

SRF520 THRU SRF5200(SINGLE CHIP)

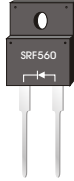
SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 200 Volts Forward Current - 5.0 Amperes

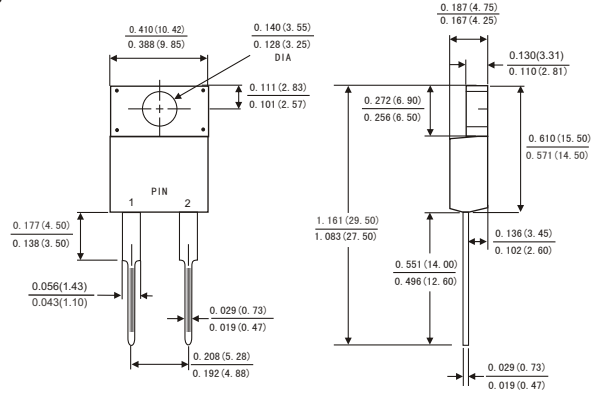


FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- Single rectifier construction
- High surge capability
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering guaranteed:260°C/10 seconds, 0.25"(6.35mm)from case
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



ITO-220AC



Dimensions in inches and (millimeters)

MECHANICAL DATA

- Case: JEDEC ITO-220AC molded plastic body
- Terminals: Lead solderable per MIL-STD-750,method 2026
- Polarity: As marked
- Mounting Position: Any
- Weight: 0.08ounce, 2.24 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified ,Single phase ,half wave ,resistive or inductive load. For capacitive load,derate by 20%.)

| | Symbols | SRF 520 | SRF 530 | SRF 540 | SRF 550 | SRF 560 | SRF 580 | SRF 5100 | SRF 5150 | SRF 5200 | Units | |
|--|------------------------------------|---------------------|---------|---------|---------|---------|---------|----------|----------|----------|-------|------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | Volts | |
| Maximum RMS voltage | V_{RMS} | 14 | 21 | 28 | 35 | 42 | 57 | 71 | 105 | 140 | Volts | |
| Maximum DC blocking voltage | V_{DC} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | 150 | 200 | Volts | |
| Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1) | $I_{(AV)}$ | 5.0 | | | | | | | | | Amps | |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated T_J) | I_{FSM} | 150.0 | | | | | | | | | Amps | |
| Maximum instantaneous forward voltage at 5.0 A(Note 1) | V_F | 0.60 | | | 0.75 | | 0.85 | 0.90 | 0.95 | | Volts | |
| Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) | I_R | $T_A = 25^\circ C$ | 0.2 | | | | | | | | | mA |
| | | $T_A = 100^\circ C$ | 50 | | | 25 | | | | | | |
| Typical junction capacitance(Note 3) | C_J | 500 | | | 400 | | | | | | pF | |
| Typical thermal resistance (Note 2) | $R_{\theta JA}$ $R_{\theta JL}$ | | | | | 25.0 | | | | | | °C/W |
| | | | | | | 8.0 | | | | | | |
| Operating junction temperature range | T_J | -65 to +150 | | | | | | | | | °C | |
| Storage temperature range | T_{STG} | -65 to +150 | | | | | | | | | °C | |

Notes: 1.Pulse test: 300 μ s pulse width,1% duty cycle

2.Thermal resistance from junction to lead vertical P.C.B. mounted , 0.375"(9.5mm)lead length

3.Measured at 1MHz and reverse voltage of 4.0volts

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FIG.1-FORWARD CURRENT DERATING CURVE

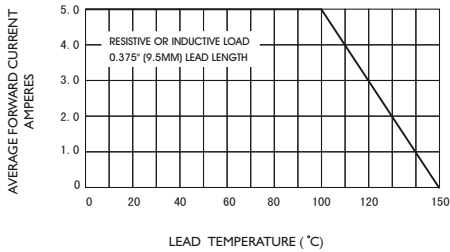


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

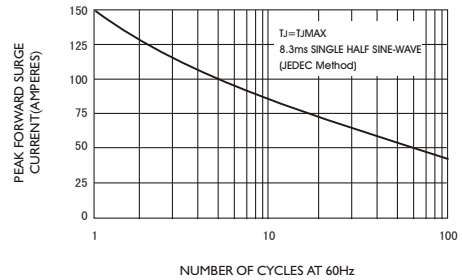


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

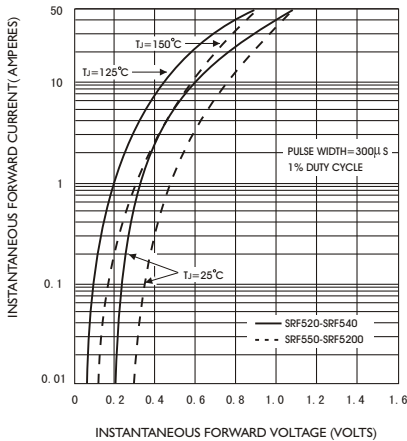


FIG.4-TYPICAL REVERSE CHARACTERISTICS

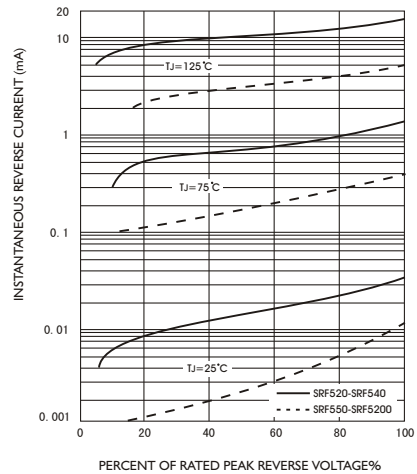


FIG.5-TYPICAL JUNCTION CAPACITANCE

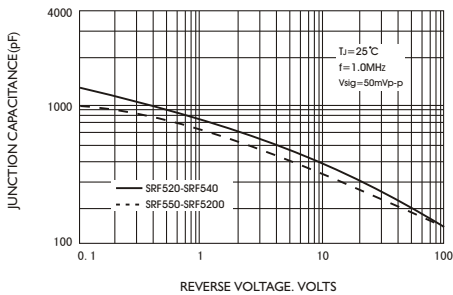


FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

