RECTRON
SEMICONDUCTOR
TECHNICAL SPECIFICATION

SR5020C THRU SR5050C

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE 20 to 50 Volts CURRENT 50 Amperes

FEATURES

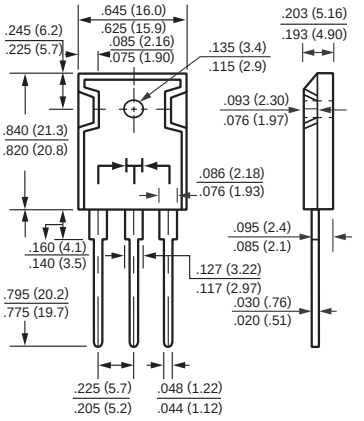
* Low switching noise
* Low forward voltage drop
* Low thermal resistance
* High current capability
* High switching capability
* High surge capabitity
* High reliability

MECHANICAL DATA

* Case: To-247 molded plastic
* Epoxy: Device has UL flammability classification 94V-O
* Lead: MIL-STD-202E method 208C guaranteed
* Mounting position: Any
* Weight: 5.1 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 (At T_A = 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)	$R_{\theta JC}$	1.0						°C/W
Operating Temperature Range	T_J	-65 to + 125					-65 to + 150	°C
Storage Temperature Range	T_{STG}	-65 to + 150						°C

ELECTRICAL CHARACTERISTICS (At T_A = 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	@T_C = 25°C	I_R	10						mAmps
at Rated DC Blocking Voltage	@T_C = 100°C		100						mAmps

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

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RATING AND CHARACTERISTIC CURVES (SR5020C THRU SR5050C)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

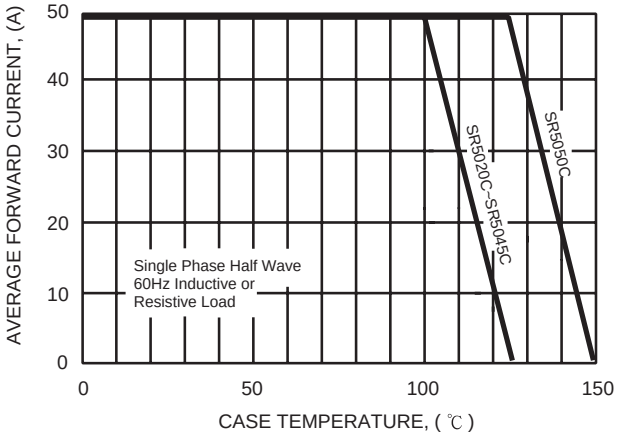


FIG. 2 - TYPICAL REVERSE CHARACTERISTICS

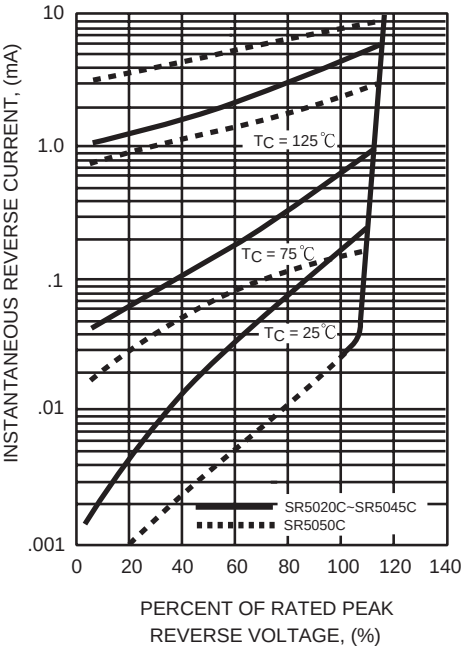


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

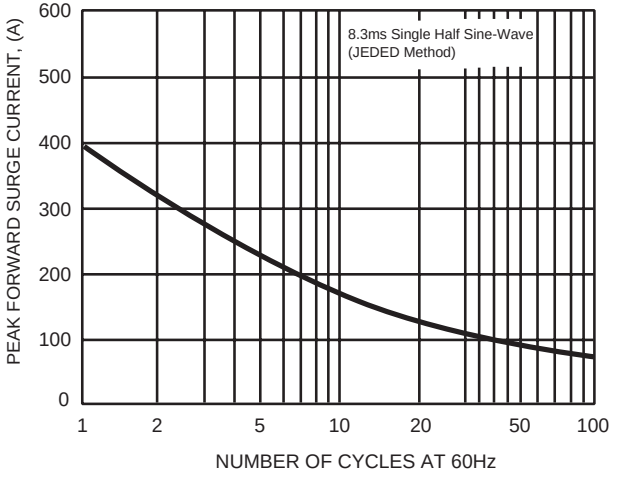


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

