



## SCHOTTKY BARRIER RECTIFIER

# SRF2020 THRU SRF2060

VOLTAGE RANGE  
CURRENT

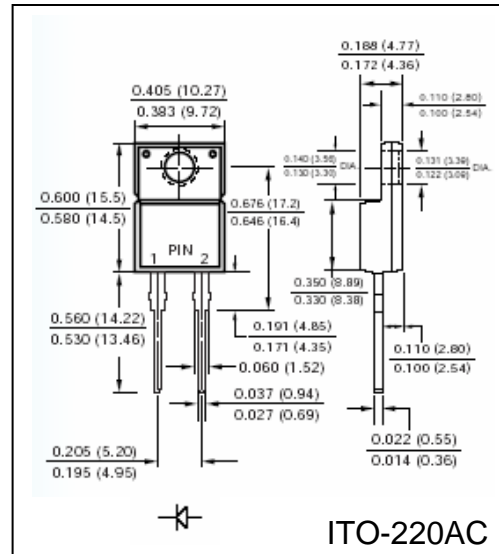
20 to 60 Volts  
20.0 Ampere

### FEATURES

- 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, SR2020
- Also available in a dual diode version, SRF2020C

### 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: 0.64 ounce, 1.81 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 2020      | SRF 2030 | SRF 2035 | SRF 2040 | SRF 2045 | SRF 2050 | SRF 2060 | UNIT               |
|--|-----------------|---------------|----------|----------|----------|----------|----------|----------|--------------------|
| Maximum Repetitive Peak Reverse Voltage  | $V_{RRM}$       | 20            | 30       | 35       | 40       | 45       | 50       | 60       | Volts              |
| Maximum RMS Voltage  | $V_{RMS}$       | 14            | 21       | 25       | 38       | 32       | 35       | 42       | Volts              |
| Maximum DC Blocking Voltage  | $V_{DC}$        | 20            | 30       | 35       | 40       | 45       | 50       | 60       | 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 @ 20.0A<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>$T_A = 100^\circ\text{C}$                                  |                 | 30            |          |          | 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 SRF2020 THRU SRF2060

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

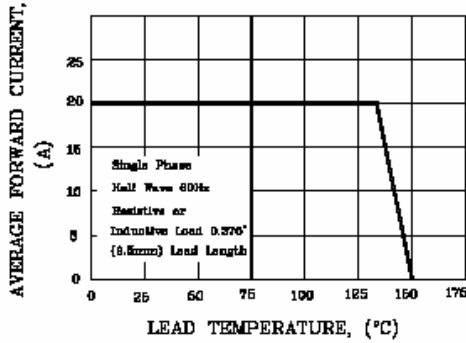


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

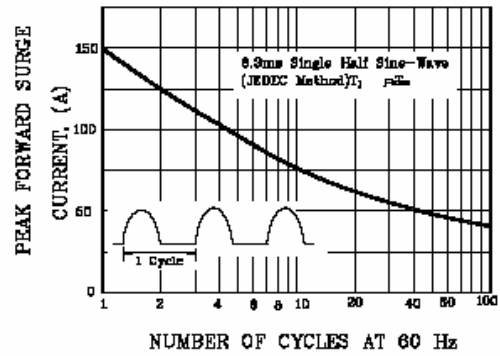


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

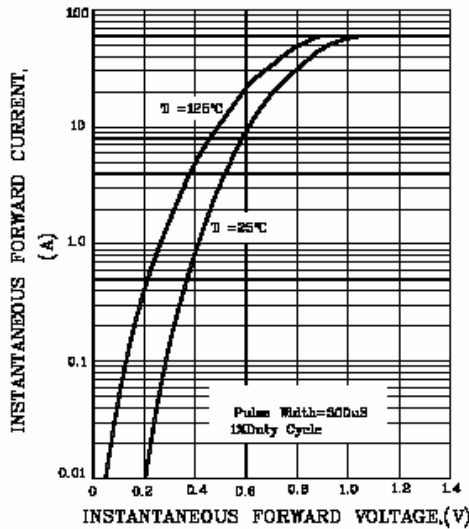


FIG.4-TYPICAL REVERSE CHARACTERISTICS

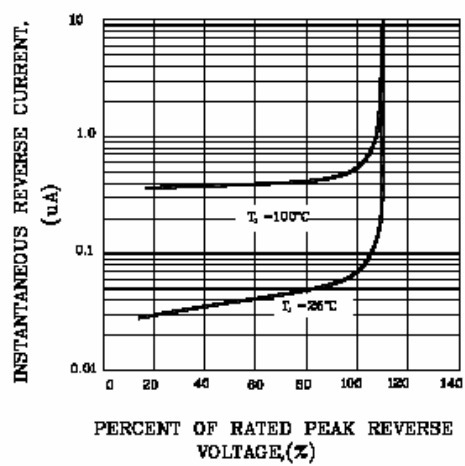


FIG.5-TYPICAL JUNCTION CAPACITANCE

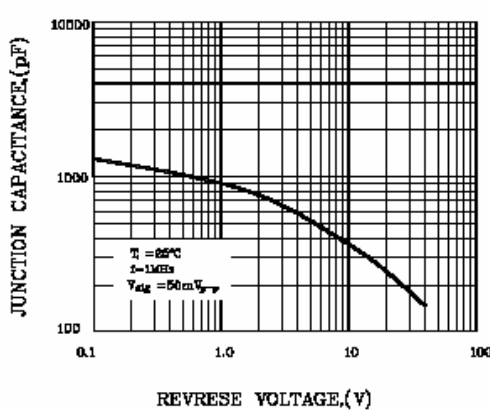


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

