

# SR502 - SR520

## 5.0 AMPS. Schottky Barrier Rectifiers

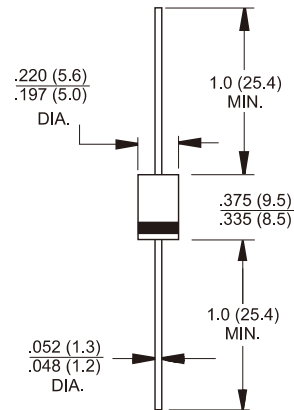
### DO-201AD

### 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 inverter, free wheeling, and polarity protection application
- ◇ Green compound with suffix "G" on packing code & prefix "G" on datecode.

### 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: 1.10 grams



Dimensions in inches and (millimeters)  
Marking Diagram



SR5XX = Specific Device Code  
G = Green Compound  
Y = Year  
WW = Work Week

### 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 515	SR 520	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	90	100	150	200	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	63	70	105	140	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	90	100	150	200	V
Maximum Average Forward Rectified Current Refer to Fig 1	$I_{F(AV)}$	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		1.05		V	
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$ (Note 1) @ $T_A=125^\circ\text{C}$	$I_R$	0.5			0.1						mA
		15			10						mA
		-						5		1	mA
Typical Junction Capacitance (Note 2)	$C_j$	250		210		120				pF	
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	35				35				$^\circ\text{C/W}$	
	$R_{\theta JC}$	6				6					
Operating Temperature Range	$T_J$	-65 to +150									$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +150									$^\circ\text{C}$

Notes: 1. Pulse Test with PW=300 usec, 1% Duty Cycle  
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.  
3: Mount on Cu-Pad Size 16 mm x 16 mm on P.C.B.

## RATINGS AND CHARACTERISTIC CURVES (SR502 THRU SR520)

