



# SR502 THRU SR520

## 5.0 AMPS. Schottky Barrier Rectifiers



Voltage Range  
20 to 100 Volts  
Current  
5.0 Amperes

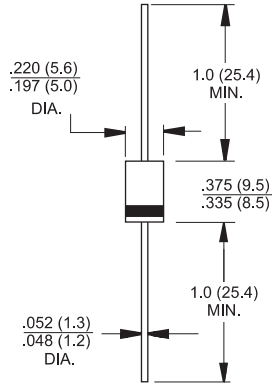
### Features

- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability

### Mechanical Data

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

### DO-201AD



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%

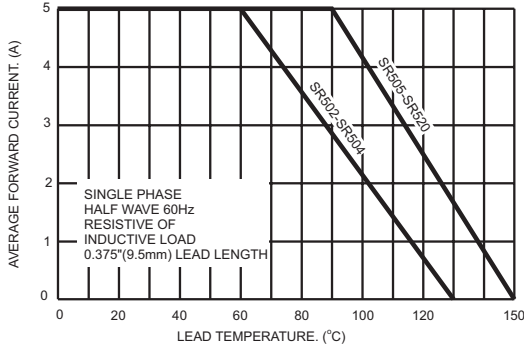
Type Number	Symbol	SR 502	SR 503	SR 504	SR 505	SR 506	SR 509	SR 510	SR 520	Units	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	90	100	200	V	
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	63	70	140	V	
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	90	100	200	V	
Maximum Average Forward 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)	$I_{FSM}$	200						150		A	
Maximum Instantaneous Forward Voltage @5.0A	$V_F$	0.55		0.70		0.85		1.05		V	
Maximum D.C. Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$	$I_R$	0.5 50				0.2 10		0.010 10		mA mA	
Typical Thermal Resistance (Note 1)	$R\theta_{JA}$ $R\theta_{JC}$	35 5				10 2				°C/W	
Typical Junction Capacitance (Note 2)	$C_j$	250		210		120				pF	
Operating Junction Temperature Range	$T_J$	-65 to +125			-65 to +150					°C	
Storage Temperature Range	TSTG	-65 to +150									°C

Notes: 1. Mount on Cu-Pad Size 16mm x 16mm on P.C.B.

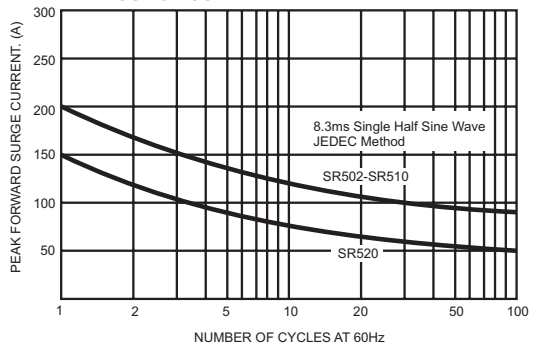
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

## RATINGS AND CHARACTERISTIC CURVES (SR502 THRU SR520)

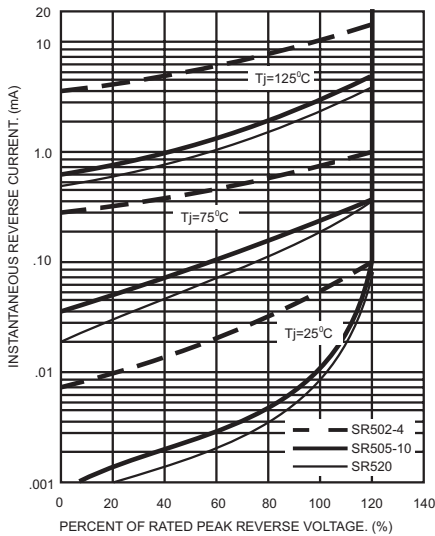
**FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE**



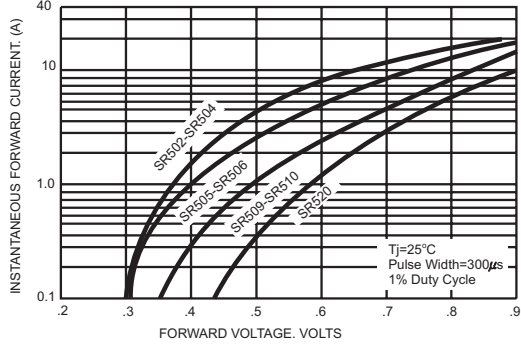
**FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



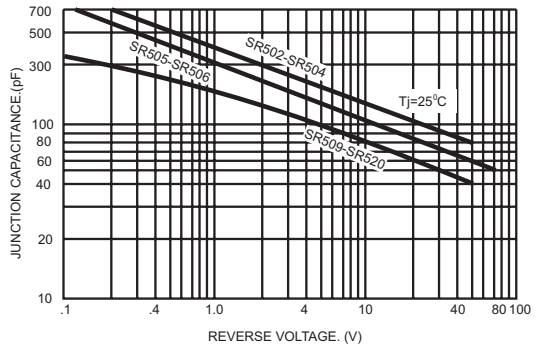
**FIG.3- TYPICAL REVERSE CHARACTERISTICS**



**FIG.4- TYPICAL FORWARD CHARACTERISTICS**



**FIG.5- TYPICAL JUNCTION CAPACITANCE**



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Datasheets for electronics components.