



## SCHOTTKY BARRIER RECTIFIER

SR1620C THRU SR16100C

VOLTAGE RANGE

20 to 100 Volts

CURRENT

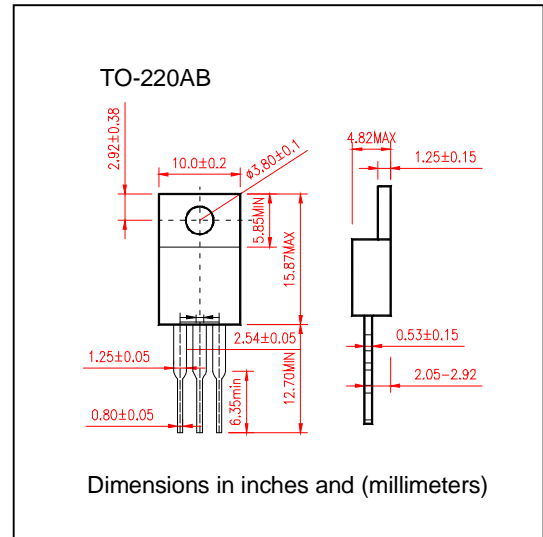
16.0 Amperes

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound
- Exceeds environmental standards of MIL-S-19500/228
- Low power loss, high efficiency
- Low forward voltage high current capability
- High surge capacity
- For use in low voltage, high frequency inverters. Free wheeling, and polarity protection applications

### MECHANICAL DATA

- Case: TO-220AB molded plastic
- Terminals: Lead solderable per MIL-STD-202 METHOD 208
- Polarity: AS marked
- Mounting position: Any
- Weight: 0.08ounce, 2.24 grams



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

|  | SYMBOLS                   | SR16<br>20C   | SR1<br>630C | SR1<br>635C | SR1<br>640C | SR1<br>645C | SR1<br>650C | SR1<br>660C | SR1<br>680C | SR161<br>00C | SR16<br>150C | SR16<br>200C | UNIT                      |
|--|---------------------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|--------------|---------------------------|
| Maximum Repetitive 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<br>At $T_c=90^\circ\text{C}$                                 | $I_{(AV)}$                | 16.0          |             |             |             |             |             |             |             |              |              |              | Amps                      |
| Peak Forward Surge Current<br>8.3ms single half sine wave superimposed on<br>rated load (JEDEC method) | $I_{FSM}$                 | 150           |             |             |             |             |             |             |             |              |              |              | Amps                      |
| Maximum Forward Voltage at 8.0A per element  | $V_F$                     | 0.65          |             |             |             |             | 0.75        |             |             | 0.85         |              |              | Volts                     |
| Maximum DC Reverse Current<br>at rated DC Blocking Voltage<br>per element                              | $T_C = 25^\circ\text{C}$  | 0.5           |             |             |             |             |             |             |             |              |              |              | mA                        |
|  | $T_C = 100^\circ\text{C}$ | 100           |             |             |             |             |             |             |             |              |              |              |                           |
| Typical Junction Capacitance(Note2)  | $C_J$                     | 500           |             |             |             |             |             |             |             |              |              |              | pF                        |
| Typical Thermal Resistance (Note 1)  | $R_{\theta JC}$           | 2.0           |             |             |             |             |             |             |             |              |              |              | $^\circ\text{C}/\text{W}$ |
| Operating Storage Temperature Range  | $T_J T_{STG}$             | (-55 to +150) |             |             |             |             |             |             |             |              |              |              | $^\circ\text{C}$          |

#### Notes:

1. Thermal Resistance Junction to Case
2. Measured at  $V_R=4\text{v}$  and  $f=1\text{MHz}$



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CURRENT 16.0 Ampere

## RATING AND CHARACTERISTIC CURVES SR1620C THRU SR16100C

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

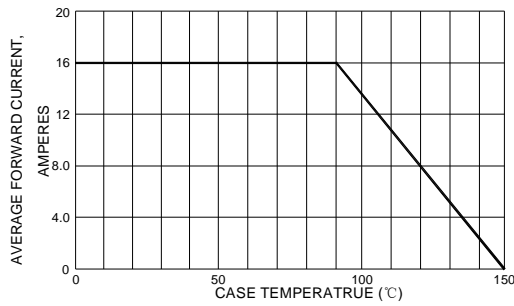


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

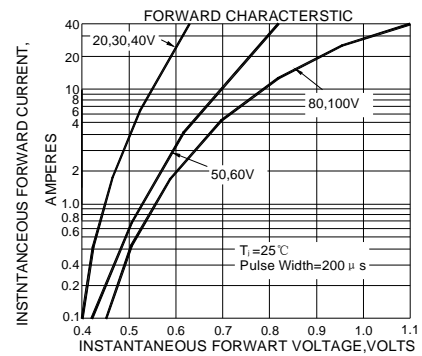


FIG.2-TYPICAL REVERSE CHARACTERISTICS

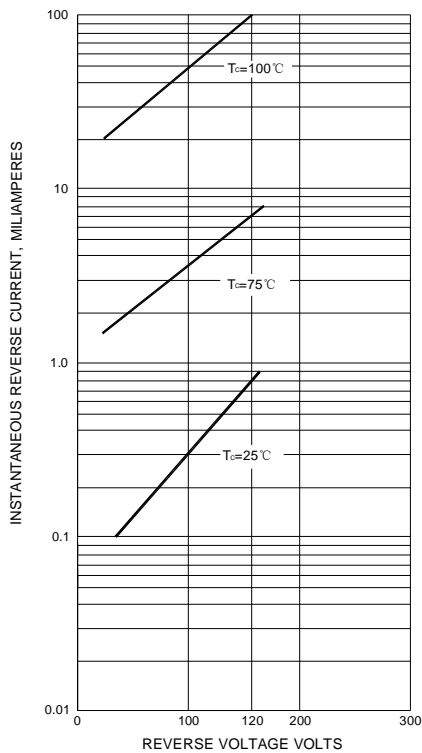


FIG.4-MAXIMUM NON-REPETITIVE SURGE CURRENT

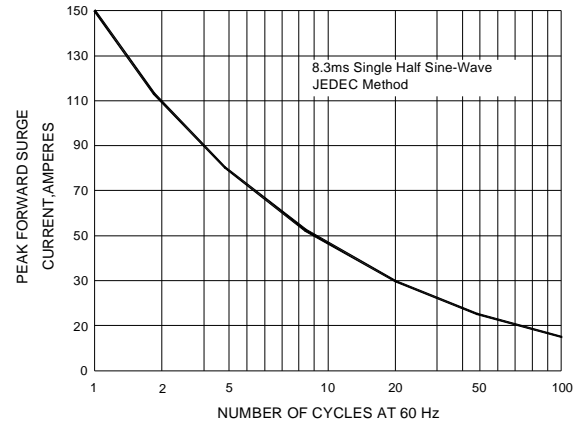


FIG.5-TYPICAL JUNCTION CAPACITANCE

