

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

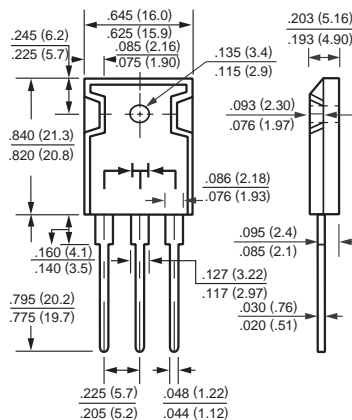
- * Case: To-247 molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 5.1 grams

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	-65 to + 125					-65 to + 150	$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 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 at Rated DC Blocking Voltage	I_R	10						mAmps
		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

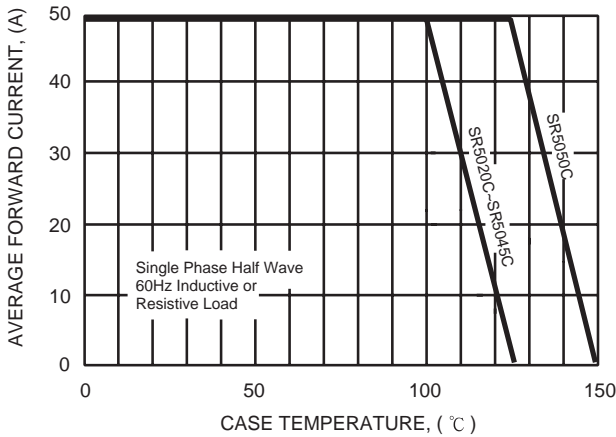


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

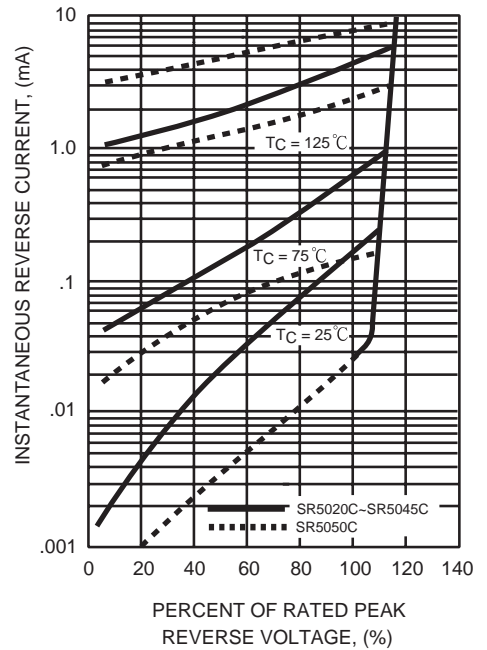


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

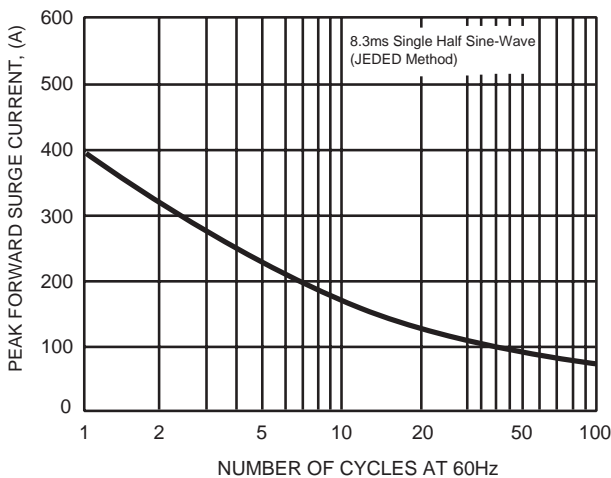


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

