RECTRON SEMICONDUCTOR
TECHNICAL SPECIFICATION

# SR2020 THRU SR20200

## SCHOTTKY BARRIER RECTIFIER

### VOLTAGE RANGE 20 to 200 Volts CURRENT 20.0 Ampere

### FEATURES

* Low switching noise
* Low forward voltage drop
* Low thermal resistance
* High current capability
* High switching capability
* High surge capabitity
* High reliability
* P/N suffix V means AEC-Q101 qualified, e.g:SR2020V

### MECHANICAL DATA

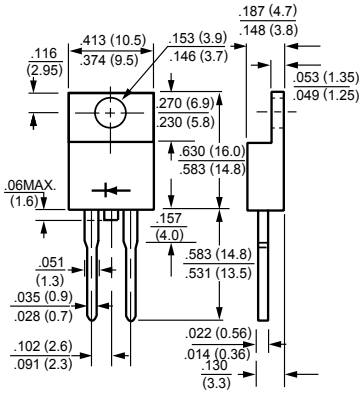
* Case: To-220A molded plastic
* Epoxy: Device has UL flammability classification 94V-O
* Lead: MIL-STD-202E method 208C guaranteed
* Mounting position: Any

### 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-220A




Dimensions in inches and (millimeters)

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

| RATINGS | SYMBOL | SR2020 | SR2030 | SR2035 | SR2040 | SR2045 | SR2050 | SR2060 | SR2080 | SR20100 | SR20150 | SR20200 | 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 | $I_O$ | 20 | | | | | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$ | 150 | | | | | | | | | | | Amps |
| Typical Current Squarad Time | $I^2t$ | 93.37 | | | | | | | | | | | $A^2$/Sec |
| Typical Thermal Resistance (Note 1) | $R_{\theta JC}$ | 2.0 | | | | | | | | | | | °C/W |
| | $R_{\theta JA}$ | 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 | SR2020 | SR2030 | SR2035 | SR2040 | SR2045 | SR2050 | SR2060 | SR2080 | SR20100 | SR20150 | SR20200 | UNITS |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Instantaneous Forward Voltage at 20.0A DC | | $V_F$ | .65 | | | | | .75 | | .85 | | | | Volts |
| Maximum Average Reverse Current at Rated DC Blocking Voltage | @$T_A$ = 25°C | $I_R$ | 1.0 | | | | | | | | | | | mA |
| | @$T_A$ = 150°C | | 20 | | | | | | | | | | | mA |

NOTES : 1. Thermal Resistance : Heat-sink mounted.
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
3. " ROHS compliant".

