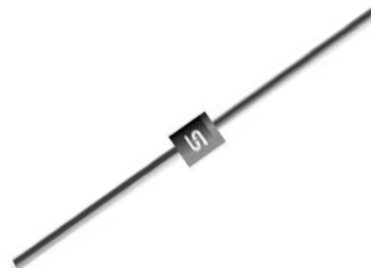


Features

- ✧ 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
1/375", (9.5mm) lead lengths at 5 lbs, (2.3kg) tension
- ✧ Weight: 1.10 grams

Ordering Information (example)

Part No.	Package	Packing	INNER TAPE	Packing code	Green Compound Packing code
SR502	DO-201AD	500 / AMMO box	52mm	A0	A0G

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	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	R _{θJA}	35									°C/W	
	R _{θJC}	6										
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.

RATINGS AND CHARACTERISTIC CURVES (SR502 THRU SR520)

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

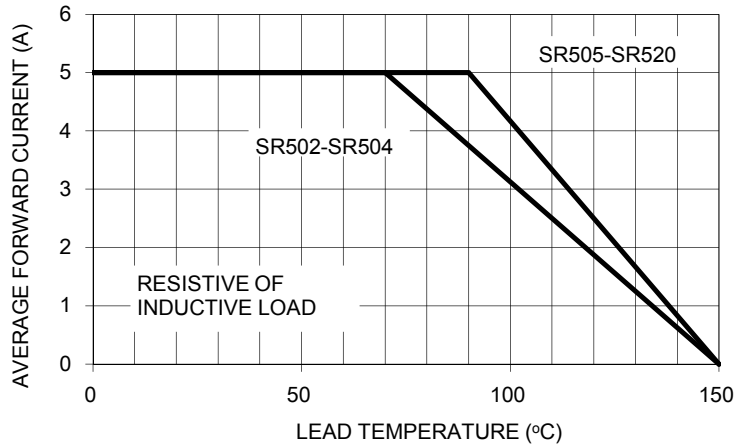


FIG. 2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

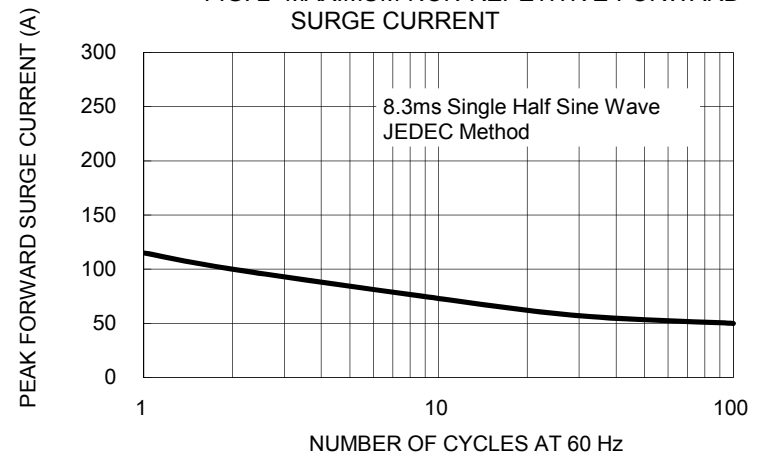


FIG. 3- TYPICAL FORWARD CHARACTERISTICS

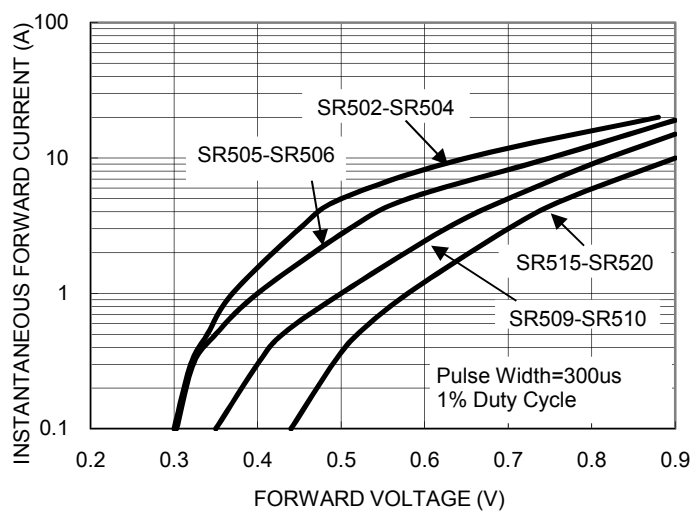


FIG. 4- TYPICAL REVERSE CHARACTERISTICS

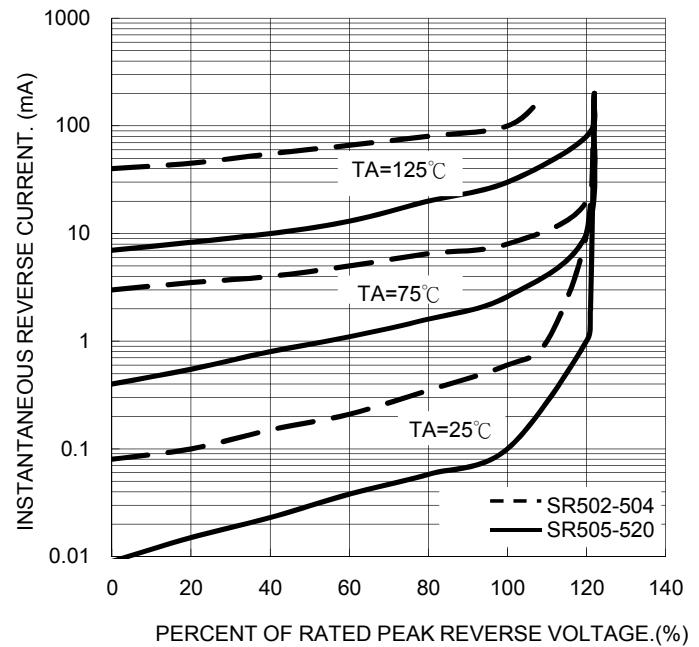


FIG. 5- TYPICAL JUNCTION CAPACITANCE

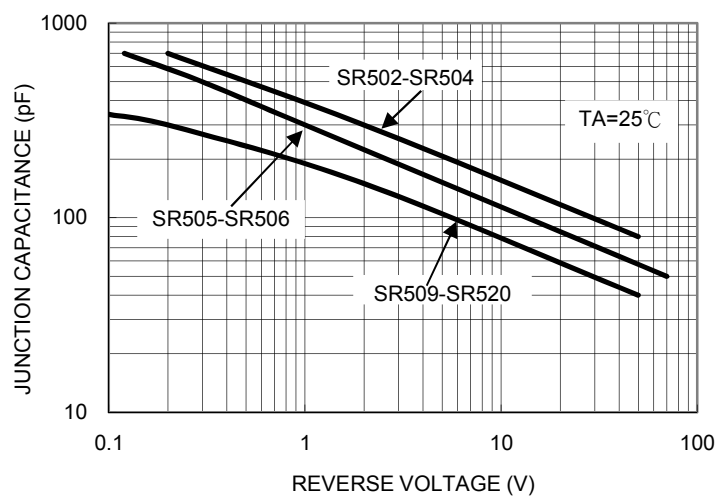
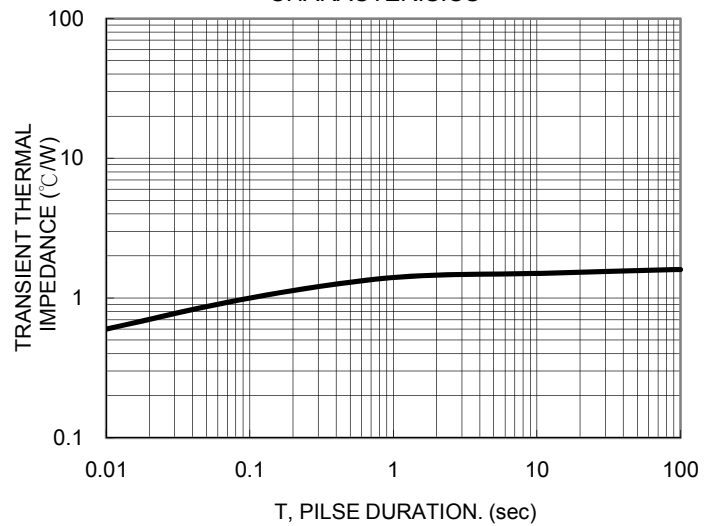


