

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 as Bypass diode in Solar application.
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode.



Mechanical Data

- ✧ Cases: 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

Ordering Information (example)

Part No.	Package	Packing	INNER TAPE	Packing code	Green Compound Packing code
SR1202	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	SR1202	SR1203	SR1204	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	30	40	V
Maximum RMS Voltage	V_{RMS}	14	21	28	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	V
Maximum Average Forward Rectified Current.	$I_{F(AV)}$	12			A
Repetitive Peak Forward Current $f > 15\text{Hz}$	I_{FRM}	55			A
Peak Forward Surge Current, 50/60 Hz Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	280 / 320			A
Maximum Instantaneous Forward Voltage @5 A @ $T_A=25^\circ\text{C}$ (Note 1) @12 A	V_F	0.45 0.55			V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=100^\circ\text{C}$	I_R	500 20			μA mA
Rating for fusing $t < 10\text{ms}$ @ $T_A=25^\circ\text{C}$	I^2t	390			A^2S
Maximum Thermal Resistance	$R_{\theta JA}$ $R_{\theta JL}$	24 3			$^\circ\text{C/W}$
Junction Temperature Range - in DC forward mode	T_J	- 50 to + 150 ≤ 200			$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 50 to + 175			$^\circ\text{C}$

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

RATINGS AND CHARACTERISTIC CURVES (SR1202 THRU SR1204)

