

## 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°C Operating Junction Temperature
- \* Low Stored Charge Majority Carrier Conduction.
- \* Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-0
- \* Moisture Sensitivity Level: MSL-1



\* In compliance with EU RoHs 2002/95/EC directives  
The marking is indicated by part no. with. "M". ex:SR102M~SR106M

### MAXIMUM RATINGS

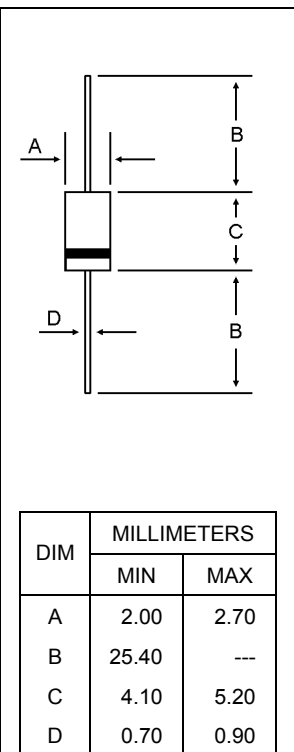
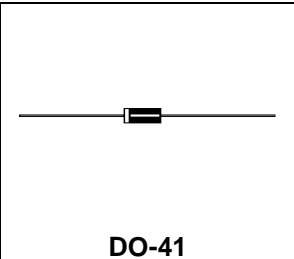
Characteristic	Symbol	SR102	SR103	SR104	SR105	SR106	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	$V_{RRM}$ $V_{RWM}$ $V_R$	20	30	40	50	60	V
RMS Reverse Voltage	$V_{R(RMS)}$	14	21	28	28	42	V
Average Rectifier Forward Current	$I_O$	1.0					A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase,60Hz )	$I_{FSM}$	40					A
Operating and Storage Junction Temperature Range	$T_J, T_{STG}$	-65 to +150					°C

### ELECTRIAL 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, $T_C = 25^\circ\text{C}$ ) (Rated DC Voltage, $T_C = 125^\circ\text{C}$ )	$I_R$	0.5 10					mA
Maximum Thermal Resistance Junction to Case	$R_{\theta JC}$	60					°C/W
Typical Junction Capacitance (Reverse Voltage of 4 volts & f=1 MHz)	$C_P$	90		80			pF

### SCHOTTKY BARRIER RECTIFIERS

**1.0 AMPERES  
20-60 VOLTS**



CASE---  
Transfer molded  
plastic

POLARITY---  
Cathode indicated  
polarity band

# SR102 Thru SR106

FIG-1 FORWARD CURRENT DERATING CURVE

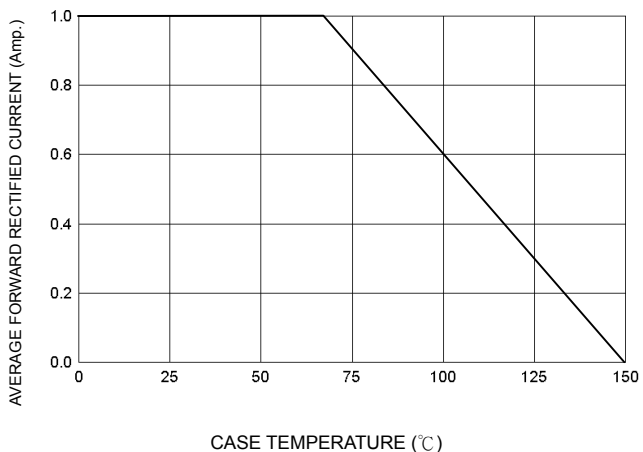


FIG-2 TYPICAL FORWARD CHARACTERISTICS

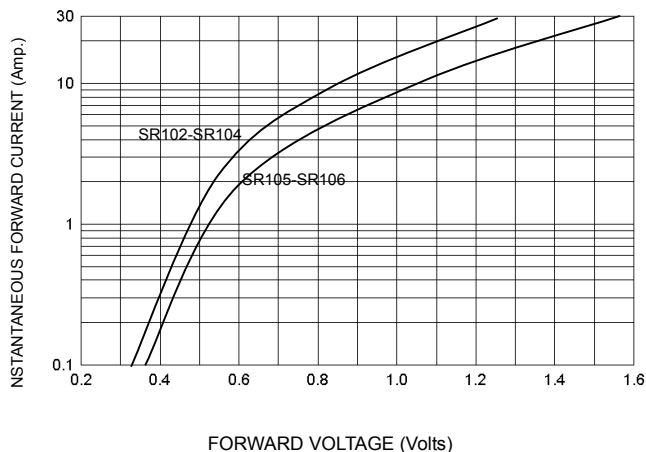


FIG-3 TYPICAL REVERSE CHARACTERISTICS

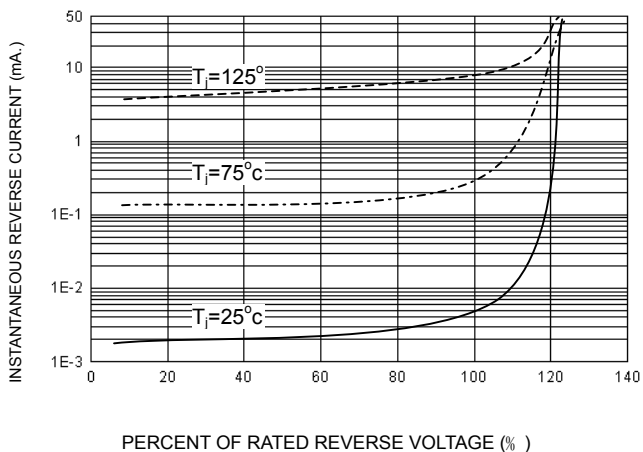


FIG-4 TYPICAL JUNCTION CAPACITANCE

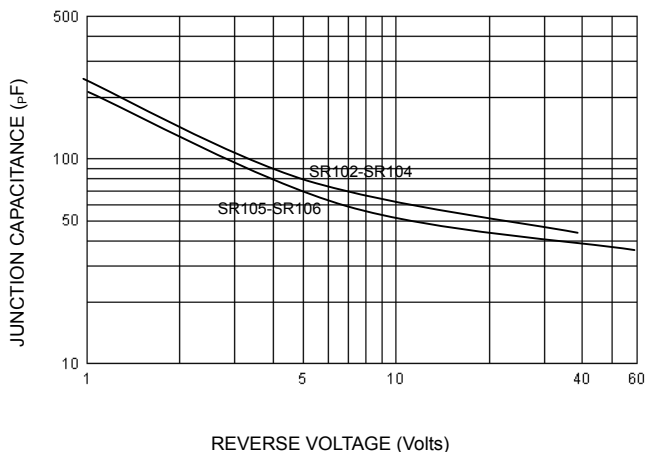


FIG-5 PEAK FORWARD SURGE CURRENT

