

Schottky Barrier Rectifiers

Using the Schottky Barrier principle with a Refractory metal capable of high temperature operation metal. The proprietary barrier technology allows for reliable operation up to 150 junction temperature. Typical application are in switching Mode Power Supplies such as adaptators, DC/DC convertes, 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 Operating Junction Temperature
- * Low Stored Charge Majority Carrier Conduction.
- * Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O



- * *In compliance with EU RoHs 2002/95/EC directives*
- * *"G" Green product*
The green product before is indicated by the date code "XMY" with alphabet "G" XMY

MAXIMUM RATINGS

| Characteristic | Symbol | S30S100 | Unit |
|---|----------------|-------------|------|
| Peak Repetitive Reverse Voltage | V_{RRM} | 100 | V |
| Working Peak Reverse Voltage | V_{RWM} | | |
| DC Blocking Voltage | V_R | | |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 70 | V |
| Average Rectifier Forward Current (Per diode) | $I_{F(AV)}$ | 15 | A |
| Total Device (Rated V_R), $T_C=125$ | | 30 | |
| Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz) | I_{FM} | 30 | A |
| Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase, 60Hz) | I_{FSM} | 250 | A |
| Operating and Storage Junction Temperature Range | T_J, T_{stg} | -65 to +150 | |

THERMAL RESISTANCES

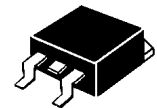
| | | | |
|---|------------------|-----|----|
| Typical Thermal Resistance junction to case | $R_{\theta j-c}$ | 4.0 | /w |
| Per diode | | 3.6 | |
| Total | | 3.2 | |
| Coupling | $R_{\theta c}$ | 3.2 | |

ELECTRIAL CHARACTERISTICS

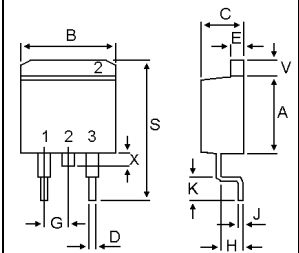
| Characteristic | Symbol | S30S100 | Unit |
|--|--------|--------------|------|
| Maximum Instantaneous Forward Voltage ($I_F=15$ Amp $T_C=25$) ($I_F=15$ Amp $T_C=125$) | V_F | 0.85 0.75 | V |
| Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C=25$) (Rated DC Voltage, $T_C=125$) | I_R | 0.2 30 | mA |

SCHOTTKY BARRIER RECTIFIERS

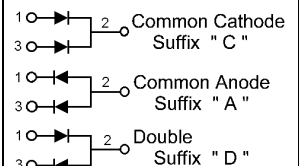
**30 AMPERES
100 VOLTS**



TO-263 (D2-PAK)



| DIM | MILLIMETERS | |
|-----|-------------|-------|
| | MIN | MAX |
| A | 8.12 | 8.92 |
| B | 9.90 | 10.30 |
| C | 4.23 | 4.83 |
| D | 0.51 | 0.89 |
| E | 1.27 | 1.53 |
| G | 2.54 | BSC |
| H | 2.03 | 2.79 |
| J | 0.31 | 0.51 |
| K | 2.29 | 2.79 |
| S | 14.60 | 15.88 |
| V | 1.57 | 1.83 |
| X | --- | 1.40 |



