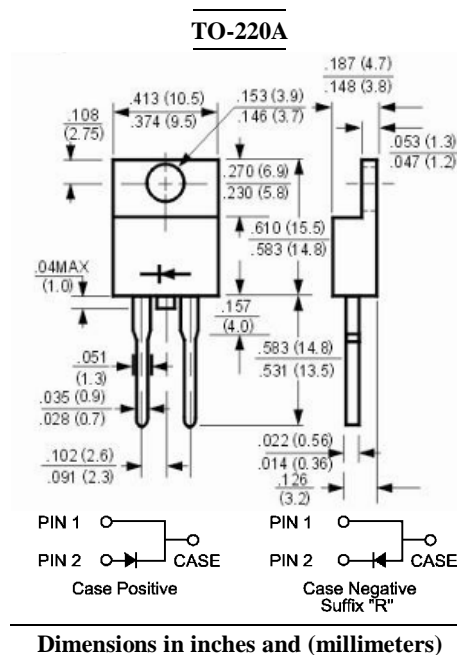
Terminals: Leads solderable per MIL-STD-202

method 208 guaranteed

Polarity: As marked

Mounting position: Any

Weight: 0.08ounce, 2.24gram



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	SF161	SF162	SF163	SF164	SF165	SF166	SF167	SF168	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	500	600	Volts
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	350	420	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	500	600	Volts
Maximum Average Forward Rectified Current at T _C =100℃	I _(AV)	16.0								Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	200								Amp
Maximum Forward Voltage at 16.0A and T _A =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	10.0 100								uAmp
Typical Junction Capacitance (Note 1)	C _J	170				140				pF
Maximum Reverse Recovery Time (Note 2)	T _{RR}	35				50				nS
Typical Thermal Resistance (Note 3)	R _{θJC}	2								℃/W
Operating and Storage Temperature Range	T _J , T _{stg}	-55 to +150								℃

NOTES:

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

2- Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1\text{A}$, $I_{RR}=0.25\text{A}$.

3- Thermal Resistance from Junction to Case Mounted on Heatsink.

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RATINGS AND CHARACTERISTIC CURVES

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

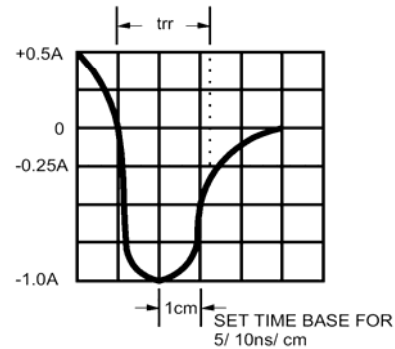
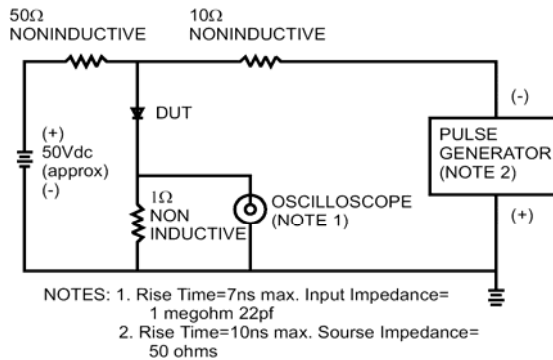


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

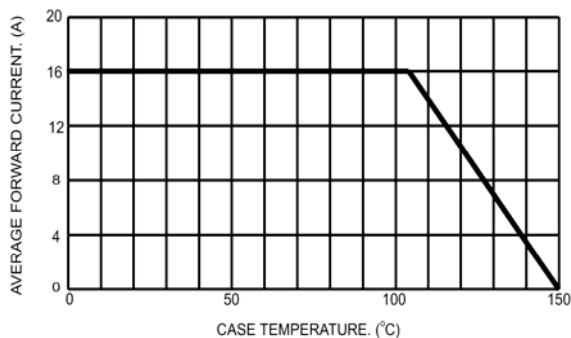


FIG.3- TYPICAL REVERSE CHARACTERISTICS

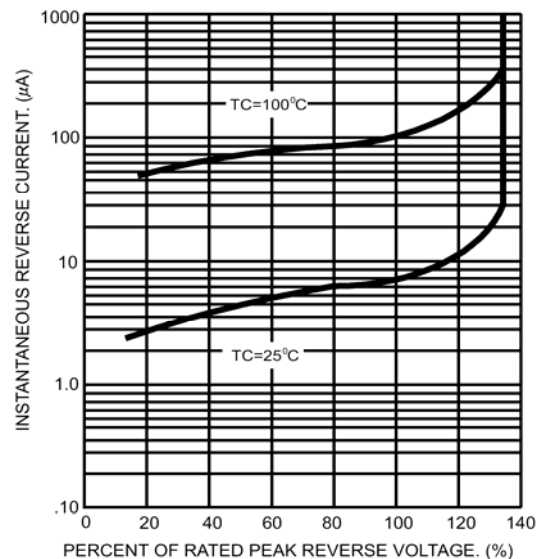


FIG.4- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

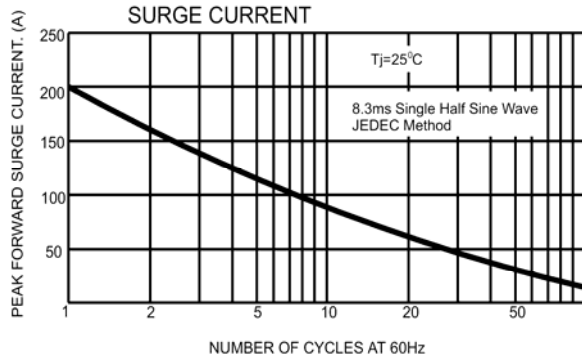


FIG.6- TYPICAL FORWARD CHARACTERISTICS

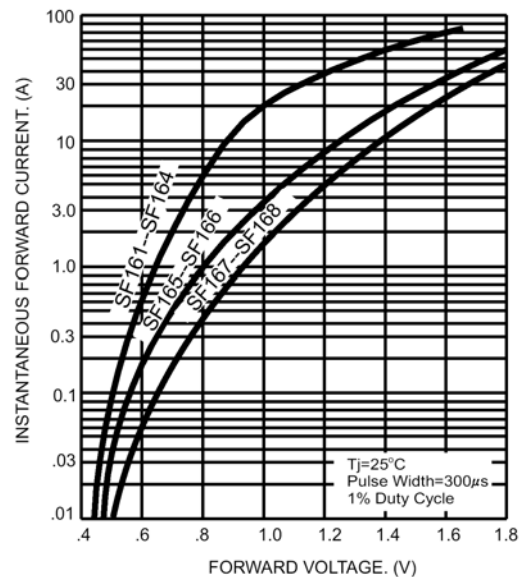


FIG.5- TYPICAL JUNCTION CAPACITANCE