FIG.1 FORWARD CURRENT DERATING CURVE

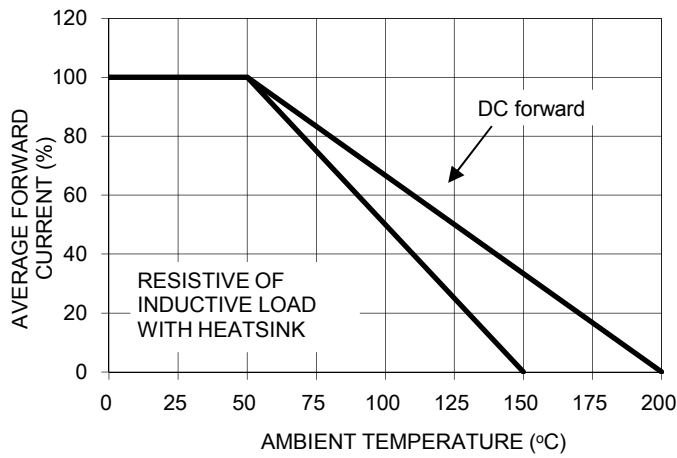


FIG. 2 MAXIMUM FORWARD SURGE CURRENT

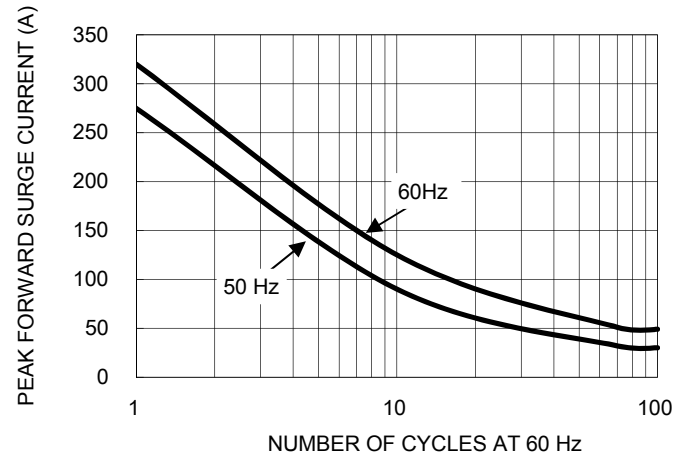


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

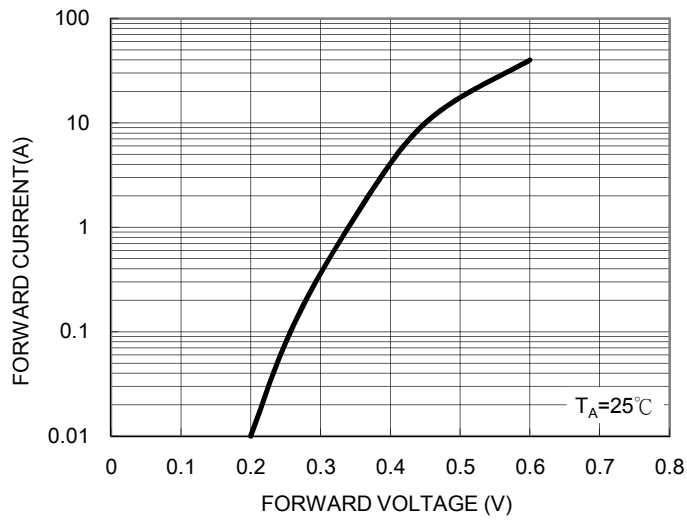


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

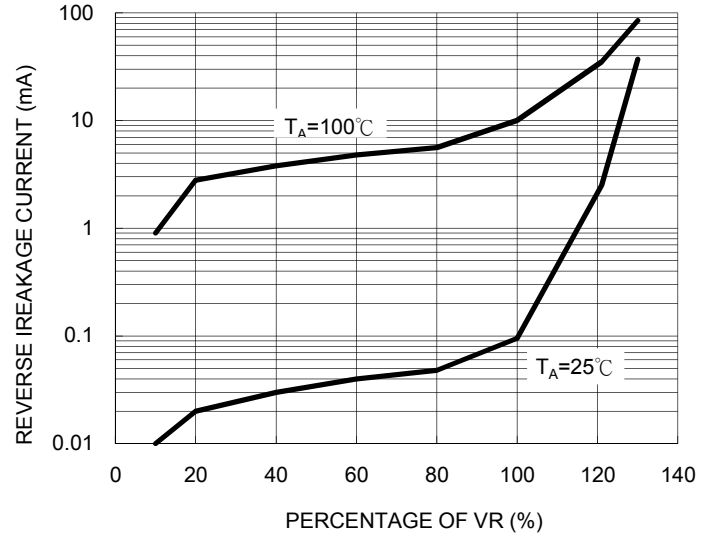


FIG. 5 TYPICAL JUNCTION CAPACITANCE

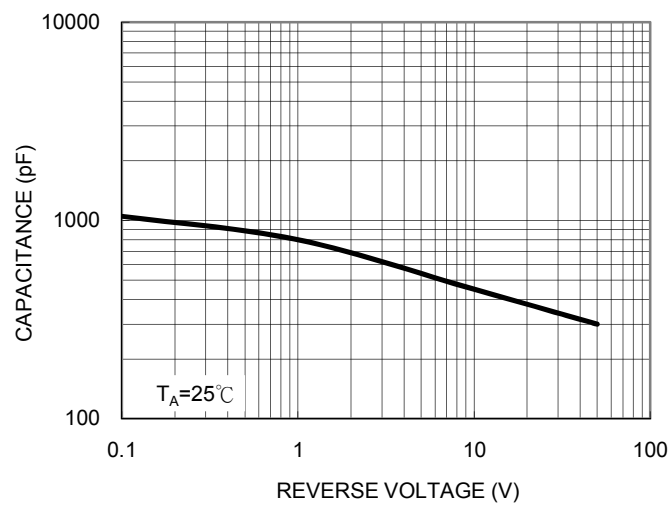
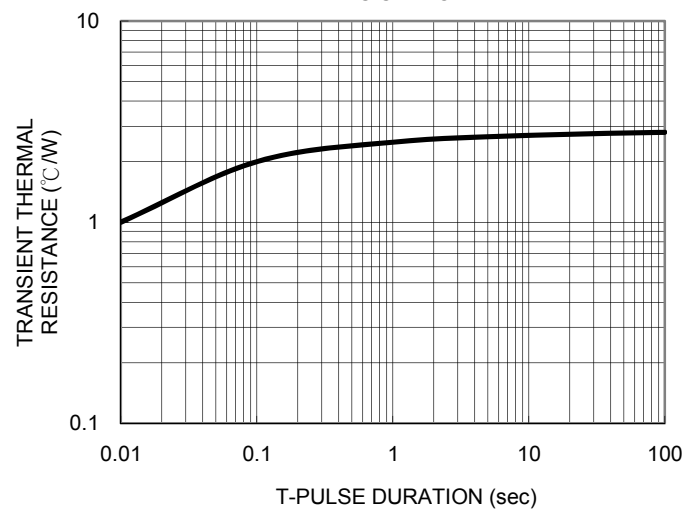


