

**SCHOTTKY BARRIER RECTIFIER**

**VOLTAGE RANGE 20 to 50 Volts CURRENT 50 Ampere**

**FEATURES**

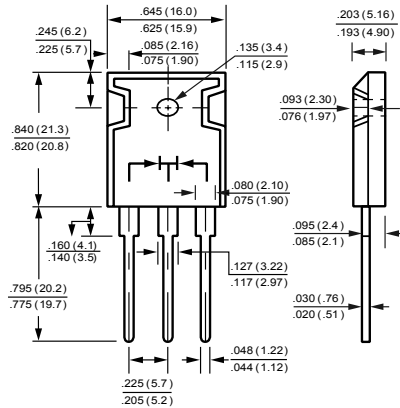
- \* Low switching noise
- \* Low forward voltage drop
- \* Low thermal resistance
- \* High current capability
- \* High switching capability
- \* High surge capability
- \* High reliability

**MECHANICAL DATA**

- \* Case: To-247 molded plastic
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 6.10 grams



**TO-247**



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)**

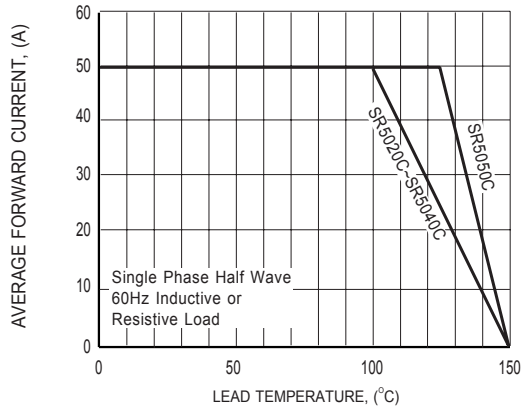
RATINGS	SYMBOL	SR5020C	SR5030C	SR5035C	SR5040C	SR5045C	SR5050C	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	35	40	45	50	Volts
Maximum RMS Voltage	$V_{RMS}$	14	21	25	28	32	35	Volts
Maximum DC Blocking Voltage	$V_{DC}$	20	30	35	40	45	50	Volts
Maximum Average Forward Rectified Current at Derating Case Temperature	$I_O$	50						Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	400						Amps
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$	1.2						°C/W
	$R_{\theta JA}$	24						
Operating Temperature Range	$T_J$	150						°C
Storage Temperature Range	$T_{STG}$	-55 to + 150						°C

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

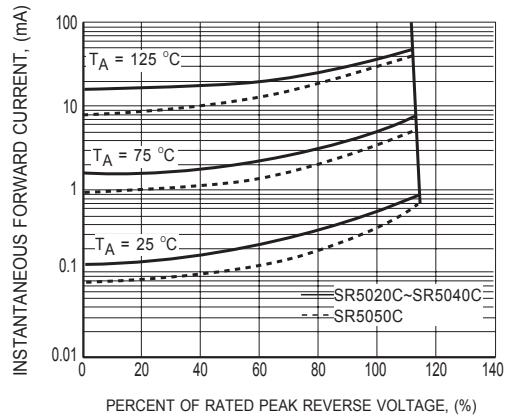
CHARACTERISTICS	SYMBOL	SR5020C	SR5030C	SR5035C	SR5040C	SR5045C	SR5050C	UNITS	
Maximum Instantaneous Forward Voltage at 25.0A DC	$V_F$	.65						.75	Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	$I_R$	@ $T_A = 25^\circ C$						1.0	mA
		@ $T_A = 100^\circ C$						10	mA

- NOTES : 1. Thermal Resistance : Heat-sink mounted.  
2. Suffix "A" = Common Anode.  
3. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

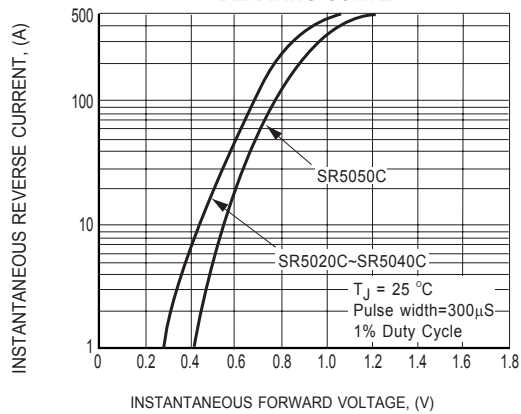
# RATING AND CHARACTERISTICS CURVES ( SR5020C THRU SR5050C )



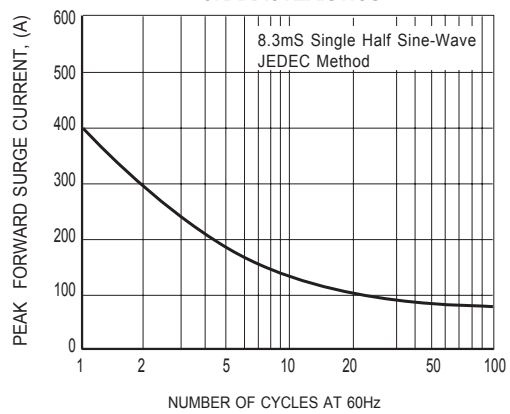
**FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE**



**FIG.2 TYPICAL REVERSE CHARACTERISTICS**



**FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**