

# SR1620C THRU SR16200C

## SCHOTTKY BARRIER RECTIFIER

**VOLTAGE RANGE 20 to 200 Volts CURRENT 16.0 Ampere**

### FEATURES

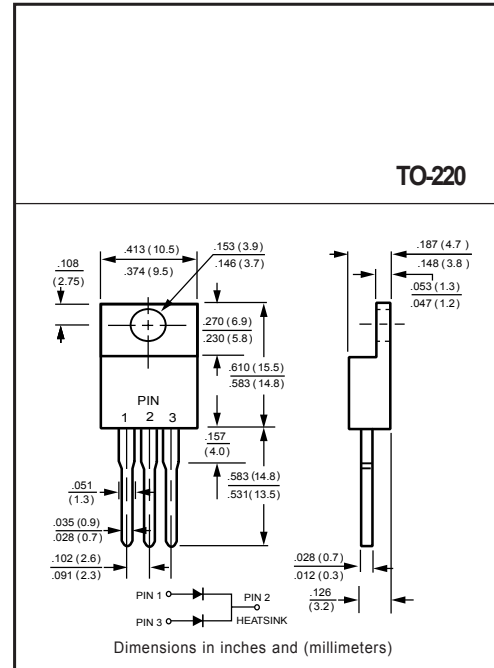
- \* Low switching noise
- \* Low forward voltage drop
- \* Low thermal resistance
- \* High current capability
- \* High switching capability
- \* High surge capability
- \* High reliability

### MECHANICAL DATA

- \* Case: To-220 molded plastic
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 2.24 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%.



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

RATINGS	SYMBOL	SR1620C	SR1630C	SR1635C	SR1640C	SR1645C	SR1650C	SR1660C	SR1680C	SR16100C	SR16150C	SR16200C	UNITS	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	35	40	45	50	60	80	100	150	200	Volts	
Maximum RMS Voltage	$V_{RMS}$	14	21	25	28	32	35	42	56	70	105	140	Volts	
Maximum DC Blocking Voltage	$V_{DC}$	20	30	35	40	45	50	60	80	100	150	200	Volts	
Maximum Average Forward Rectified Current at Derating Case Temperature	$I_O$	16.0											Amps	
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	150											Amps	
Typical Thermal Resistance (Note 1)	$R_{qJC}$	2.0											°C/W	
	$R_{qJA}$	40												
Typical Junction Capacitance (Note 3)	$C_J$	700					500							pF
Operating Temperature Range	$T_J$	150											°C	
Storage Temperature Range	$T_{STG}$	-55 to + 150											°C	

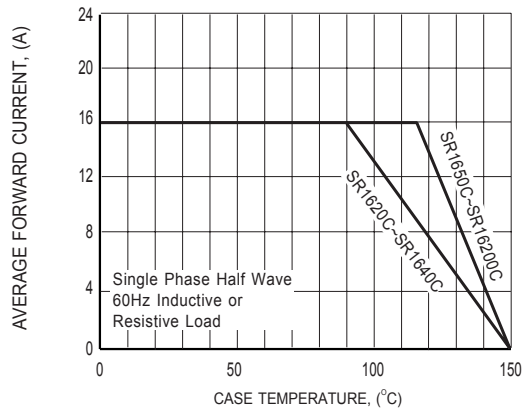
### ELECTRICAL CHARACTERISTICS (@TA=25 °C unless otherwise noted)

CHARACTERISTICS	SYMBOL	SR1620C	SR1630C	SR1635C	SR1640C	SR1645C	SR1650C	SR1660C	SR1680C	SR16100C	SR16150C	SR16200C	UNITS	
Maximum Instantaneous Forward Voltage at 8.0A DC	$V_F$	.65					.75			.85				Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	$I_R$	@ $T_A = 25^\circ\text{C}$											mA	
		@ $T_A = 100^\circ\text{C}$												
		2											mA	

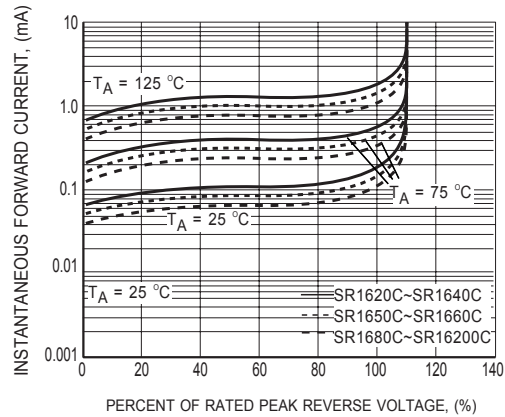
- NOTES : 1. Thermal Resistance : Heat-sink mounted.  
2. Suffix "A" = Common Anode.  
3. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
4. "Fully ROHS compliant", "100% Sn plating (Pb-free)".

2008-11  
REV: A

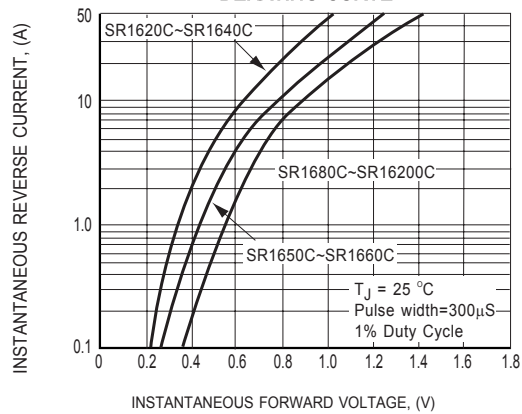
# RATING AND CHARACTERISTICS CURVES ( SR1620C THRU SR16200C )



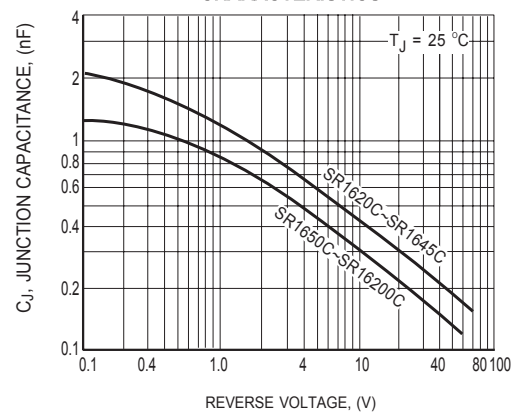
**FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE**



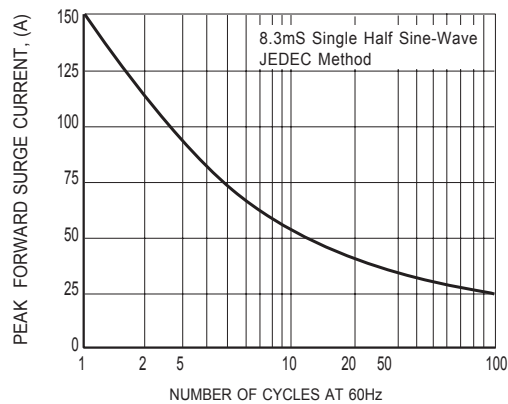
**FIG.2 TYPICAL REVERSE CHARACTERISTICS**



**FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4 TYPICAL JUNCTION CAPACITANCE**



**FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**

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