



## SCHOTTKY BARRIER RECTIFIER

SRF2020C THRU SRF20100C

VOLTAGE RANGE  
CURRENT

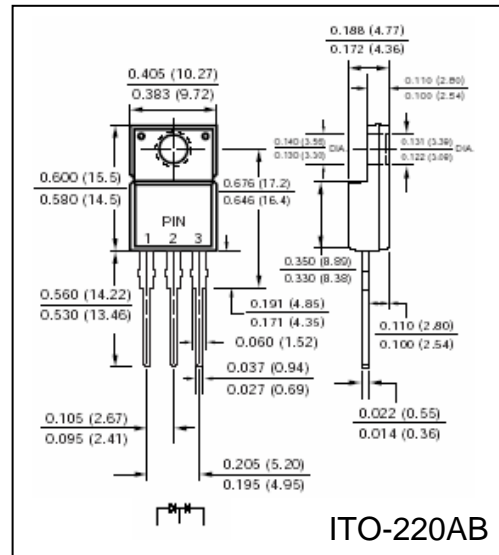
20 to 100 Volts  
16.0 Ampere

### FEATURES

- Dual Diode device
- Fast switching
- Low forward voltage
- Low power loss for high efficiency
- High Surge capability
- High temperature Soldering guaranteed:  
250 °C/10 seconds, 0.25" (6.35mm) lead length
- Also available with reverse polarity, add and "R" suffix,  
i.e. SRF2020R
- Also available in a non isolate package, SR2020C
- Also available in a dual diode version, SRF2020

### MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Lead: Solderable per MIL-STD-202E  
Method 208C
- Polarity: as marked
- Mounting Position: Any, 5.0 in-lbs Torque Max
- Weight: 0.08 ounce, 2.24 gram



### 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         | SRF<br>2020C  | SRF<br>2030C | SRF<br>2035C | SRF<br>2040C | SRF<br>2045C | SRF<br>2050C | SRF<br>2060C | SRF<br>2080C | SRD<br>20100C | UNIT               |
|--|-----------------|---------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|--------------------|
| Maximum Repetitive Peak Reverse Voltage  | $V_{RRM}$       | 20            | 30           | 35           | 40           | 45           | 50           | 60           | 80           | 100           | Volts              |
| Maximum RMS Voltage  | $V_{RMS}$       | 14            | 21           | 25           | 38           | 32           | 35           | 42           | 56           | 70            | Volts              |
| Maximum DC Blocking Voltage  | $V_{DC}$        | 20            | 30           | 35           | 40           | 45           | 50           | 60           | 80           | 100           | Volts              |
| Maximum Average Forward Rectified Current, (Note 1)<br>$T_L = 135^\circ\text{C}$                       | $I_{(AV)}$      | 20            |              |              |              |              |              |              |              |               | Amps               |
| Peak Forward Surge Current<br>8.3ms single half sine wave superimposed on<br>rated load (JEDEC method) | $I_{FSM}$       | 150           |              |              |              |              |              |              |              |               | Amps               |
| Maximum Instantaneous Forward Voltage per leg @ 10.0A<br>(Note 1)                                      | $V_F$           | 0.65          |              |              |              |              |              | 0.75         |              |               | Volts              |
| Maximum DC Reverse Current at Rated<br>$T_A = 25^\circ\text{C}$  | $I_R$           | 5.0           |              |              |              |              |              |              |              |               | mA                 |
| DC Blocking Voltage per element (Note 1)<br>$T_A = 100^\circ\text{C}$                                  |                 | 50            |              |              |              |              |              |              |              |               |                    |
| Typical Thermal Resistance , per leg   | $R_{\theta JC}$ | 3.0           |              |              |              |              |              |              |              |               | $^\circ\text{C/W}$ |
| Operating Junction Temperature Range   | $T_J$           | (-55 to +150) |              |              |              |              |              |              |              |               | $^\circ\text{C}$   |
| Storage Temperature Range  | $T_{STG}$       | (-55 to +150) |              |              |              |              |              |              |              |               | $^\circ\text{C}$   |

