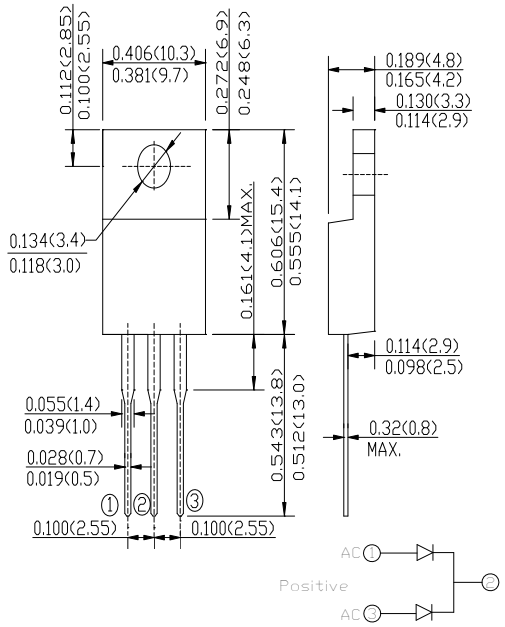
# SCHOTTKY BARRIER RECTIFIER

## SR3020FCT THRU SR30200FCT 20 to 200 V 30A

## Features

- Plastic package has Underwriters Laboratory
- Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for over voltage protection
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- High surge capability
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- Dual rectifier construction
- High temperature soldering guaranteed:250℃/10
- seconds, 0.25"(6.35mm)from case

ITO-220AB




Dimensions in inches and (millimeters)

## Mechanical Data

- Case: JEDEC ITO-220AB molded plastic body
- Terminals: Lead solder able per MIL-STD-750, method 2026
- Polarity: As marked. No suffix indicates Common Cathode, suffix "A" indicates Common Anode
- Mounting Position: Any
- Weight: 0.08ounce,2.24 grams

## Maximum Ratings and Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified. Single phase, half wave, 60HZ, resistive or inductive load. For capacitive load, derate current by 20%.

| | Symbols | SR 3020 FCT | SR 3030 FCT | SR 3040 FCT | SR 3045 FCT | SR 3060 FCT | SR 3080 FCT | SR 30100 FCT | SR 30150 FCT | SR 30200 FCT | Units |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak ReverseVoltage | $V_{RRM}$ | 20 | 30 | 40 | 45 | 60 | 80 | 100 | 150 | 200 | Volts |
| Maximum RMS Voltage | $V_{RMS}$ | 14 | 21 | 28 | 31.5 | 42 | 57 | 71 | 105 | 140 | Volts |
| Maximum DC Blocking Voltage | $V_{DC}$ | 20 | 30 | 40 | 45 | 60 | 80 | 100 | 150 | 200 | Volts |
| Maximum average forward rectified current see Fig.1 | $I_{(AV)}$ | 30.0 | | | | | | | | | Amp |
| Peak Forward SurgeCurrent, 8.3ms singlehalf-sine-wave superimposedon | $I_{FSM}$ | 200 | | | | | | | | | Amp |
| Maximum instantaneous forward voltage at 15.0 A(Note 1 ) | $V_F$ | 0.65 | | | 0.75 | | 0.85 | | 0.90 | 0.95 | Volts |
| Maximum Reverse Current $T_A$=25℃at Rated DC Blocking Voltage $T_A$=125℃ | $I_R$ | 0.2 | | | | | | | | | mA |
| | | 20 | | | | | | | | | |
| Typical Junction Capacitance(NOTE3) | $C_J$ | 450 | | | 310 | | 260 | | 200 | 170 | pF |
| Typical Thermal Resistance (Note 2 ) | $R_{\Theta}JC$ | 1.5 | | | | | | | | | ℃/W |
| Operating Temperature Range | $T_J$ | -50 to +150 | | | | | | | | | ℃ |
| Storage Temperature Range | $T_{STG}$ | -65 to +150 | | | | | | | | | |

**NOTES:**

1. Pulse test: 300μs pulse width, 1% duty cycle
2. Thermal resistance from junction to case
3. Measured at 1.0MHZ and applied reverse voltage of 4.0V DC

