

Schottky Barrier 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.

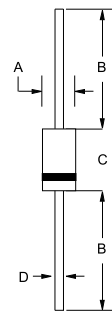
- * Low Forward Voltag.
- * Low Switching noise.
- * High Current Capacity
- * Guarantee Reverse Avalance.
- * Guard-Ring for Stress Protection.
- * Low Power Loss & High efficiency.
- * 125 °C Operating Junction Temperature
- * Low Stored Charge Majority Carrier Cnduction.
- * Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O

SCHOTTKY BARRIER RECTIFIERS

1.0 AMPERES
20-60 VOLTS



DO-41



MAXIMUM RATINGS

| Characteristic | Symbol | SR102 | SR103 | SR104 | SR105 | SR106 | Unit |
|--|---------------------------------|---------------|-------|-------|-------|-------|------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_R | 20 | 30 | 40 | 50 | 60 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 14 | 21 | 28 | 35 | 42 | V |
| Average Rectifier Forward Current | I_O | 1.0 | | | | | A |
| Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfware, single phase, 60Hz) | I_{FSM} | 40 | | | | | A |
| Operating and Storage Junction Temperature Range | T_J, T_{stg} | - 65 to + 125 | | | | | °C |

| DIM | MILLMETERS | |
|-----|------------|------|
| | MIN | MAX |
| A | 2.00 | 2.70 |
| B | 25.40 | --- |
| C | 4.10 | 5.20 |
| D | 0.70 | 0.90 |

ELECTRICAL CHARACTERISTICS

| Characteristic | Symbol | SR102 | SR103 | SR104 | SR105 | SR106 | Unit |
|--|--------|----------------|-------|----------------|-------|-------|------|
| Maximum Instantaneous Forward Voltage ($I_F=1.0$ Amp) ($I_F=3.0$ Amp) | V_F | 0.550 0.750 | | 0.700 0.850 | | | V |
| Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_c = 25$ °C) (Rated DC Voltage, $T_c = 125$ °C) | I_R | 1.0 50 | | | | | mA |
| Typical Junction Capacitance (Reverse Voltage of 4 volts & $f=1$ MHz) | C_P | 90 | | 80 | | | pF |