FIG. 6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

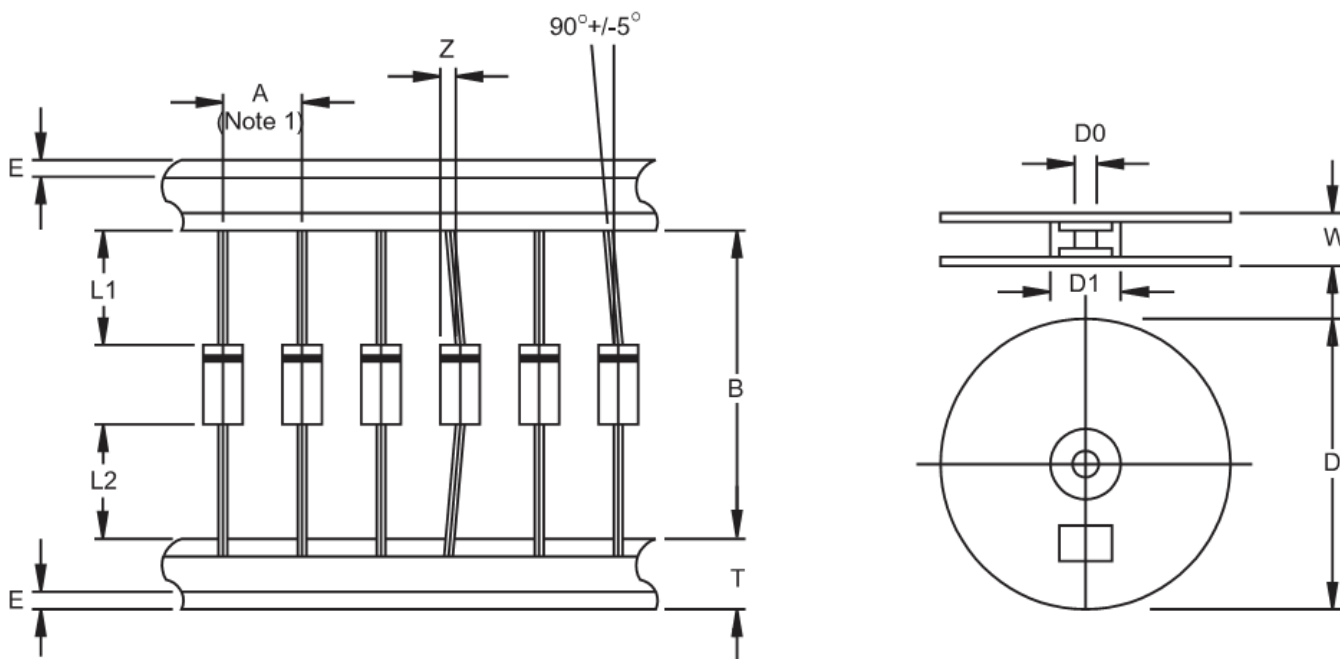


Ordering information

Part No.	Package	Packing	INNER TAPE	Packing code	Green Compound Packing code
SR5xx (Note)	DO-201AD	500 / AMMO box	52mm	A0	A0G
	DO-201AD	1.25K / 13" Reel	52mm	R0	R0G
	DO-201AD	500 / Bulk packing		B0	B0G
	DO-201AD	500 / Bulk packing		X0	X0G

Note: "xx" is Device Code from "02" thru "20".

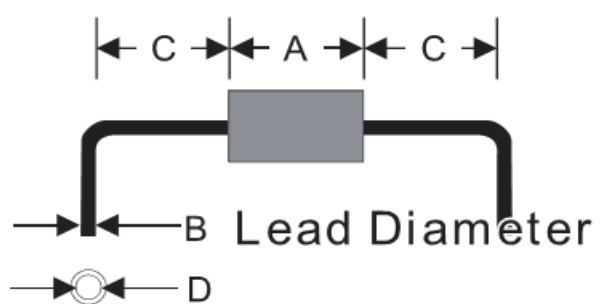
AXIAL LEAD TAPING SPECIFICATIONS



Outline	A	B	Z	T	E	L1-L2	D	D1	D0	W
	±0.5	±1.5	MAX	±0.4	MAX	MAX		±0.3	±0.4	±1.0
DO-201AD	10	52.4	1.2	6	0.8	1	330	85.7	16.6	76

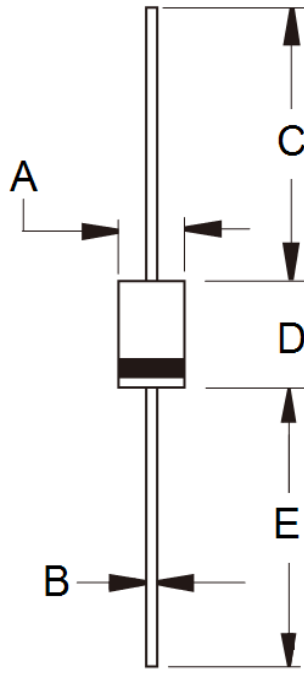
Unit (mm)

Suggested Mounting Hole Rule



Symbol	Unit(mm)
A	9.0
B	1.2
C	4.0
D	1.6

Dimensions



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	5.00	5.60	0.197	0.220
B	1.20	1.30	0.048	0.052
C	25.40	-	1.000	-
D	8.50	9.50	0.335	0.375
E	25.40	-	1.000	-

Marking Diagram



P/N = Specific Device Code
 G = Green Compound
 YWW = Date Code

Mouser Electronics

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[SR503](#) [SR505](#) [SR506](#) [SR504](#) [SR502](#) [SR509](#) [SR515](#) [SR510](#) [SR520 R0](#)