

### 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: 1.70 grams

### Ordering Information (example)

Part No.	Package	Packing	INNER TAPE	Packing code	Green Compound Packing code
SR1502	R-6	700 / 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	SR1502	SR1503	SR1504	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. R-load	$I_{F(AV)}$	15			A
Repetitive Peak Forward Current $f > 15\text{Hz}$	$I_{FRM}$	60			A
Peak Forward Surge Current, 50/60 Hz Single Half Sine-wave Superimposed on Rated Load (JEDEC Method )	$I_{FSM}$	300 / 340			A
Maximum Instantaneous Forward Voltage @5 A @ $T_A=25^\circ\text{C}$ (Note 1) @15 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			uA mA
Rating for fusing $t < 10\text{ms}$ @ $T_A=25^\circ\text{C}$	$I^2t$	390			A <sup>2</sup> S
Maximum Thermal Resistance	$R_{\theta JA}$ $R_{\theta JL}$	25 2.5			°C/W
Junction Temperature Range - in DC forward mode	$T_J$	- 50 to + 150 <=200			°C
Storage Temperature Range	$T_{STG}$	- 50 to + 175			°C

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

RATINGS AND CHARACTERISTIC CURVES (SR1502 THRU SR1504)

FIG.1 RATED FORWARD CURRENT VS AMBIENT TEMP. CURVE

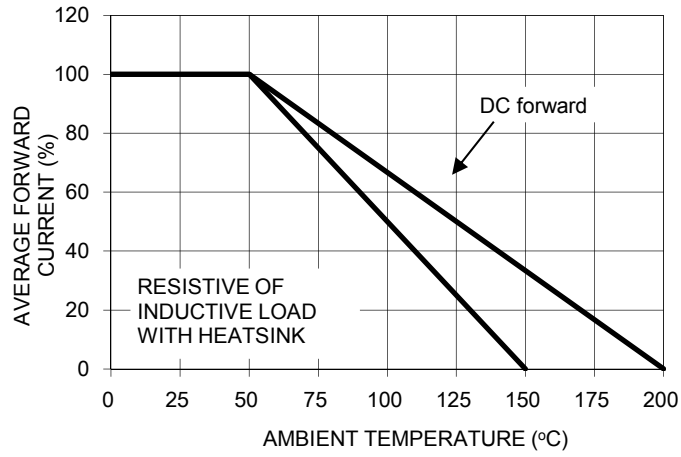


FIG. 2 MAXIMUM FORWARD SURGE CURRENT

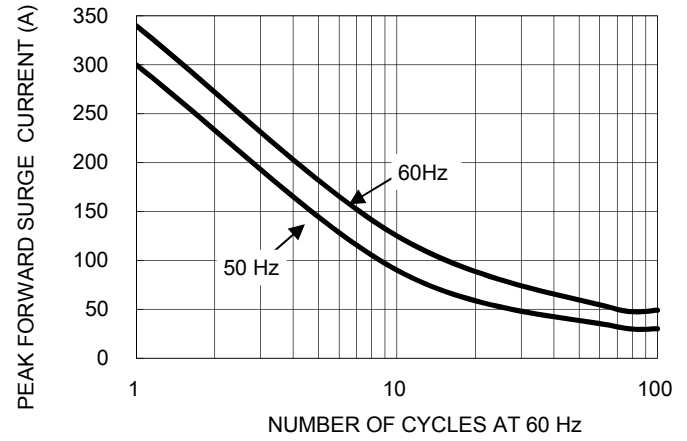


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

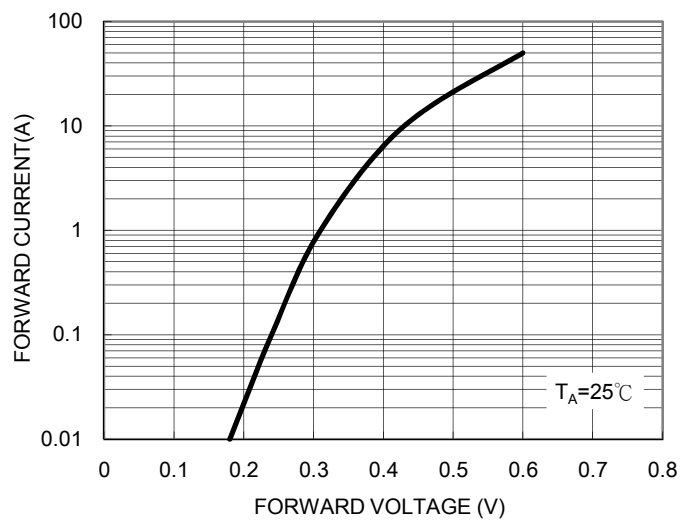


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

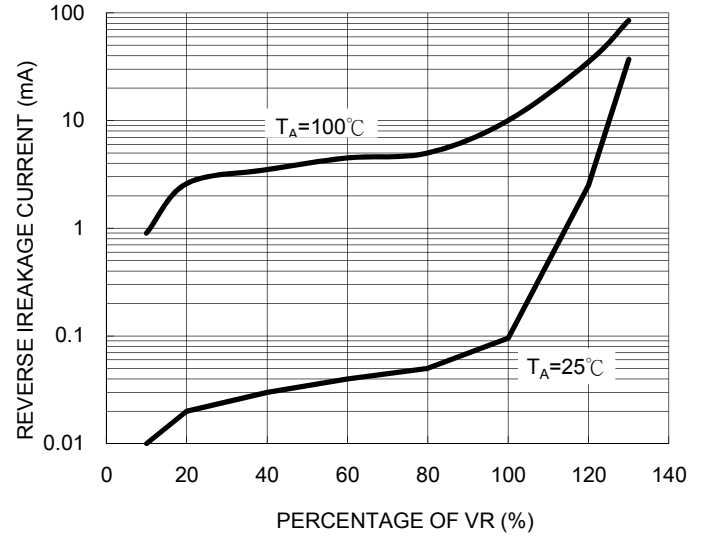


FIG. 5 TYPICAL JUNCTION CAPACITANCE

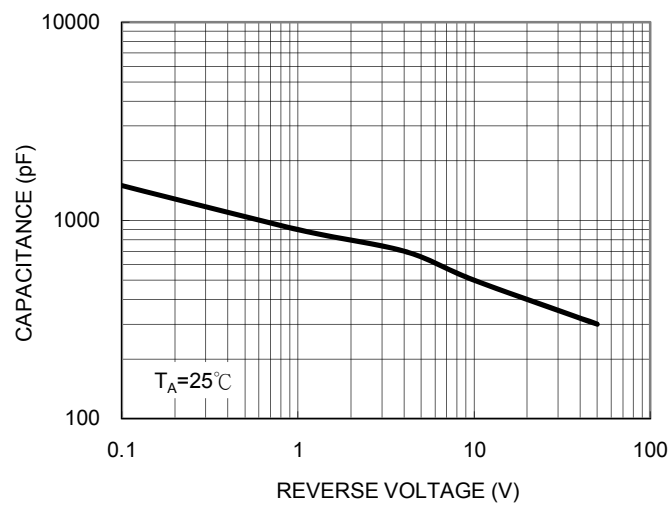
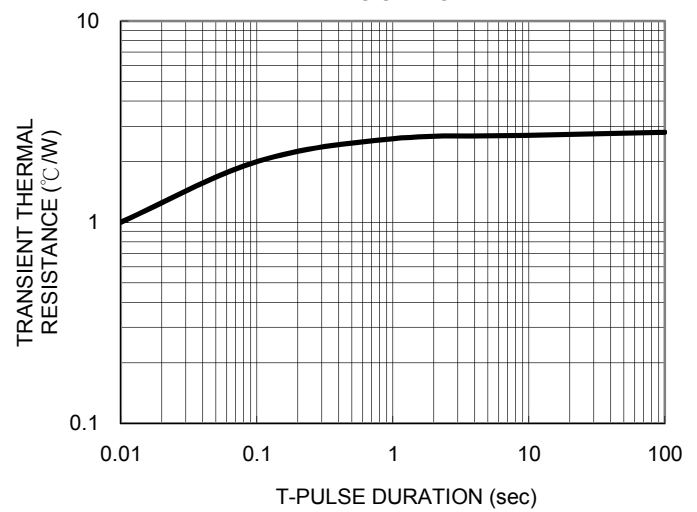


