

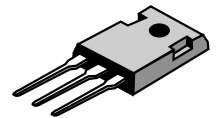
Schottky Barrier Rectifiers

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

SCHOTTKY BARRIER RECTIFIERS

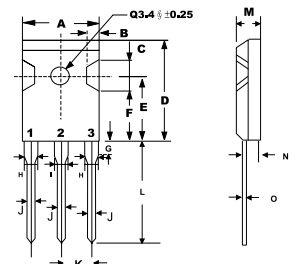
**20 AMPERES
70 -- 100 VOLTS**



TO-247 (3P)

MAXIMUM RATINGS

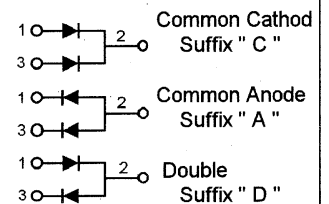
| Characteristic | Symbol | S20D | | | | Unit |
|---|---------------------------------|---------------|----|----|-----|------|
| | | 70 | 80 | 90 | 100 | |
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_R | 70 | 80 | 90 | 100 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 49 | 56 | 63 | 70 | V |
| Average Rectifier Forward Current Total Device | $I_{F(AV)}$ | 10 20 | | | | A |
| Peak Repetitive Forward Current (Rate V_R , Square Wave, 20kHz) | I_{FRM} | 20 | | | | A |
| Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfwave, single phase, 60Hz) | I_{FSM} | 225 | | | | A |
| Operating and Storage Junction Temperature Range | T_J, T_{stg} | - 65 to + 125 | | | | °C |



| DIM | MILLIMETERS | |
|-----|-------------|------|
| | MIN | MAX |
| A | -- | 16.2 |
| B | 1.7 | 2.7 |
| C | 5.0 | 6.0 |
| D | -- | 23.0 |
| E | 14.8 | 15.2 |
| F | 11.7 | 12.7 |
| G | -- | 4.5 |
| H | -- | 2.5 |
| I | -- | 3.5 |
| J | 1.1 | 1.4 |
| K | 5.25 | 5.65 |
| L | 19 | -- |
| M | 4.7 | 5.3 |
| N | 2.8 | 3.2 |
| O | 0.45 | 0.85 |

ELECTRICAL CHARACTERISTICS

| Characteristic | Symbol | S20D | | | | Unit |
|--|--------|--------------|----|--------------|-----|------|
| | | 70 | 80 | 90 | 100 | |
| Maximum Instantaneous Forward Voltage ($I_F=10$ Amp, $T_C = 25$ °C) ($I_F=10$ Amp, $T_C = 100$ °C) | V_F | 0.75 0.66 | | 0.85 0.74 | | V |
| Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25$ °C) (Rated DC Voltage, $T_C = 100$ °C) | I_R | 5.0 50 | | | | mA |



