# MOSPEC

**SR302 thru SR306**

## Schottky Barrier Rectifiers

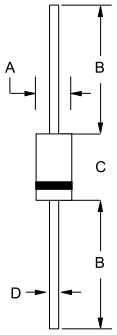
Using the Schottky Barrier principle with a Molybdenum barrier metal. These state-of-the-art geometry features epitaxial construction with oxide passivation and metal overlay contact. Ideally suited for low voltage, high frequency rectification, or as free wheeling and polarity protection diodes.

* 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**

**3.0 AMPERES**
**20-60 VOLTS**

**DO-201AD**




| DIM | MILLMETERS | |
|---|---|---|
| | MIN | MAX |
| A | 5.00 | 5.60 |
| B | 25.40 | --- |
| C | 8.50 | 9.50 |
| D | 1.20 | 1.30 |

CASE---
Transfer molded plastic

POLARITY---
Cathode indicated polarity band

### MAXIMUM RATINGS

| Characteristic | Symbol | SR | | | | | Unit |
|---|---|---|---|---|---|---|---|
| | | 302 | 303 | 304 | 305 | 306 | |
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 20 | 30 | 40 | 50 | 60 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 14 | 21 | 28 | 35 | 42 | V |
| Average Rectifier Forward Current | $I_O$ | 3.0 | | | | | A |
| Non-Repetitive Peak Surge Current<br>( Surge applied at rate load conditions halfware,single phase,60Hz ) | $I_{FSM}$ | 100 | | | | | A |
| Operating and Storage Junction Temperature Range | $T_J$ , $T_{stg}$ | - 65 to + 125 | | | | | °C |

### ELECTRICAL CHARACTERISTICS

| Characteristic | Symbol | SR | | | | | Unit |
|---|---|---|---|---|---|---|---|
| | | 302 | 303 | 304 | 305 | 306 | |
| Maximum Instantaneous Forward Voltage<br>( $I_F$=3.0 Amp )<br>( $I_F$=9.0 Amp ) | $V_F$ | 0.550<br>0.850 | | | 0.650<br>0.950 | | V |
| Maximum Instantaneous Reverse Current<br>( Rated DC Voltage, $T_C$ = 25 °C)<br>( Rated DC Voltage, $T_C$ = 100 °C) | $I_R$ | 3.0<br>50 | | | | | mA |
| Typical Junction Capacitance<br>( Reverse Voltage of 4 volts & f=1 MHz) | $C_P$ | 210 | | | 190 | | pF |

