

Switchmode Full Plastic Dual Schottky Barrier Power Rectifiers

Using the Schottky Barrier principle with a Molybdenum barrier metal. These state-of-the-art geometry features epitaxial construction with oxide passivation and metal overlay contact. Ideally suited for low voltage, high frequency rectification, or as free wheeling and polarity protection diodes.

Features

- * Low Forward Voltage.
- * Low Switching noise.
- * High Current Capacity
- * Guarantee Reverse Avalanche.
- * Guard-Ring for Stress Protection.
- * Low Power Loss & High efficiency.
- * 150°C Operating Junction Temperature
- * Low Stored Charge Majority Carrier Conduction.
- * Plastic Material used Carries Underwriters Laboratory
- * Flammability Classification 94V-O
- * **Pb free**
- * **In compliance with EU RoHs directives**



MAXIMUM RATINGS

| Characteristic | Symbol | SRF20150C | Unit |
|--|---------------------------------|-------------|------------------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_R | 150 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 105 | V |
| Average Rectifier Forward Current (per diode) Total Device (Rated V_R), $T_C=100^\circ\text{C}$ | $I_{F(AV)}$ | 10 20 | A |
| Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz) | I_{FM} | 20 | A |
| Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware, single phase, 60Hz) | I_{FSM} | 175 | A |
| Operating and Storage Junction Temperature Range | T_J, T_{stg} | -65 to +150 | $^\circ\text{C}$ |

THERMAL RESISTANCES

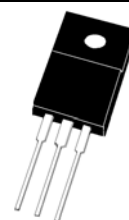
| | | | |
|---|-----------------|-----|---------------------------|
| Typical Thermal Resistance junction to case | $R_{\theta jc}$ | 3.5 | $^\circ\text{C}/\text{w}$ |
|---|-----------------|-----|---------------------------|

ELECTRIAL CHARACTERISTICS

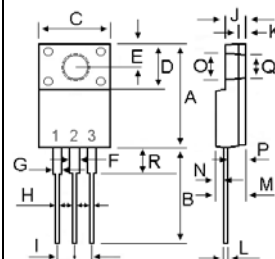
| Characteristic | Symbol | SRF20150C | Unit |
|--|--------|--------------|------|
| Maximum Instantaneous Forward Voltage (per diode) ($I_F=10$ Amp $T_C=25^\circ\text{C}$) ($I_F=10$ Amp $T_C=125^\circ\text{C}$) | V_F | 0.95 0.85 | V |
| Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C=25^\circ\text{C}$) (Rated DC Voltage, $T_C=125^\circ\text{C}$) | I_R | 0.2 10 | mA |

SCHOTTKY BARRIER RECTIFIERS

**20 AMPERES
150 VOLTS**



ITO-220AB



| DIM | MILLIMETERS | |
|-----|-------------|-------|
| | MIN | MAX |
| A | 14.80 | 16.10 |
| B | 12.65 | 13.80 |
| C | 9.85 | 10.36 |
| D | 4.60 | 6.80 |
| E | 2.50 | 3.50 |
| F | 1.00 | 1.45 |
| G | 1.00 | 1.45 |
| H | 0.30 | 0.90 |
| I | 2.40 | 2.70 |
| J | 2.34 | 3.30 |
| K | 0.55 | 1.30 |
| L | 0.36 | 0.80 |
| M | 4.20 | 4.90 |
| N | 1.10 | 1.80 |
| O | 2.90 | 3.50 |
| P | 2.50 | 3.15 |
| Q | 2.90 | 3.50 |
| R | 3.10 | 4.85 |