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## RATINGS AND CHARACTERISTIC CURVES

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

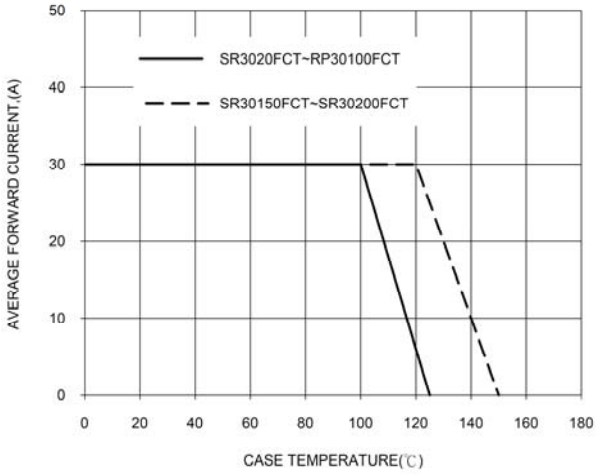


FIG. 2-TYPICAL FORWARD CHARACTERISTICS

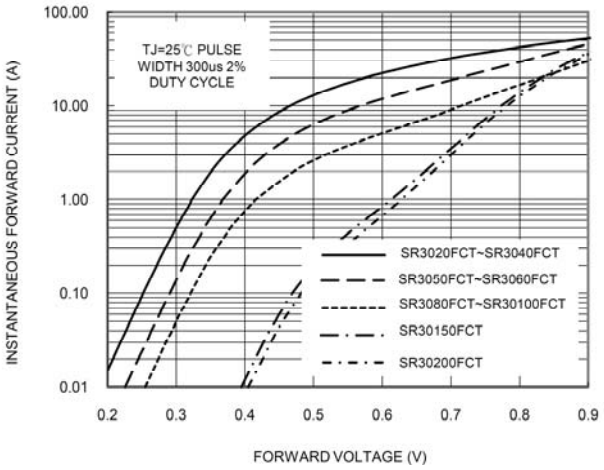


FIG. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

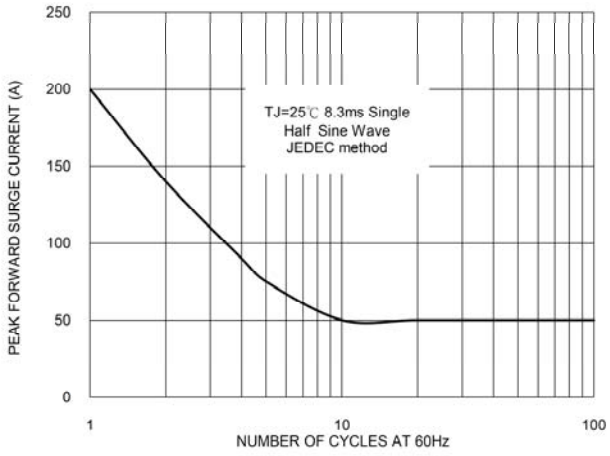


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

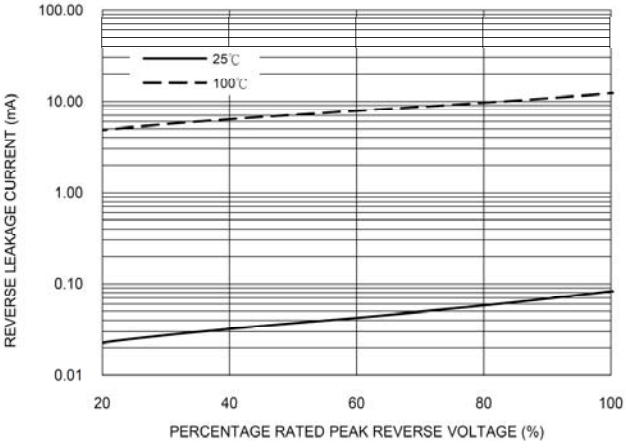


FIG. 5-TYPICAL JUNCTION CAPACITANCE