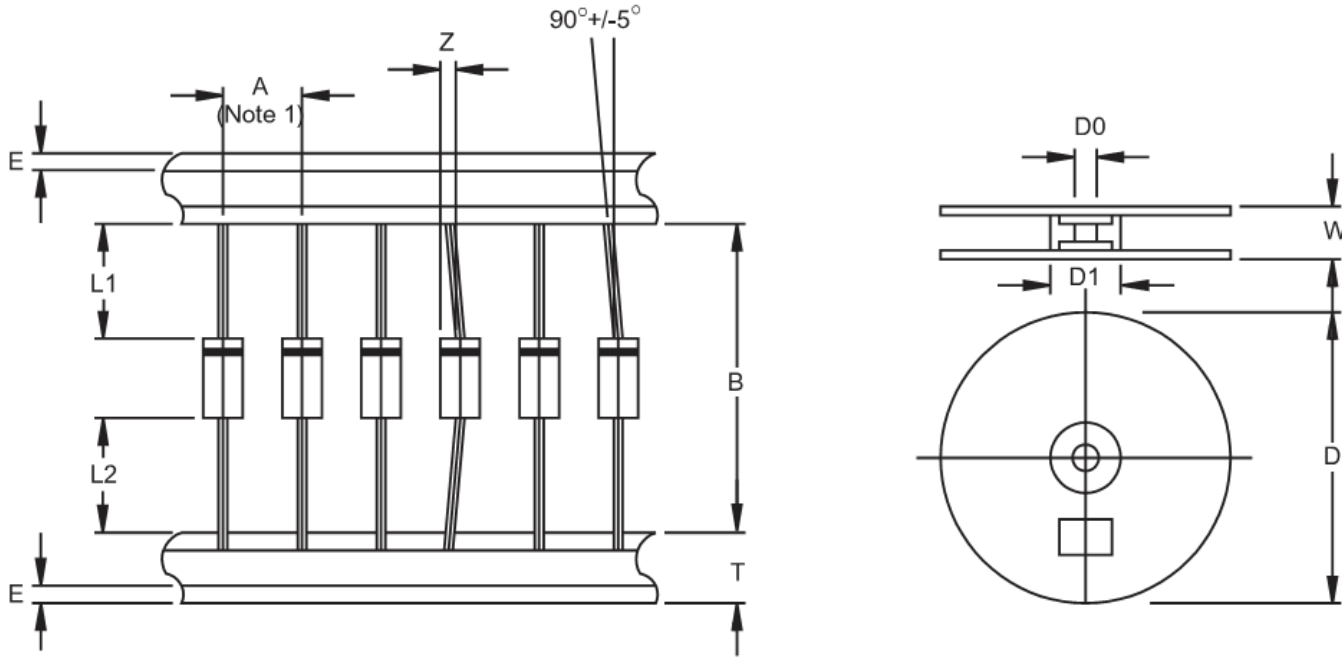
FIG. 6 TYPICAL TRANSIENT THERMAL RESISTANCE



**Ordering information**

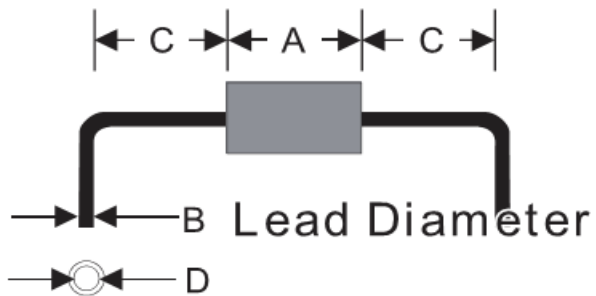
Part No.	Package	Packing	INNER TAPE	Packing code	Green Compound Packing code
SR15xx (Note)	R-6	700 / AMMO box	52mm	A0	A0G
	R-6	1 K / 13" Reel	52mm	R0	R0G
	R-6	400 / Bulk packing		B0	B0G

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

**AXIAL LEAD TAPING SPECIFICATIONS**


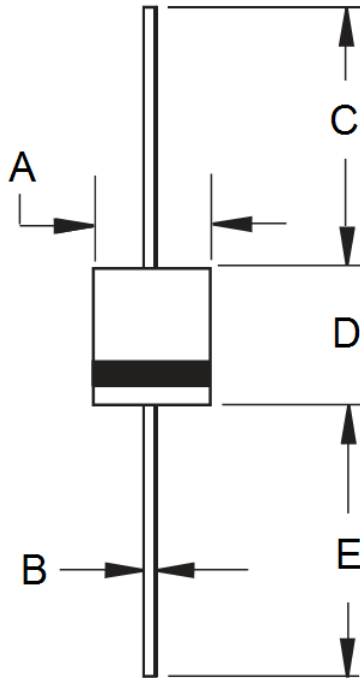
Outline	A	B	Z	T	E	L1-L2	D	D1	D0	W
		±0.5	±1.5	MAX	±0.4	MAX	MAX		±0.3	±0.4
R-6	10	52.4	1.2	6	0.8	1	330	85.7	16.6	76

Unit (mm)

**Suggested Mounting Hole Rule**


Symbol	Unit(mm)
A	8.9
B	1.3
C	4.0
D	1.5

**Dimensions**



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	6.80	7.20	0.268	0.283
B	1.20	1.30	0.047	0.051
C	25.40	-	1.000	-
D	8.60	9.10	0.339	0.358
E	25.40	-	1.000	-

**Marking Diagram**



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