S30S100

FIG-1 FORWARD CURRENT DERATING CURVE

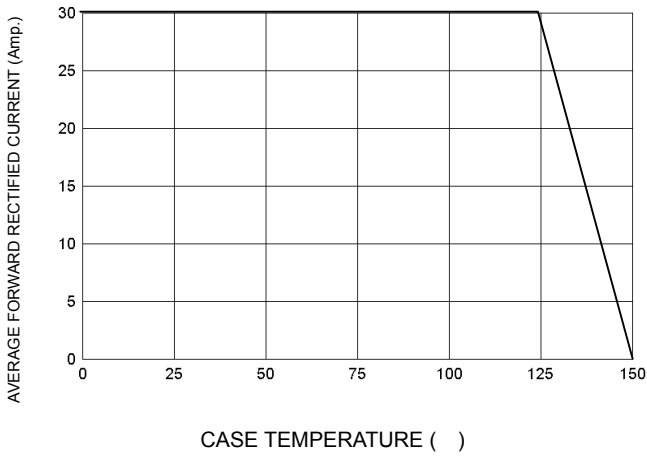


FIG-2 TYPICAL FORWARD CHARACTERISTICS

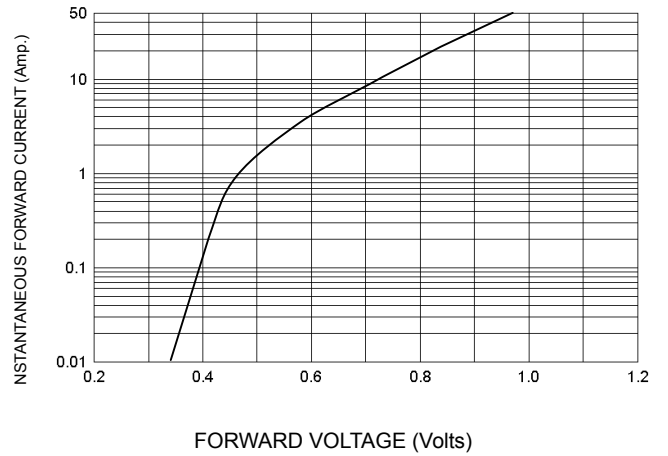


FIG-3 TYPICAL REVERSE CHARACTERISTICS

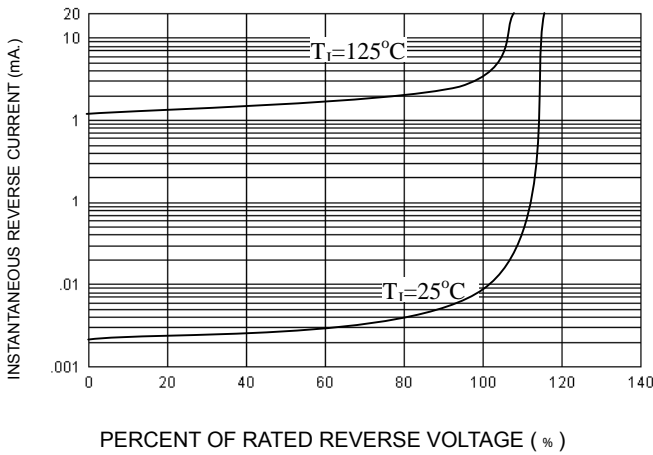


FIG-4 TYPICAL JUNCTION CAPACITANCE

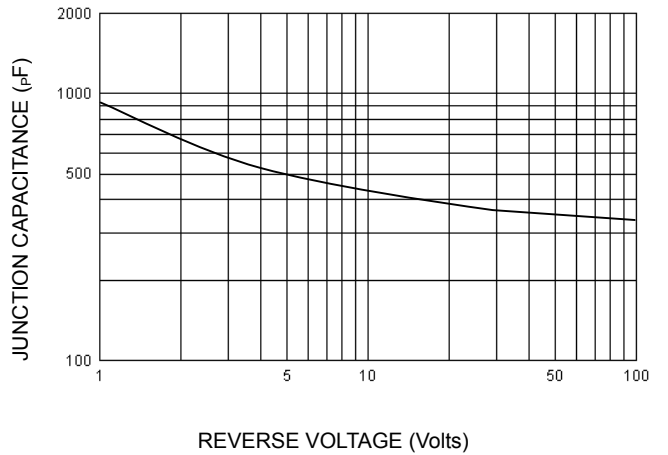
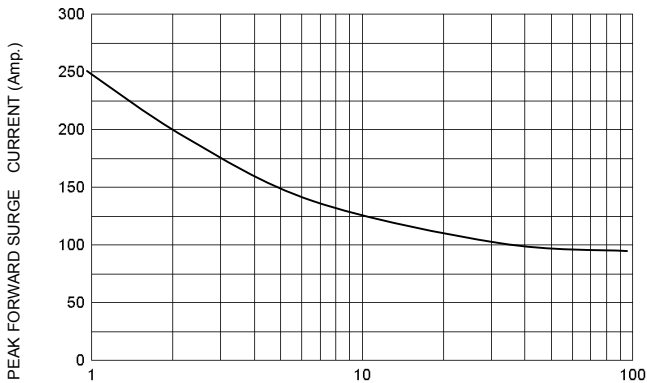


FIG-5 PEAK FORWARD SURGE CURRENT



REMARK: Green product is indicated by carton “Halogen-free”

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