S20D70 , S20D80

FIG-1 FORWARD CURRENT DERATING CURVE

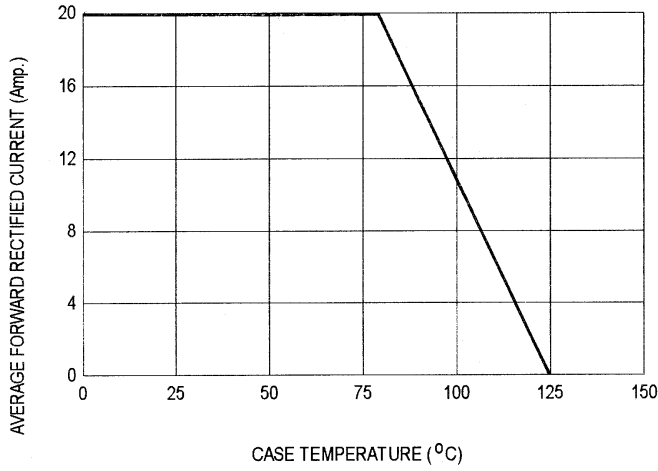


FIG-2 TYPICAL FORWARD CHARACTERISTICS

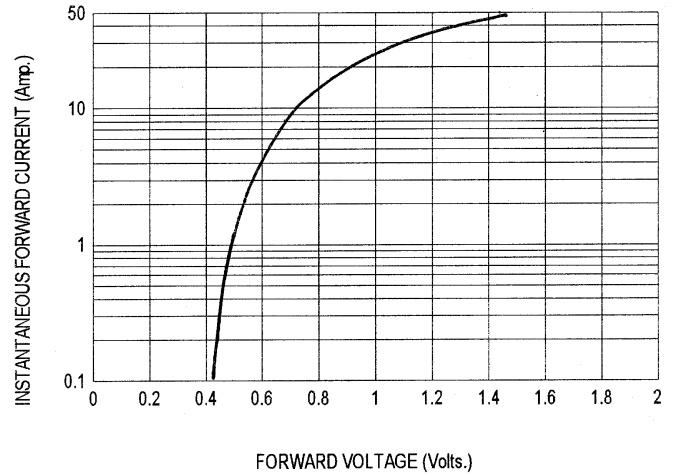


FIG-3 TYPICAL REVERSE CHARACTERISTICS

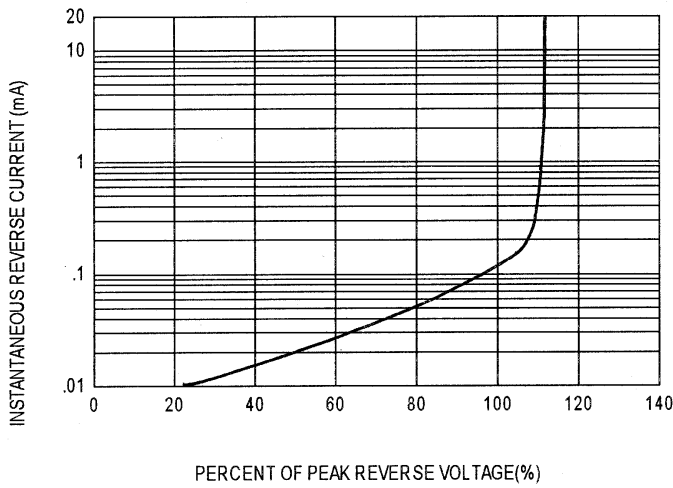


FIG-4 TYPICAL JUNCTION CAPACITANCE

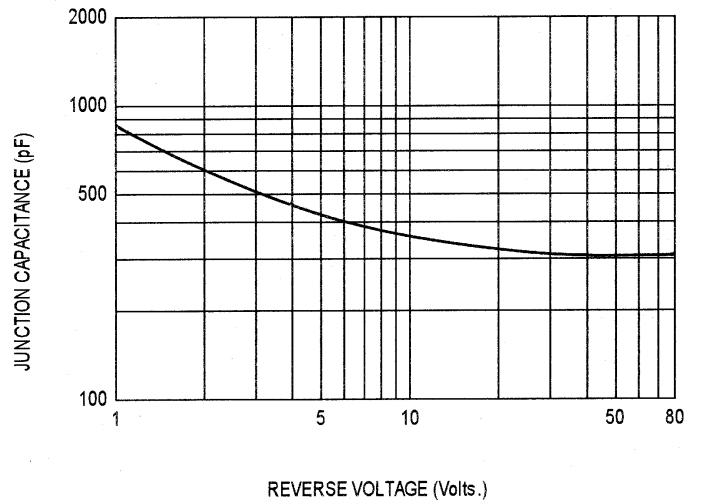
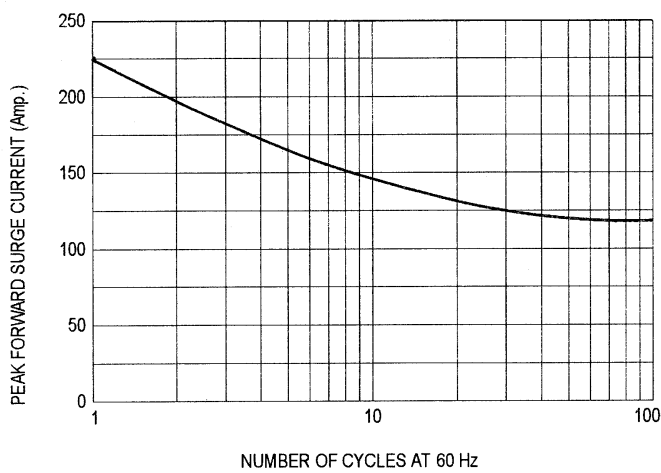