CASE---
Transfer molded
plastic

POLARITY---
Cathode indicated
polarity band

SR102 Thru SR104

FIG-1 FORWARD CURRENT DERATING CURVE

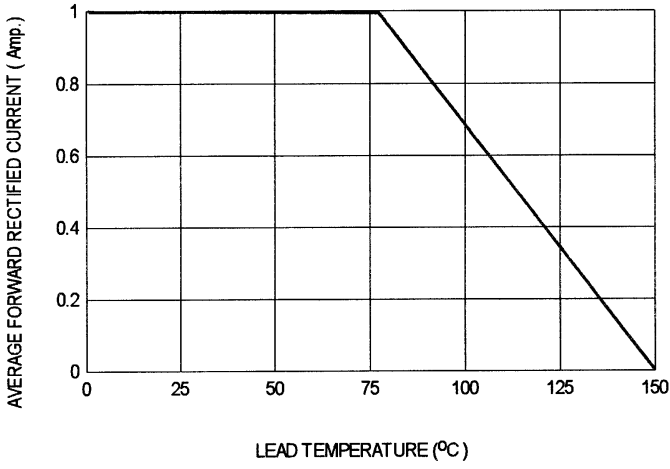


FIG-2 TYPICAL FORWARD CHARACTERISTICS

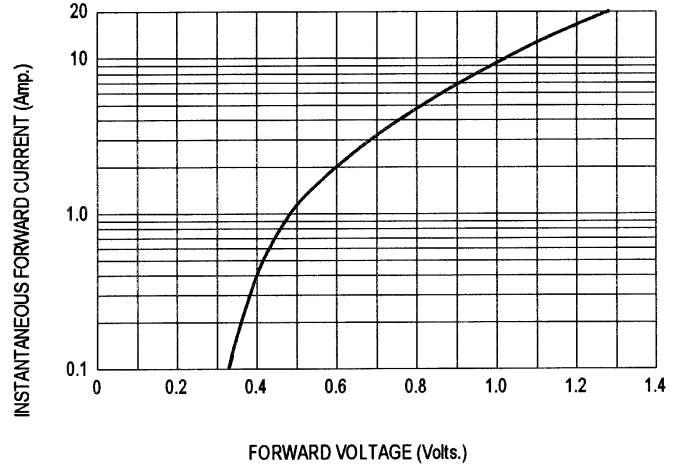


FIG-3 TYPICAL REVERSE CHARACTERISTICS

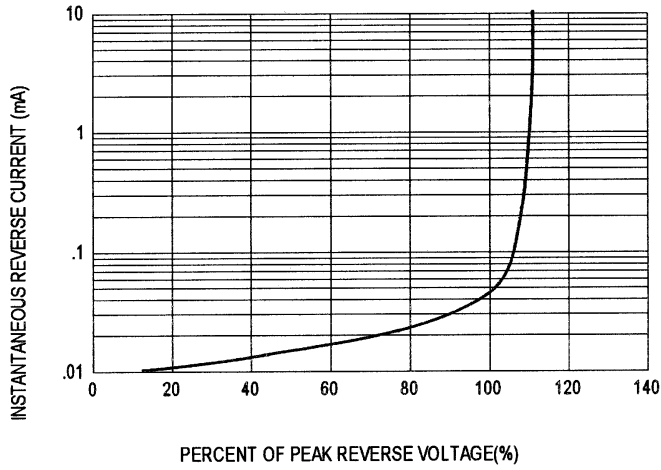


FIG-4 TYPICAL JUNCTION CAPACITANCE

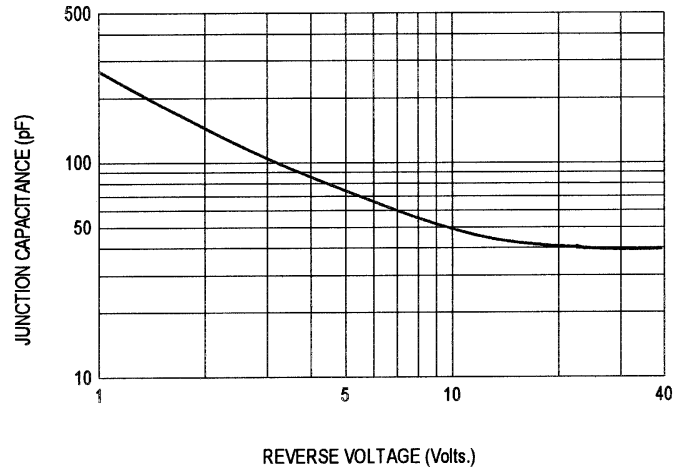
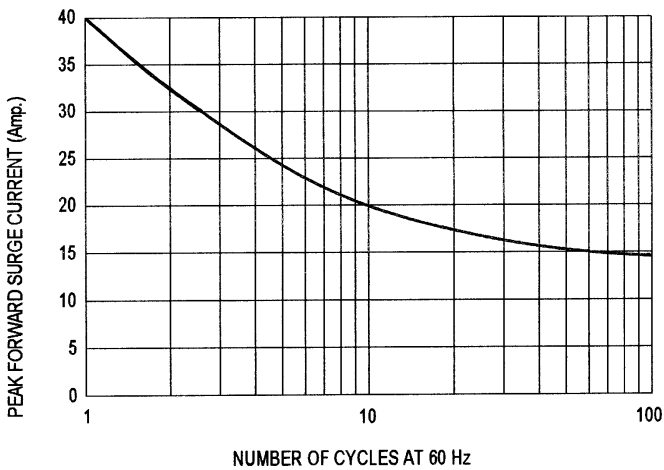