### Notes:

1. Pulse test: 300µs pulse width, 1% duty cycle



# RATINGS AND CHARACTERISTIC CURVES SRF2020C THRU SRF20100C

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

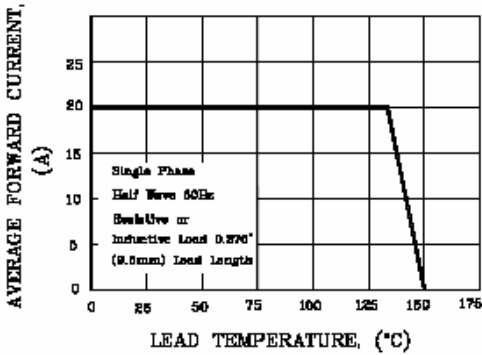


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

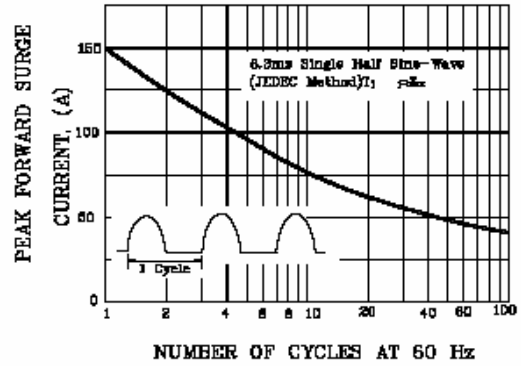


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

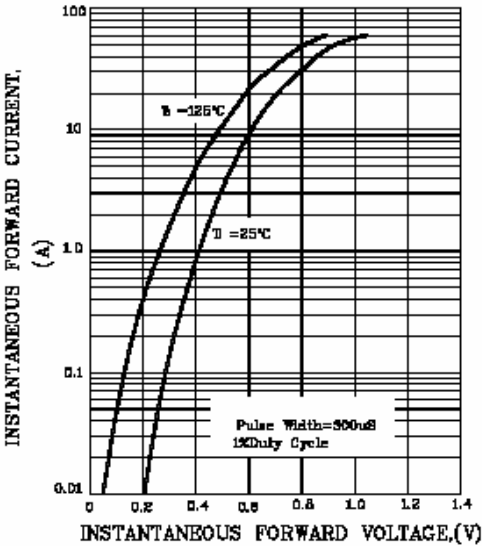


FIG.4-TYPICAL REVERSE CHARACTERISTICS

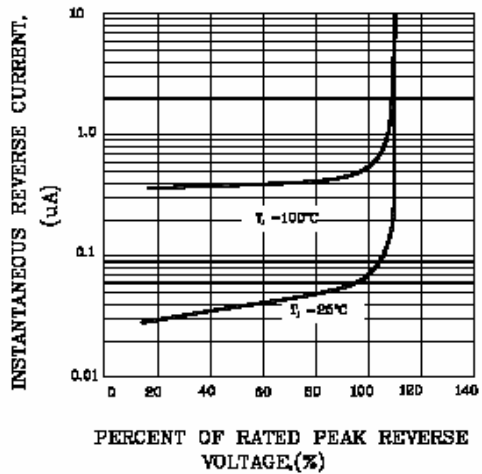


FIG.5-TYPICAL JUNCTION CAPACITANCE

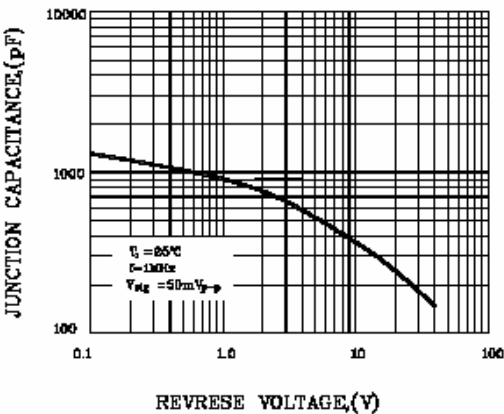


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

