RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

SF161 THRU SF164

GLASS PASSIVATED SUPER FAST RECTIFIER

VOLTAGE RANGE 50 to 200 Volts CURRENT 16 Ampere

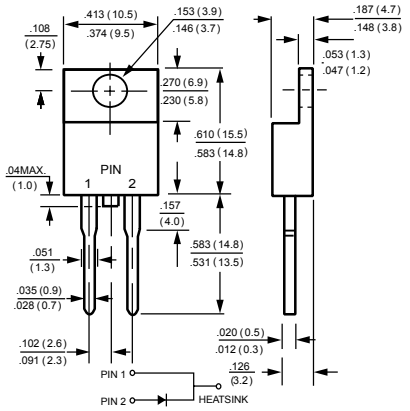
FEATURES

* Low switching noise
* Low forward voltage drop
* Low thermal resistance
* High current capability
* Super fast switching speed
* High reliability
* Good for switching mode circuit

MECHANICAL DATA

* Case: TO-220A molded plastic
* Epoxy: Device has UL flammability classification 94V-O
* Lead: MIL-STD-202E method 208C guaranteed
* Mounting position: Any
* Weight: 2.24 grams

TO-220A



Dimensions in inches and (millimeters)

MAXIMUM RATINGS 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%.

MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)

RATINGS	SYMBOL	SF161	SF162	SF163	SF164	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	Volts
Maximum Average Forward Rectified Current at T_C = 100°C	I_O	16.0				Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	250				Amps
Typical Thermal Resistance (Note 4)	$R_{\theta JA}$	16				°C/W
	$R_{\theta JC}$	1.2				
Typical Junction Capacitance (Note 2)	C_J	175				pF
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to + 150				°C

ELECTRICAL CHARACTERISTICS(@T_A=25 °C unless otherwise noted)

CHARACTERISTICS		SYMBOL	SF161	SF162	SF163	SF164	UNITS
Maximum Instantaneous Forward Voltage at 16.0A DC		V_F	0.975				Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@T_A = 25°C	I_R	10				µAmps
	@T_A = 100°C		500				
Maximum Reverse Recovery Time (Note 1)		trr	35				nSec

NOTES : 1. Test Conditions: I_F = 0.5A, I_R = -1.0A, I_{RR} = -0.25A
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. Suffix "R" for Reverse Polarity.
4. Typical Thermal Resistance from junction to ambient and from junction to case on heat-sink mounted.
5. "Fully ROHS complaint", "100% Sn plating (Pb-free)"

2006-11

RATING AND CHARACTERISTICS CURVES (SF161 THRU SF164)

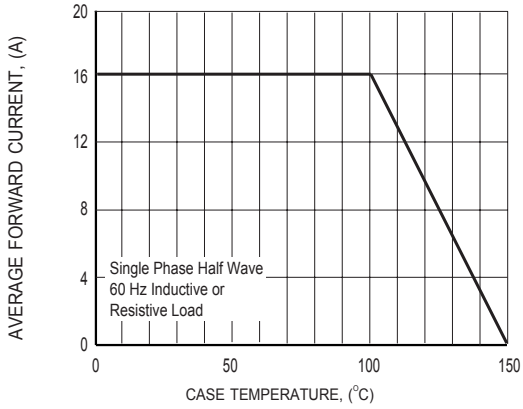


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

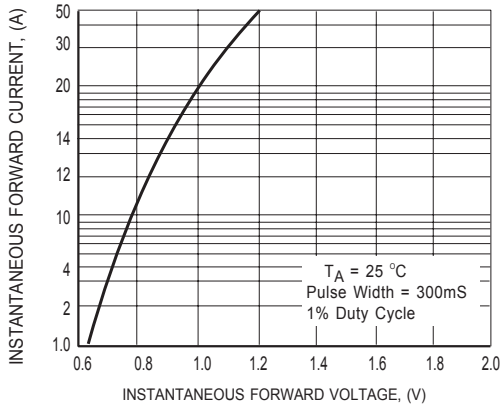


FIG.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

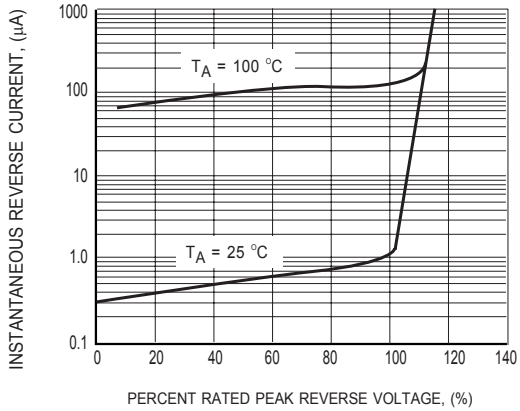


FIG.3 TYPICAL REVERSE CHARACTERISTICS

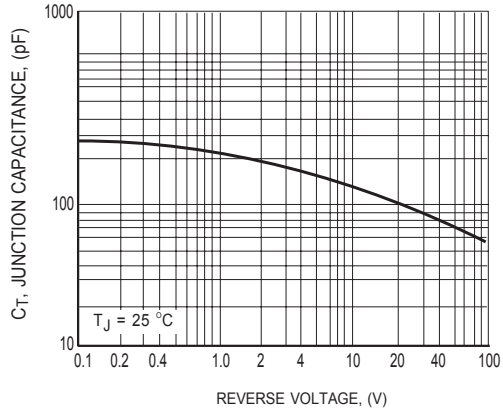


FIG.4 TYPICAL JUNCTION CAPACITANCE

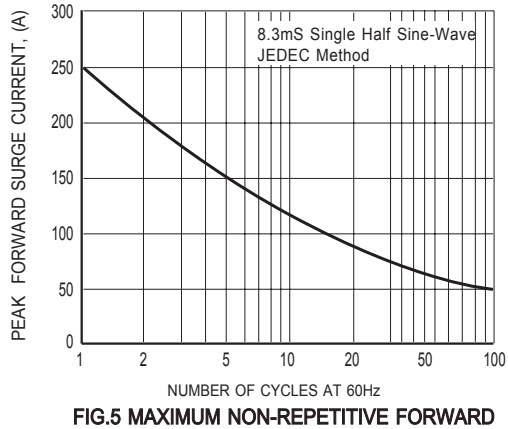


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

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