FIG-5 PEAK FORWARD SURGE CURRENT



S20D90 , S20D100

FIG-1 FORWARD CURRENT DERATING CURVE

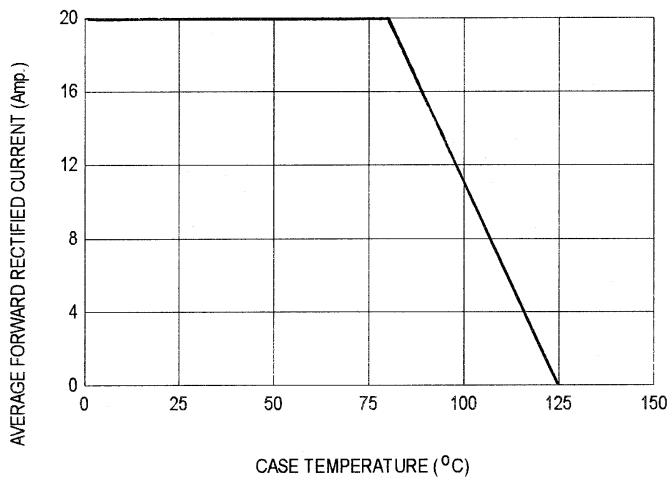


FIG-2 TYPICAL FORWARD CHARACTERISTICS

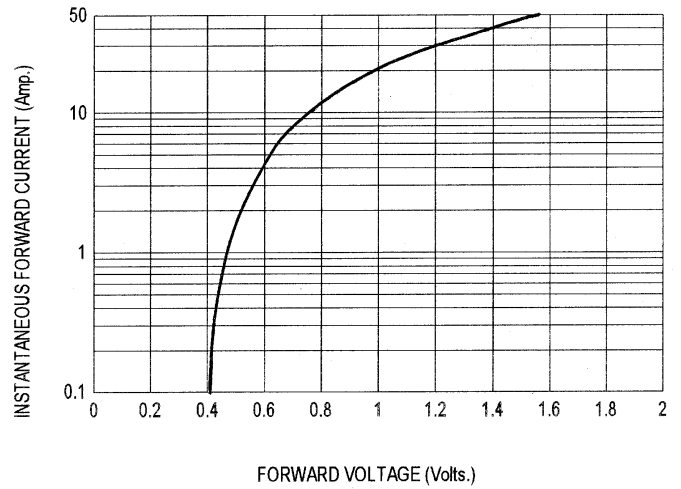


FIG-3 TYPICAL REVERSE CHARACTERISTICS

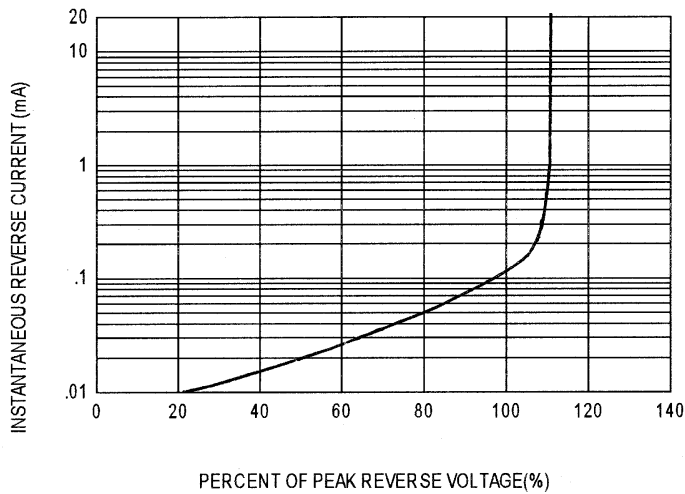


FIG-4 TYPICAL JUNCTION CAPACITANCE

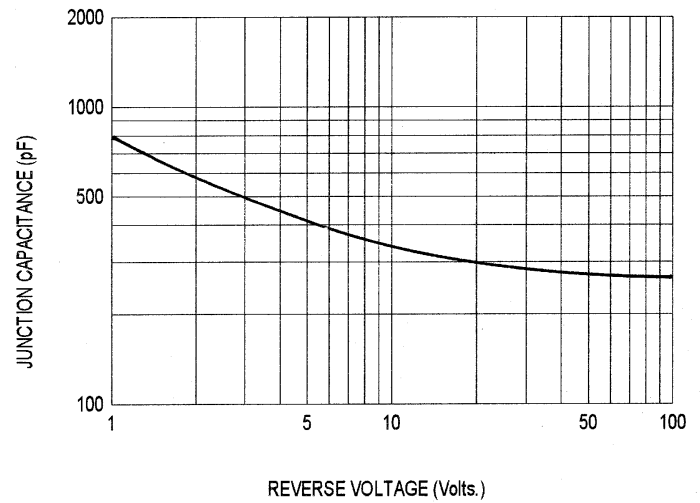


FIG-5 PEAK FORWARD SURGE CURRENT

