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.

SCHOTTKY BARRIER RECTIFIERS

5.0 AMPERES
20-60 VOLTS

DO-201AD

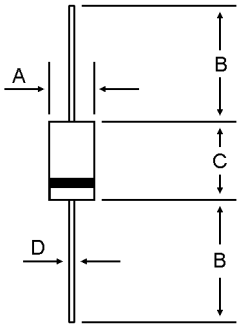
Features

- ∗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
- ∗Moisture Sensitivity Level: MSL-1

∗ESD: 5KV(Min.) Humen-Body Model

∗ *In compliance with EU RoHs 2002/95/EC directives*

The marking is indicated by part no. with. “M”. ex:SR502M~SR506M



DIM	MILLIMETERS	
	MIN	MAX
A	5.00	5.60
B	25.40	---
C	7.20	9.50
D	1.18	1.22

CASE---
Transfer molded plastic

POLARITY---
Cathode indicated polarity band

MAXIMUM RATINGS

Characteristic	Symbol	SR					Unit
		502	503	504	505	506	
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	$VR_{(RMS)}$	14	21	28	35	42	V
Average Rectifier Forward Current	I_O	5.0					A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions half-wave, single phase,60Hz)	I_{FSM}	150					A
Operating and Storage Junction Temperature Range	T_J , T_{STG}	-65 to +150					℃

ELECTRIAL CHARACTERISTICS

Characteristic	Symbol	SR					Unit
		502	503	504	505	506	
Maximum Instantaneous Forward Voltage (I_F =5.0 Amp)	V_F	0.550			0.700		V
Maximum Instantaneous Reverse Current (Rated DC Voltage, T_C = 25℃) (Rated DC Voltage, T_C = 125℃)	I_R	0.5 20					mA
Maximum Thermal Resistance from Junction to ambient	$R_{\theta JA}$	30					°C/W
Typical Junction Capacitance (Reverse Voltage of 4 volts & f=1 MHz)	C_P	340			320		pF

SR502 Thru SR506

FIG-1 FORWARD CURRENT DERATING CURVE

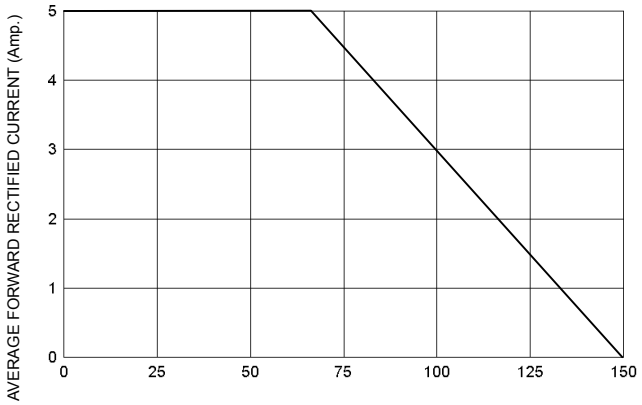


FIG-2 TYPICAL FORWARD CHARACTERISITICS

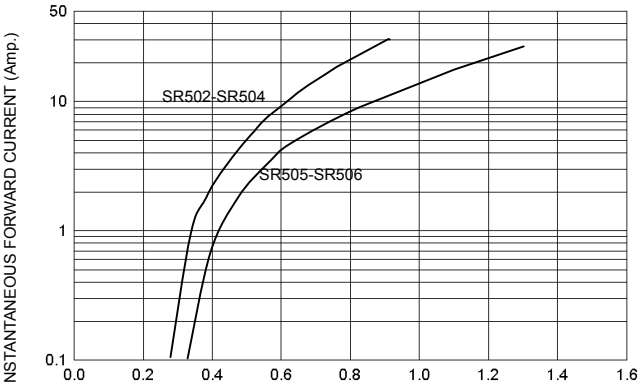


FIG-3 TYPICAL REVERSE CHARACTERISTICS

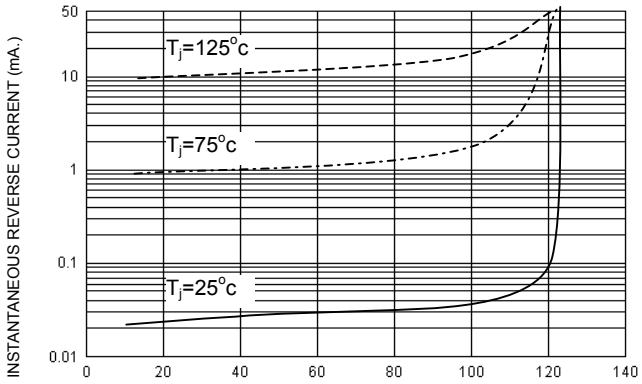


FIG-4 TYPICAL JUNCTION CAPACITANCE

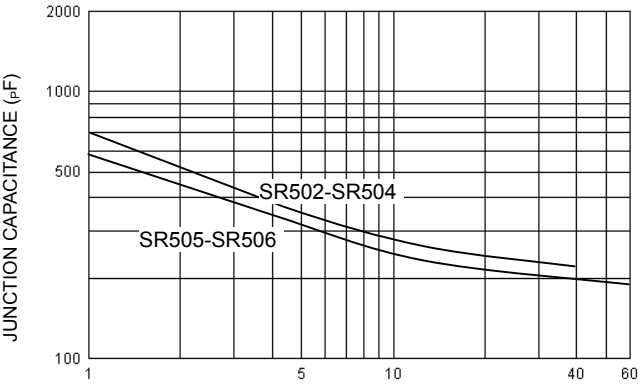


FIG-5 PEAK FORWARD SURGE CURRENT