FIG-5 PEAK FORWARD SURGE CURRENT



SR105 , SR106

FIG-1 FORWARD CURRENT DERATING CURVE

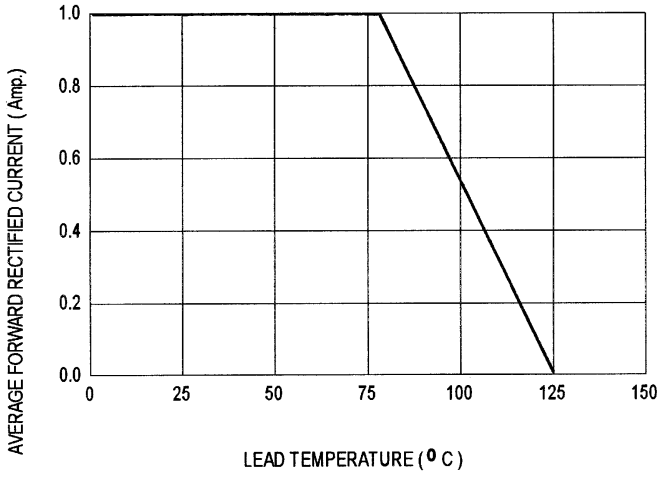


FIG-2 TYPICAL FORWARD CHARACTERISTICS

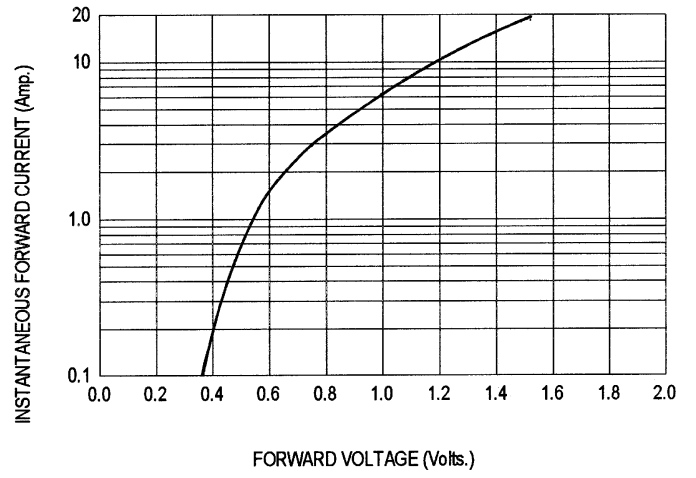


FIG-3 TYPICAL REVERSE CHARACTERISTICS

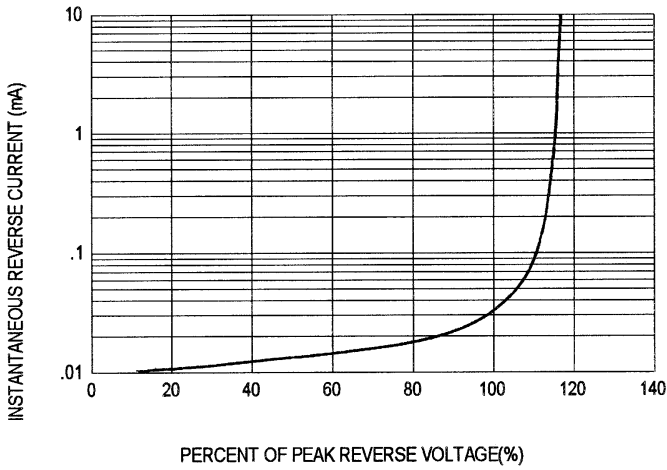


FIG-4 TYPICAL JUNCTION CAPACITANCE

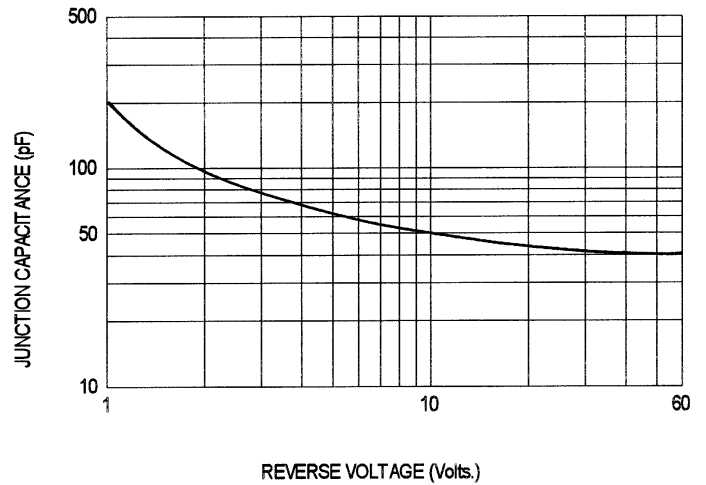


FIG-5 PEAK FORWARD SURGE CURRENT