FIG-1 FORWARD CURRENT DERATING CURVE

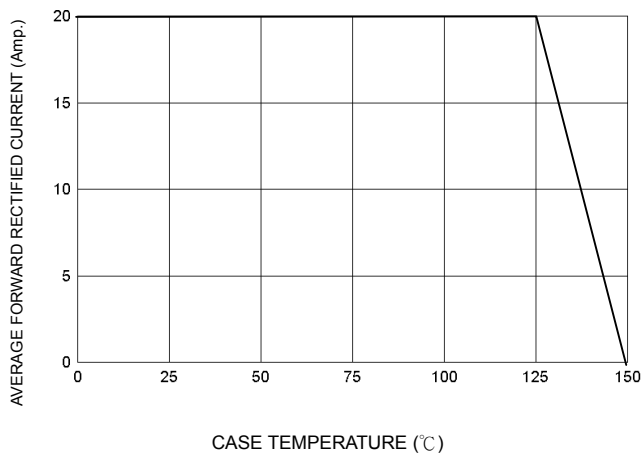


FIG-2 TYPICAL FORWARD CHARACTERISTICS

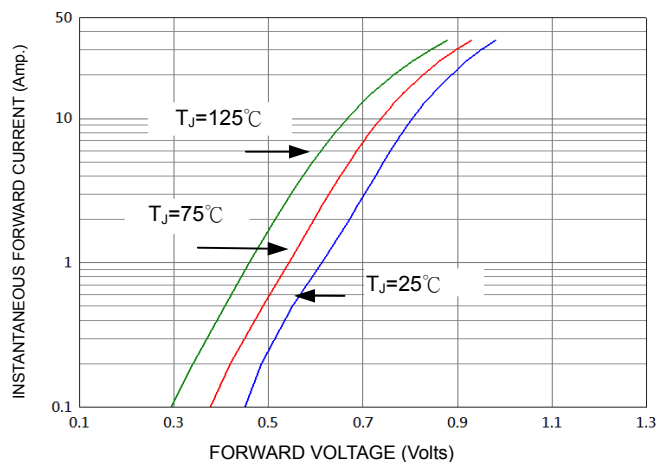


FIG-3 TYPICAL REVERSE CHARACTERISTICS

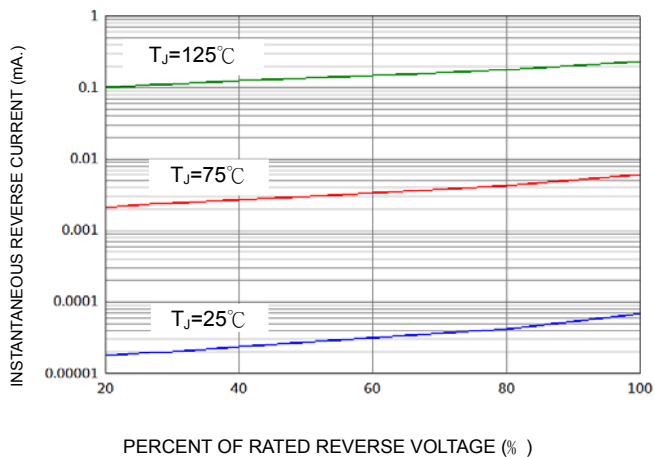


FIG-4 TYPICAL JUNCTION CAPACITANCE

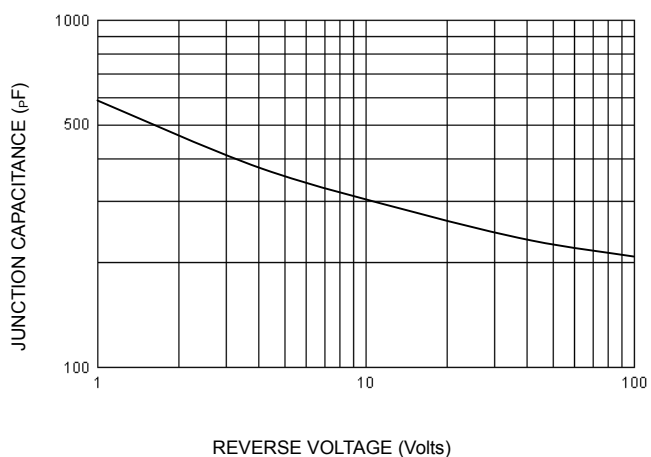
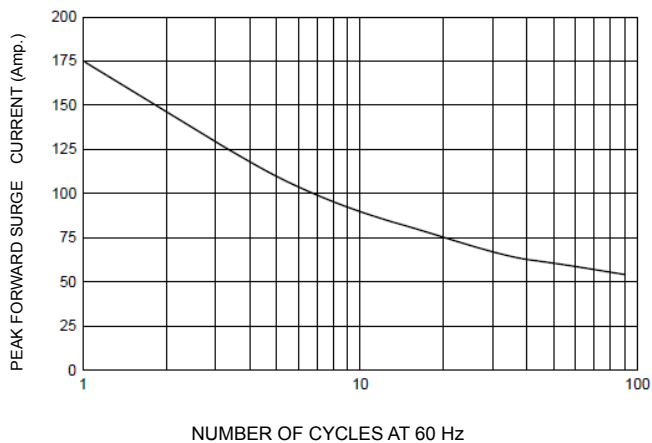


FIG-5 PEAK FORWARD SURGE CURRENT



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