

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.
- * 150 Operating Junction Temperature
- * Low Stored Charge Majority Carrier Conduction.
- * Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O

SCHOTTKY BARRIER RECTIFIERS

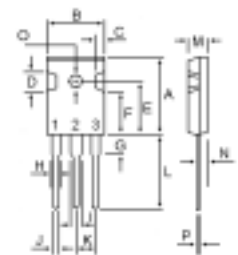
**30 AMPERES
150 VOLTS**



TO-3P

MAXIMUM RATINGS

| Characteristic | Symbol | S30D150CE | 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 Total Device (Rated V_R), $T_C=100$ | $I_{F(AV)}$ | 15 30 | A |
| 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 | |



| DIM | MILLIMETERS | |
|-----|-------------|-------|
| | MIN | MAX |
| A | 20.63 | 22.38 |
| B | 15.38 | 16.20 |
| C | 1.90 | 2.70 |
| D | 5.10 | 6.10 |
| E | 14.81 | 15.22 |
| F | 11.72 | 12.84 |
| G | 4.20 | 4.50 |
| H | 1.82 | 2.46 |
| I | 2.92 | 3.23 |
| J | 0.89 | 1.53 |
| K | 5.26 | 5.66 |
| L | 18.50 | 21.50 |
| M | 4.68 | 5.36 |
| N | 2.40 | 2.80 |
| O | 3.25 | 3.65 |
| P | 0.55 | 0.70 |

ELECTRIAL CHARACTERISTICS

| Characteristic | Symbol | S30D150CE | Unit |
|--|--------|--------------|------|
| Maximum Instantaneous Forward Voltage ($I_F=15$ Amp $T_C=25$) ($I_F=15$ Amp $T_C=125$) | V_F | 0.95 0.85 | V |
| Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C=25$) (Rated DC Voltage, $T_C=125$) | I_R | 0.5 20 | mA |



Common cathode
Suffix "C"

S30D150CE

FIG-1 FORWARD CURRENT DERATING CURVE

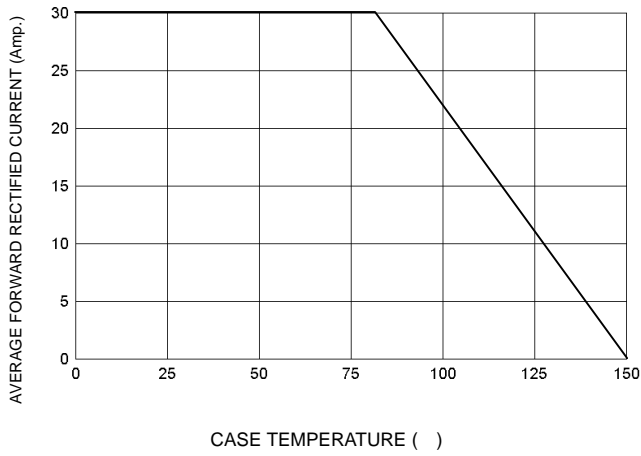


FIG-2 TYPICAL FORWARD CHARACTERISTICS

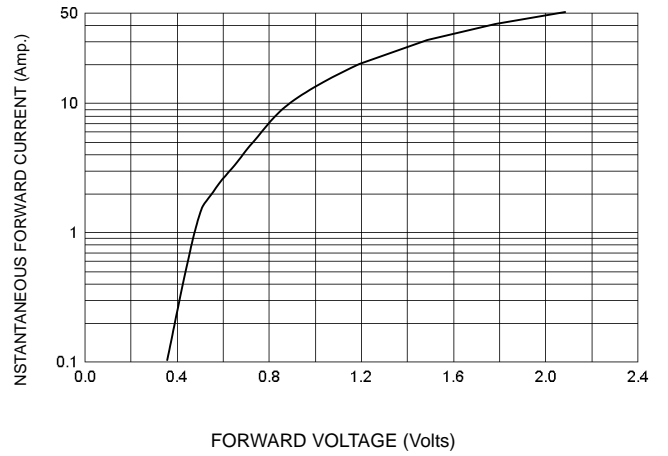


FIG-3 TYPICAL REVERSE CHARACTERISTICS

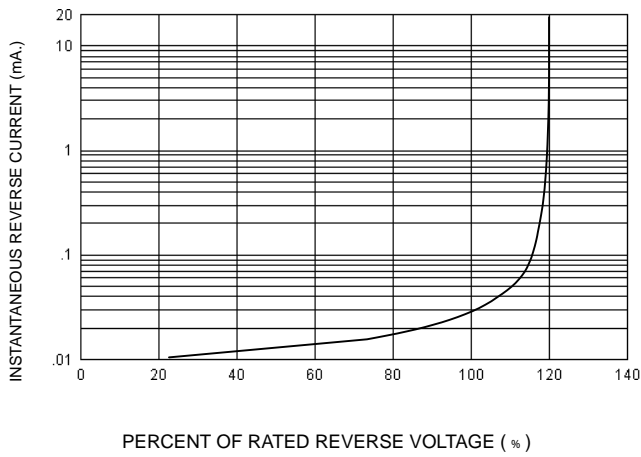


FIG-4 TYPICAL JUNCTION CAPACITANCE

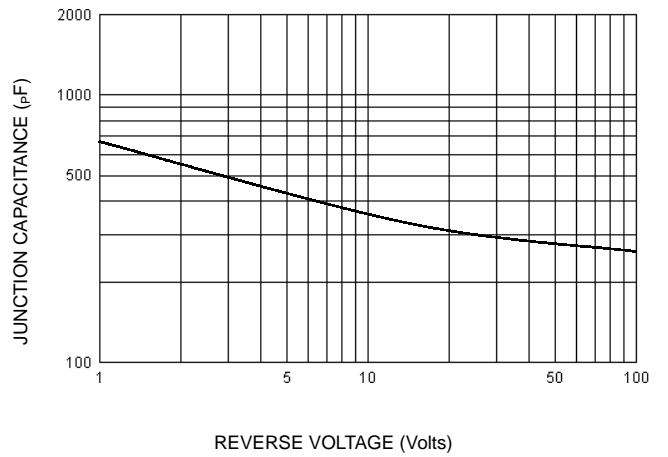


FIG-5 PEAK FORWARD SURGE CURRENT