# SR302 Thru SR304

FIG-1 FORWARD CURRENT DERATING CURVE

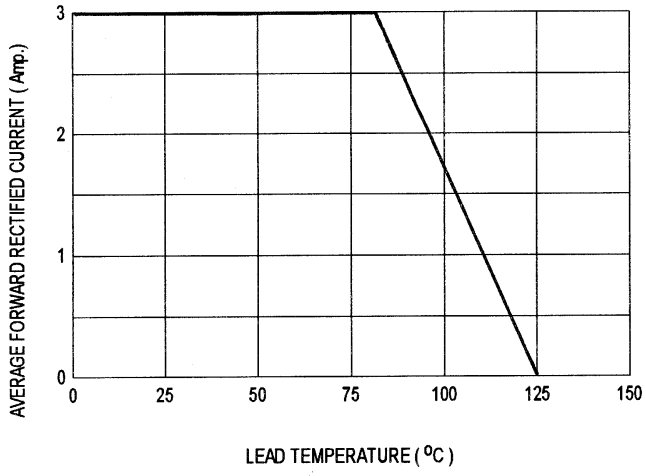



FIG-2 TYPICAL FORWARD CHARACTERISTICS

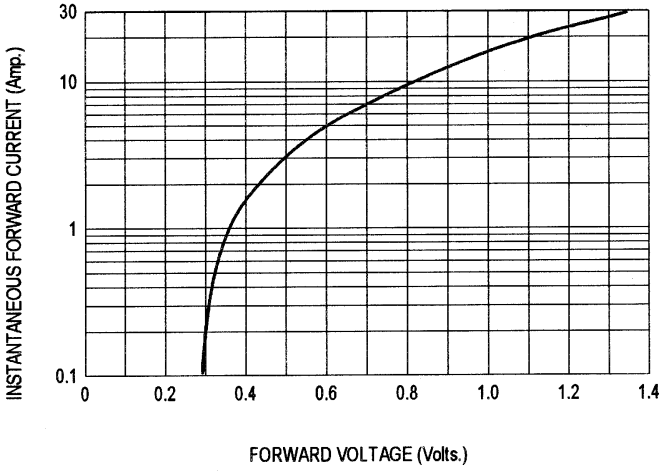



FIG-3 TYPICAL REVERSE CHARACTERISTICS

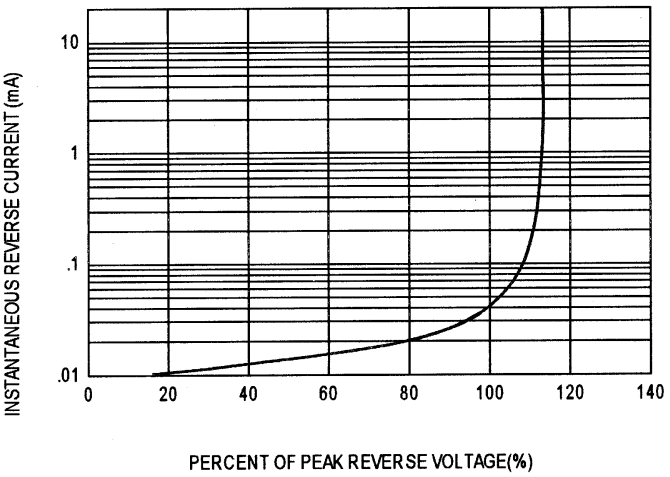



FIG-4 TYPICAL JUNCTION CAPACITANCE

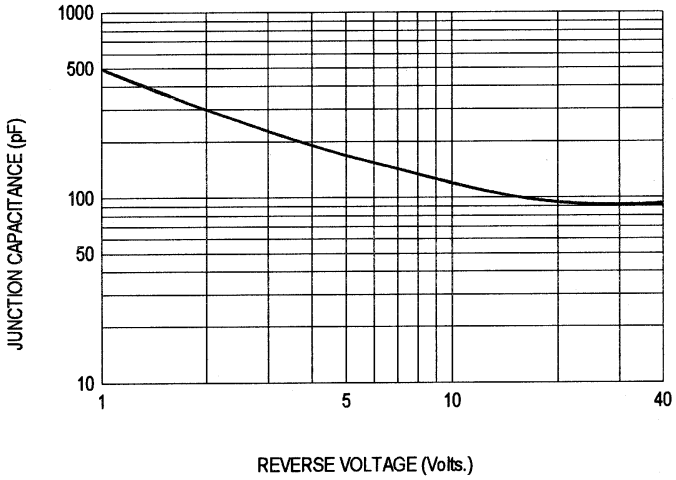
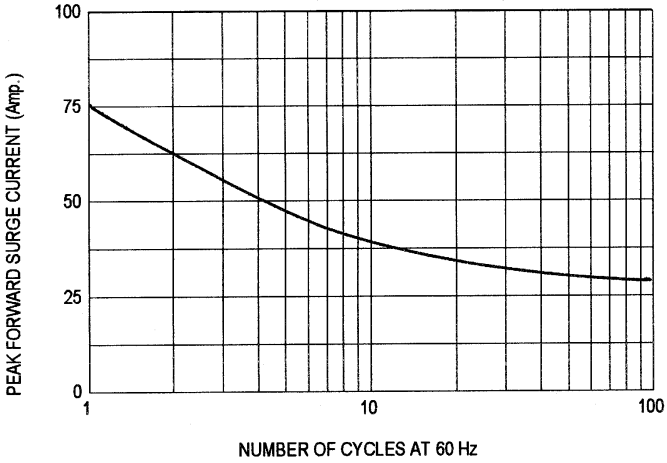



