

SR502 - SR520

5.0AMPS. Schottky Barrier Rectifiers

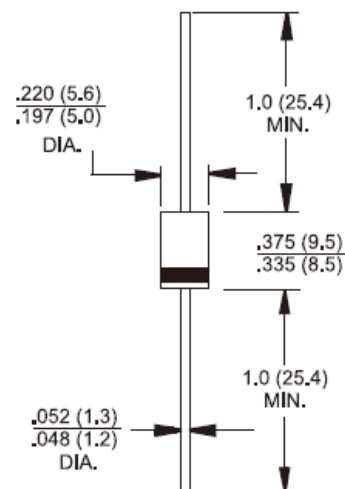
DO-201AD

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									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 (Note 1) @ 5 A	V _F	0.55			0.70		0.85		1.05		V	
Maximum DC Reverse Current @ T _A =25 °C at Rated DC Blocking Voltage @ T _A =100 °C @ T _A =125°C	I _R	0.5					0.1				mA	
		15			10		-					
		-					5		1			
Typical Junction Capacitance (Note 2)	C _j	250			210		120					pF
Typical Thermal Resistance (Note 3)	R _{θJA} R _{θJC}	35 6									°C/W	
Operating Junction Temperature Range	T _J	- 65 to + 150									°C	
Storage Temperature Range	T _{STG}	- 65 to + 150									°C	

Note1: Pulse Test with PW=300 usec, 1% Duty cycle

Note2: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

Note3: Mount on Cu-Pad Size 16mm × 16mm on P.C.B.

RATINGS AND CHARACTERISTIC CURVES (SR502 THRU SR520)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

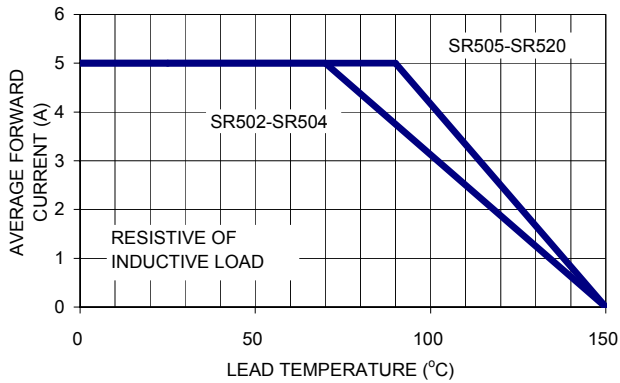


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

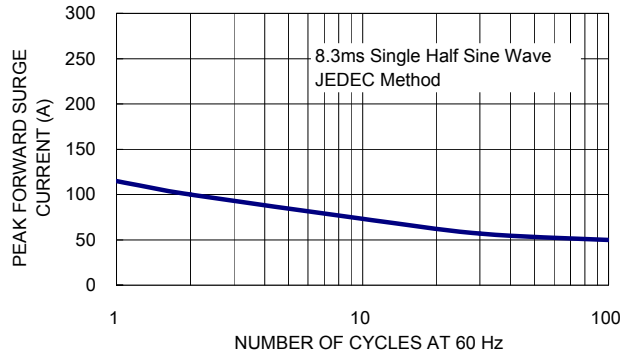


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

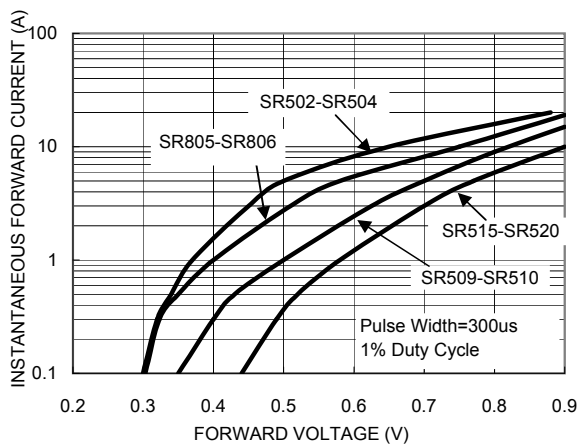


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

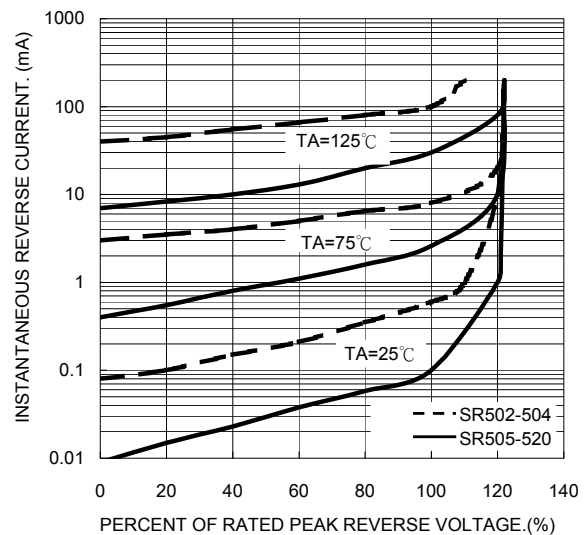


FIG. 5- TYPICAL JUNCTION CAPACITANCE

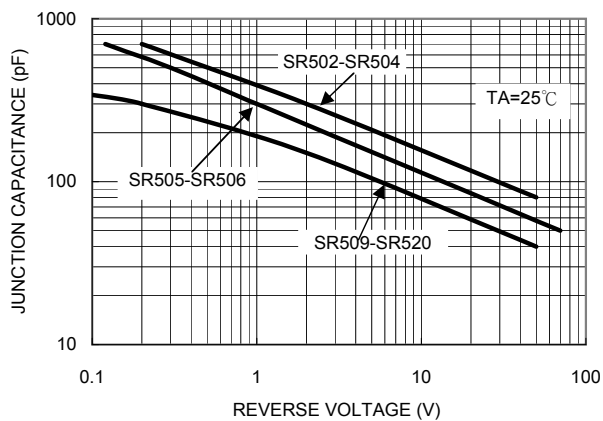


FIG. 6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

