

# SR302 -SR320

## 3.0 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 and Prefix "G" on date code.

### Mechanical Data

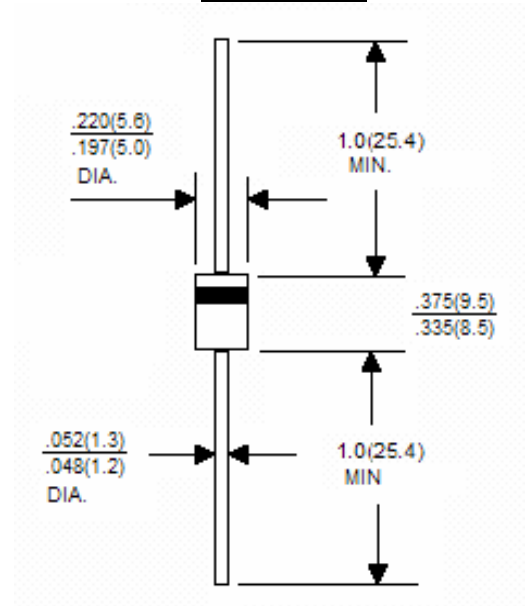
- ◇ Cases: Molded plastic
- ◇ Epoxy: UL 94V-O rate flame retardant
- ◇ Lead: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ◇ Polarity: Color band denotes cathode.
- ◇ High temperature soldering guaranteed: 260°C/10 seconds  
/.375", (9.5mm) lead lengths at 5 lbs., (2.3kg)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

### 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%



### Dimensions in inches and (millimeters)

#### Marking Diagram



- SR30X = Specific Device Code
- G = Green Compound
- Y = Year
- WW = Work Week

Type Number	Symbol	SR 302	SR 303	SR 304	SR 305	SR 306	SR 309	SR 310	SR 315	SR 320	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	$I_{(AV)}$	3.0									A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	$I_{FSM}$	80									A
Maximum Instantaneous Forward Voltage @ 3.0A	$V_F$	0.55		0.7		0.85		0.95		V	
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$	$I_R$	0.5 10		0.5 5		0.1 2.0		mA			
Typical Junction Capacitance (Note 2)	$C_j$	160		130		90		pF			
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$ $R_{\theta JC}$	50 15									$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	-65 to +150									$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-65 to +150									$^\circ\text{C}$

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

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

## RATINGS AND CHARACTERISTIC CURVES (SR302 - SR320)

FIG.1 Maximum Forward Current Derating Curve

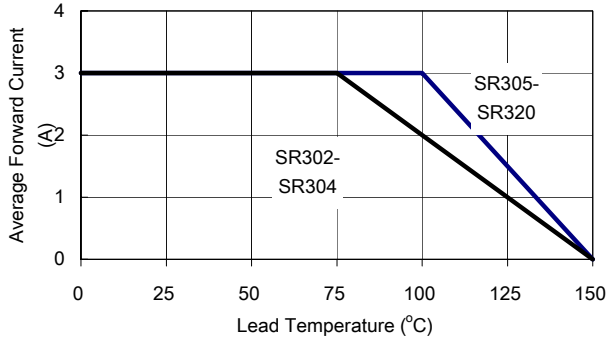


FIG 2 Maximum Forward Surge Current

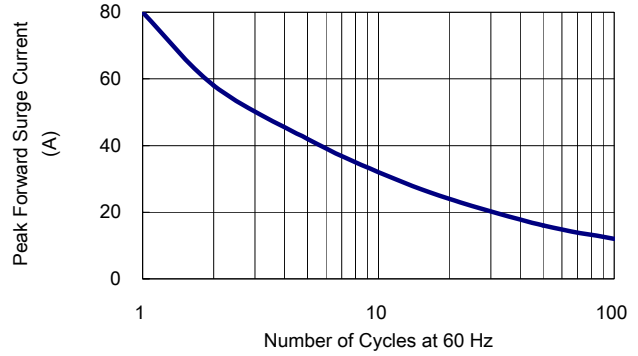


FIG 3 Typical Forward Characteristics

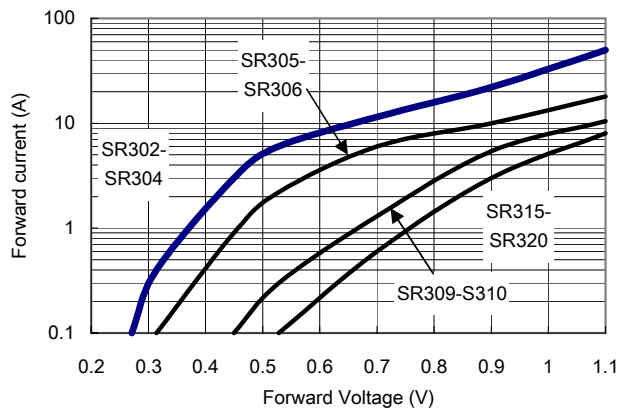


FIG 4 Typical Reverse Characteristics

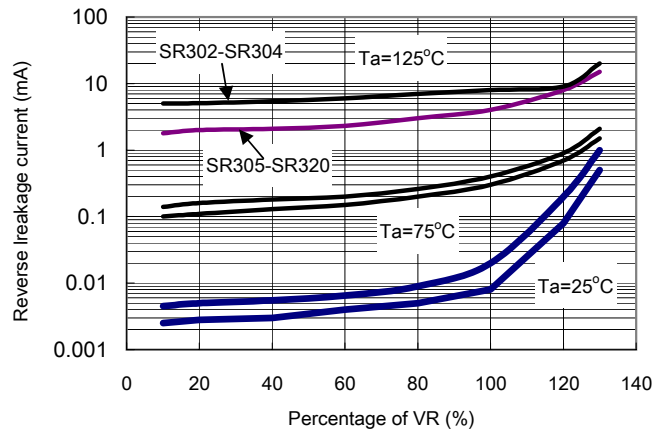


FIG 5 Typical Junction Capacitance

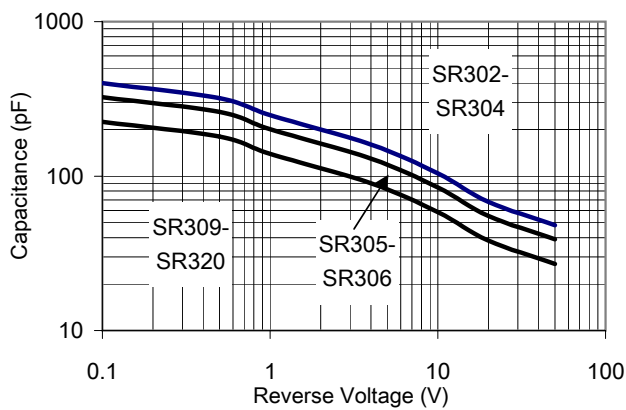


FIG 6 Typical Transient Thermal Resistance