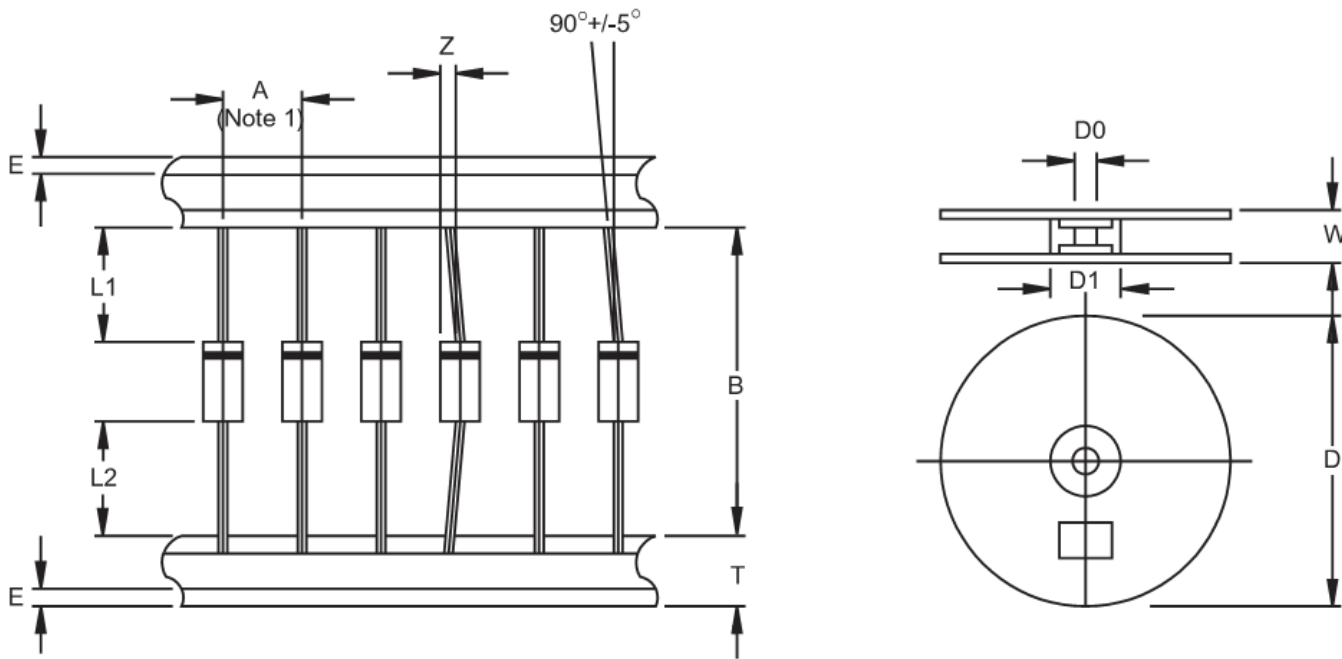
FIG. 6 TYPICAL TRANSIENT THERMAL RESISTANCE



Ordering information

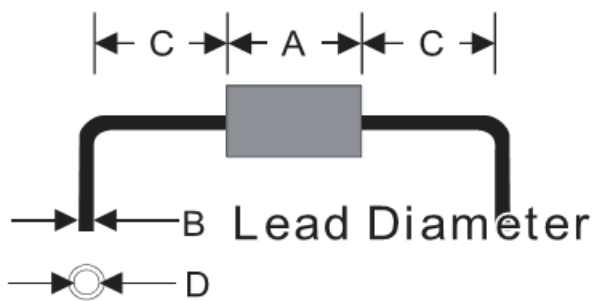
Part No.	Package	Packing	INNER TAPE	Packing code	Green Compound Packing code
SR12xx (Note)	DO-201AD	500 / AMMO box	52mm	A0	A0G
	DO-201AD	1.25K / 13" Reel	52mm	R0	R0G
	DO-201AD	500 / Bulk packing		B0	B0G
	DO-201AD	500 / Bulk packing		X0	X0G

Note: "xx" is Device Code from "02" thru "04".

AXIAL LEAD TAPING SPECIFICATIONS


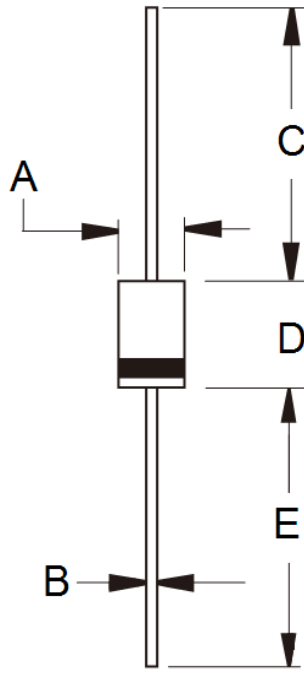
Outline	A	B	Z	T	E	L1-L2	D	D1	D0	W
		±0.5	±1.5	MAX	±0.4	MAX	MAX		±0.3	±0.4
DO-201AD	10	52.4	1.2	6	0.8	1	330	85.7	16.6	76

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