

**SCHOTTKY BARRIER RECTIFIER**

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

**FEATURES**

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

**MECHANICAL DATA**

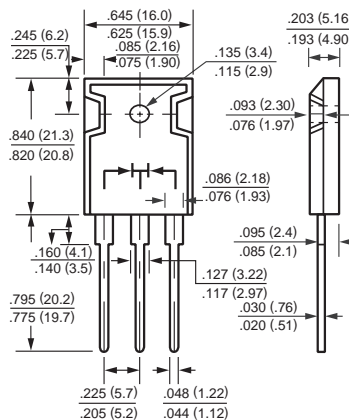
- \* Case: To-247 molded plastic
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 5.1 grams

**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%.



**TO-247**



**MAXIMUM RATINGS** (At  $T_A = 25^\circ\text{C}$  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)	$R_{\theta JC}$	1.0						$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	-55 to + 150						$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to + 150						$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS** (At  $T_A = 25^\circ\text{C}$  unless otherwise noted)

CHARACTERISTICS	SYMBOL	SR5020C	SR5030C	SR5035C	SR5040C	SR5045C	SR5050C	UNITS
Maximum Instantaneous Forward Voltage at 25.0A DC	$V_F$	.65						Volts
Maximum Average Reverse Current	$I_R$	10						mAmps
at Rated DC Blocking Voltage		100						mAmps

NOTES : 1. Thermal Resistance Junction to Case.  
2. Suffix "A" = Common Anode.

# RATING AND CHARACTERISTIC CURVES ( SR5020C THRU SR5050C )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

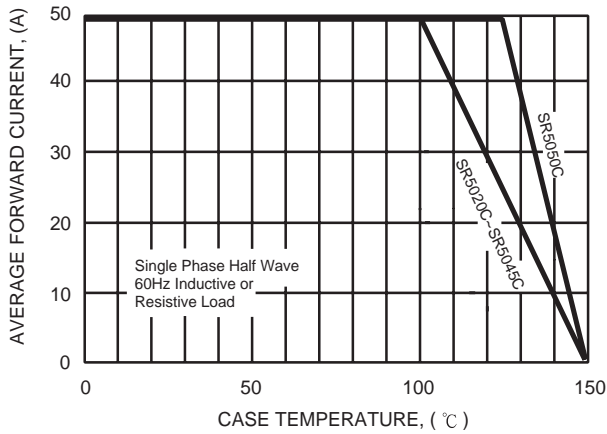


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

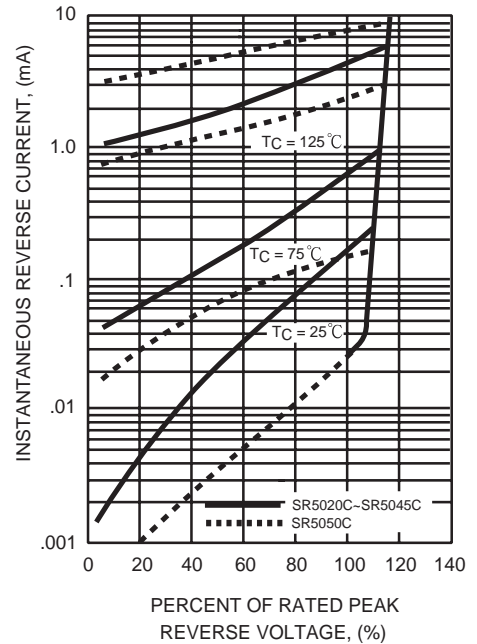


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

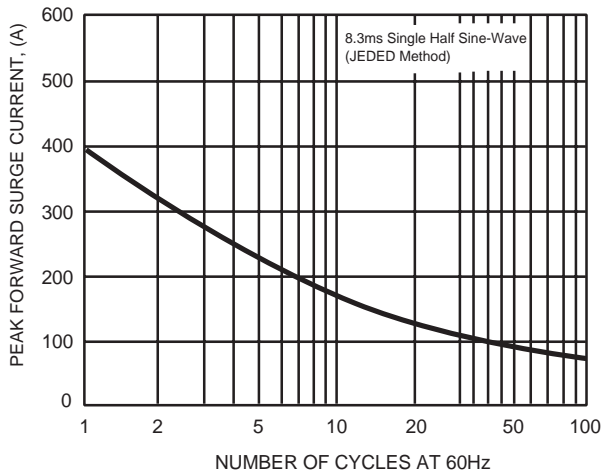


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