FIG-5 PEAK FORWARD SURGE CURRENT



# SR305 , SR306

FIG-1 FORWARD CURRENT DERATING CURVE

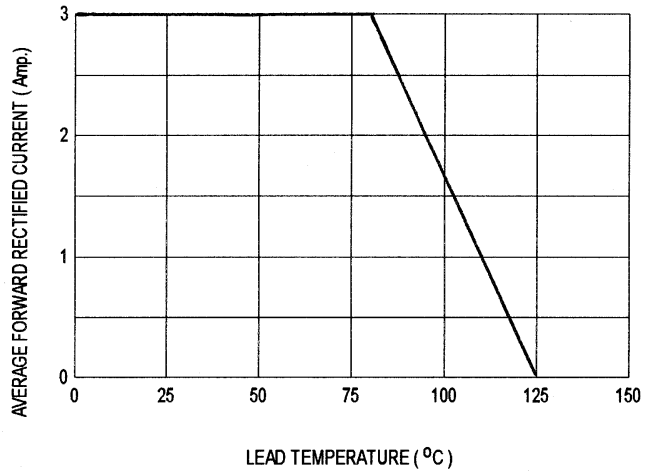



FIG-2 TYPICAL FORWARD CHARACTERISTICS

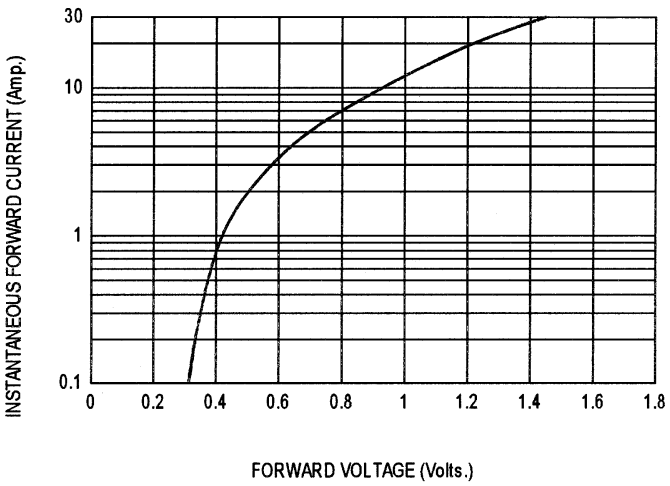



FIG-3 TYPICAL REVERSE CHARACTERISTICS

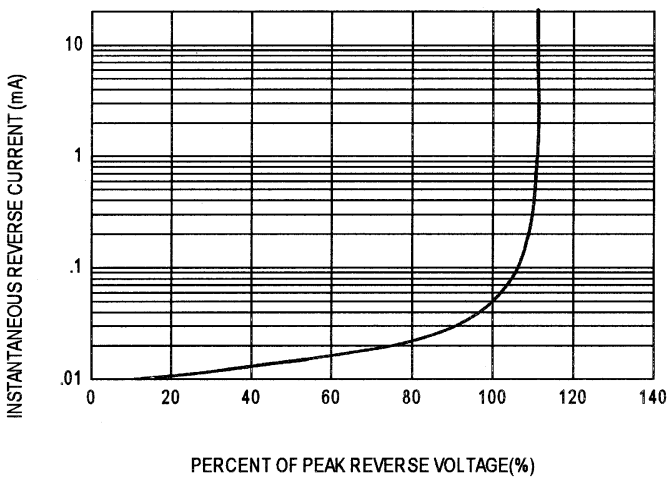



FIG-4 TYPICAL JUNCTION CAPACITANCE

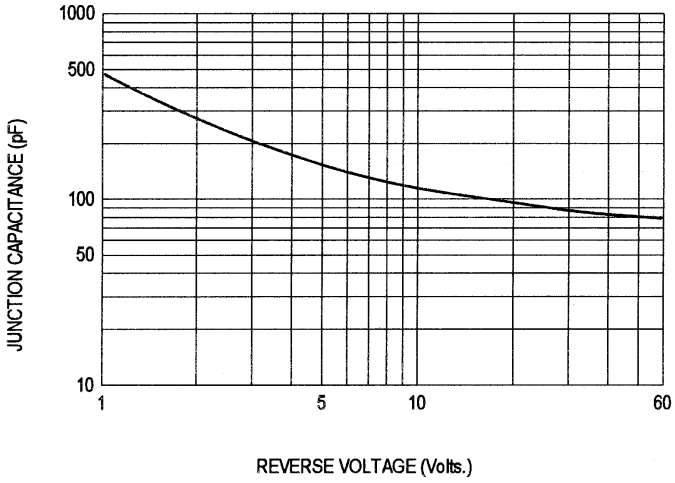



FIG-5 PEAK FORWARD SURGE CURRENT