

# SR520 - SR5100

## 5.0 AMPS. Schottky Barrier Rectifiers

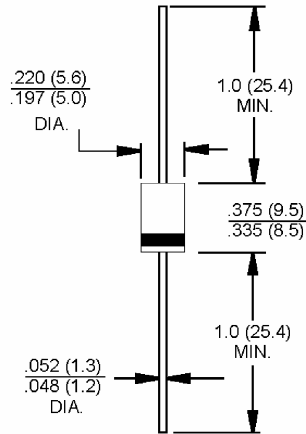
### DO-201AD



SM Technology Co., Limited

### Features

- ✧ Low power loss, high efficiency.
- ✧ High current capability, Low VF.
- ✧ High reliability
- ✧ High surge current capability.
- ✧ Epitaxial construction.
- ✧ Guard-ring for transient protection.
- ✧ For use in low voltage, high frequency inventor, free wheeling, and polarity protection application



### Mechanical Data

- ✧ Cases: DO-201AD molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Lead: Pure tin plated, lead free., solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: Color band denotes cathode
- ✧ High temperature soldering guaranteed: 260°C/10 seconds/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ✧ Weight: 1.1 grams

Dimensions in inches and (millimeters)

### Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Type Number	Symbol	SR 520	SR 530	SR 540	SR 550	SR 560	SR 58	SR 510	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	80	100	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	63	70	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	80	100	V
Maximum Average Forward Rectified Current See Fig. 1	$I_{(AV)}$	5.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	$I_{FSM}$	120							A
Maximum Instantaneous Forward Voltage @5.0A	$V_F$	0.55		0.70		0.85		V	
Maximum D.C. Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$	$I_R$	0.5			0.1			mA	
		15		10		5.0			
Typical Junction Capacitance (Note 2)	$C_j$	250		210		120		pF	
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	35			10			°C/W	
	$R_{\theta JC}$	2			2				
Operating Junction Temperature Range	$T_J$	-65 to +150							°C
Storage Temperature Range	$T_{STG}$	-65 to +150							°C

- Notes:
1. Mount on Cu-Pad Size 16mm x 16mm on P.C.B.
  2. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.



### RATINGS AND CHARACTERISTIC CURVES (SR502 THRU SR510)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

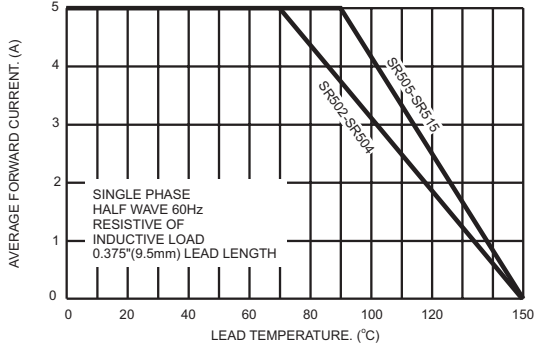


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

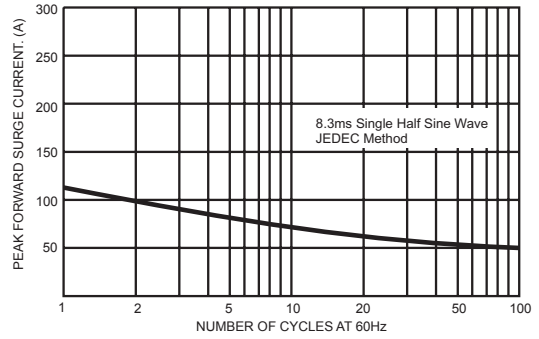


FIG.3- TYPICAL FORWARD CHARACTERISTICS

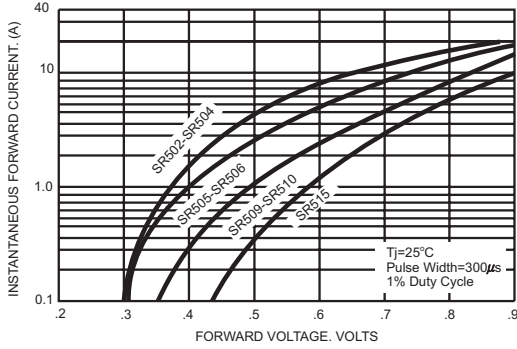


FIG.4- TYPICAL REVERSE CHARACTERISTICS

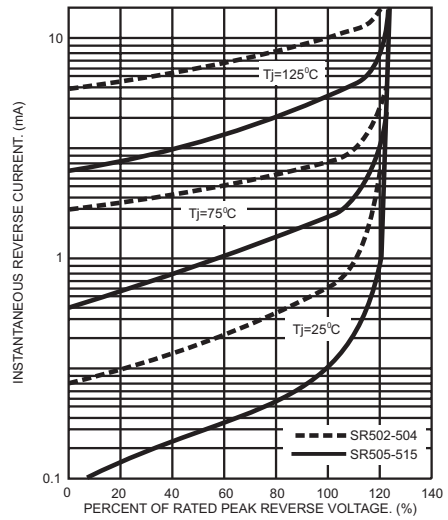


FIG.5- TYPICAL JUNCTION CAPACITANCE

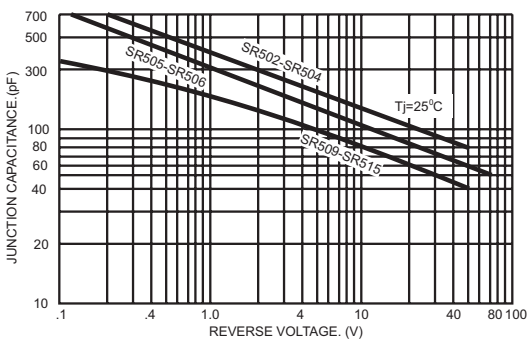


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