2019-07/52
REV:B

# RATING AND CHARACTERISTICS CURVES ( SR2020 THRU SR20200 )

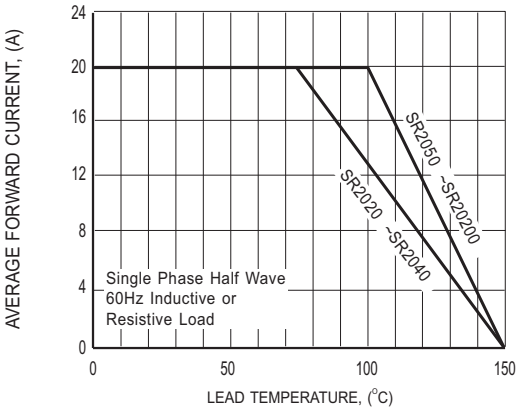



FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

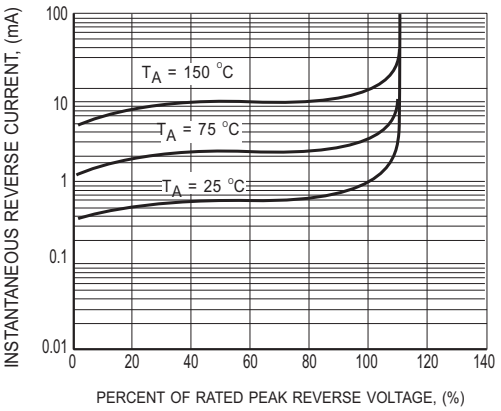



FIG.2 MAXIMUM REVERSE CHARACTERISTICS

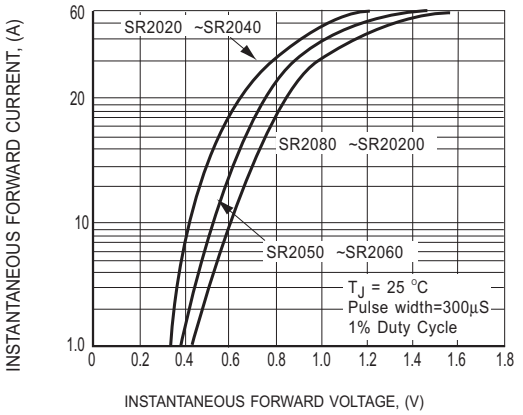



FIG.3 MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

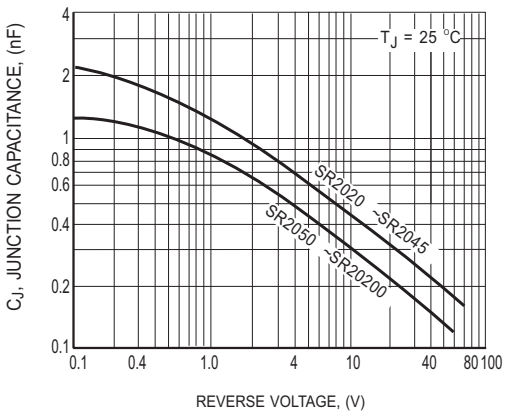



FIG.4 TYPICAL JUNCTION CAPACITANCE

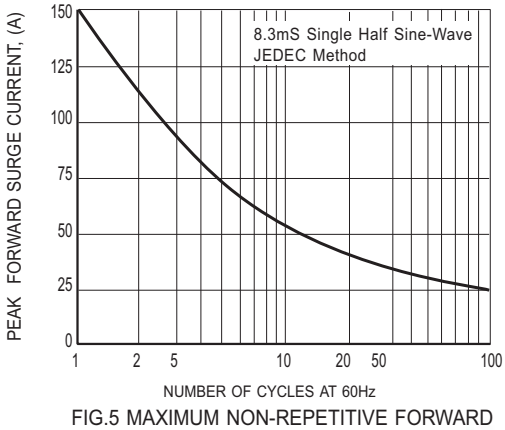
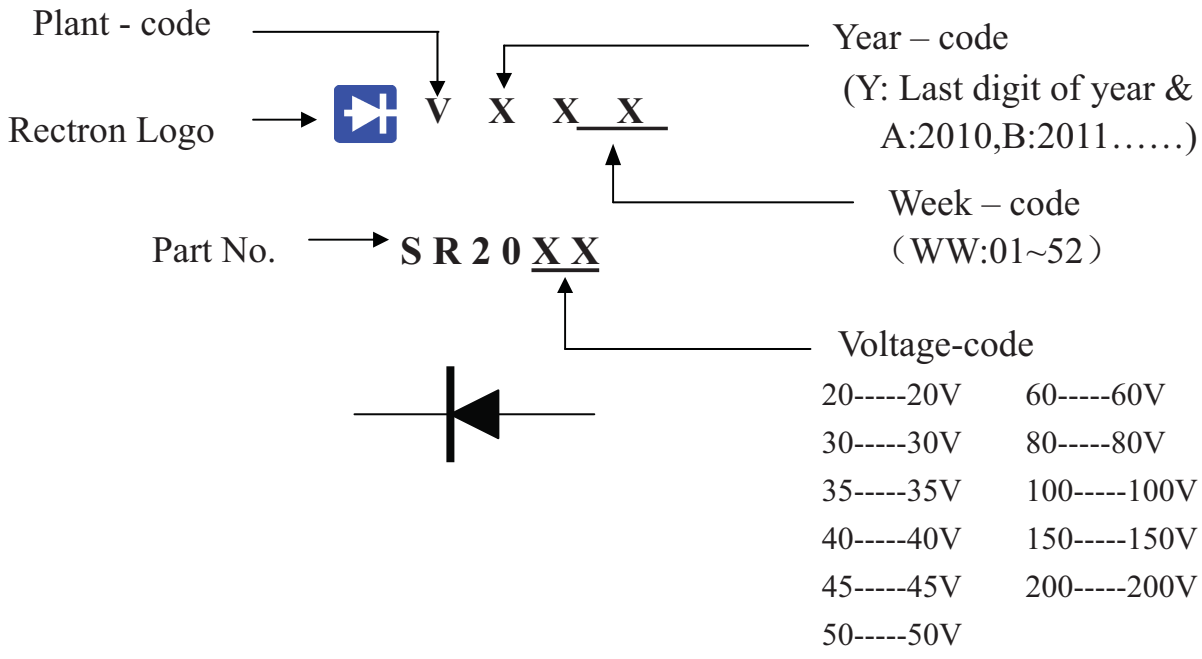



FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

## Marking on the body



# PACKAGING OF DIODE AND BRIDGE RECTIFIERS

TUBE PACK

| PACKAGE | PACKING CODE | EA PER BOX | INNER BOX SIZE (mm) | CARTON SIZE (mm) | EA PER CARTON | WEIGHT(Kg) |
|---|---|---|---|---|---|---|
| (I)TO-220/TO-220(A) | -C | 2,000 | 550*140*92 | 572*308*120 | 4,000 | 11.80 |

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