

Features

- ✧ High efficiency, low VF
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Low power loss.
- ✧ 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

- ✧ Case: 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
- ✧ Mounting position: Any
- ✧ Weight: 1.2 grams

Ordering Information (example)

Part No.	Package	Packing	INNER TAPE	Packing code	Packing code (Green)
SF41G	DO-201AD	500 / AMMO box	52mm	A0	A0G

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

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Parameter	Symbol	SF 41G	SF 42G	SF 43G	SF 44G	SF 45G	SF 46G	SF 47G	SF 48G	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	350	420	V
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current	I _{F(AV)}	4								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-Wave Supperimposed on Rated Load (JEDEC Method)	I _{FSM}	125								A
Maximum Instantaneous Forward Voltage (Note 1) @ 4 A	V _F	1.0				1.3		1.7		V
Maximum DC Reverse Current at Rated DC Blocking Voltage @ T _A =25 °C @ T _A =125 °C	I _R	5 500								uA uA
Maximum Reverse Recovery Time (Note 2)	T _{rr}	35								nS
Typical Junction Capacitance (Note 3)	C _j	100				80				pF
Thermal Resistance	R _{θJA}	25								°C/W
Operating Temperature Range	T _J	- 55 to + 150								°C
Storage Temperature Range	T _{STG}	- 55 to + 150								°C

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

Note 2: Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

RATINGS AND CHARACTERISTIC CURVES (SF41G THRU SF48G)

FIG.1- MAXIMUM AVERAGE FORWARD CURRENT DERATING

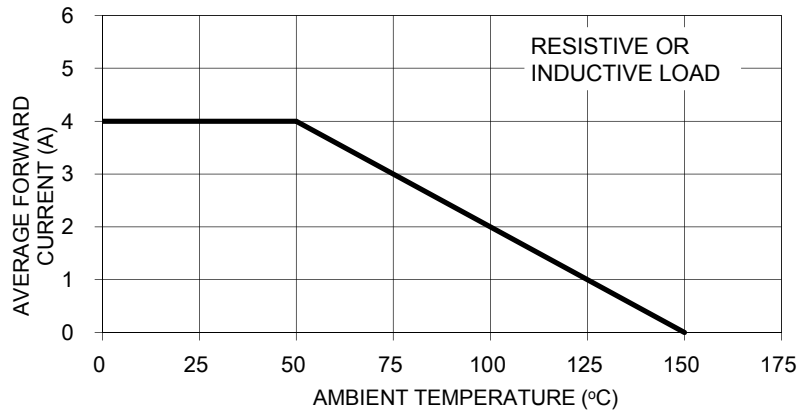


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

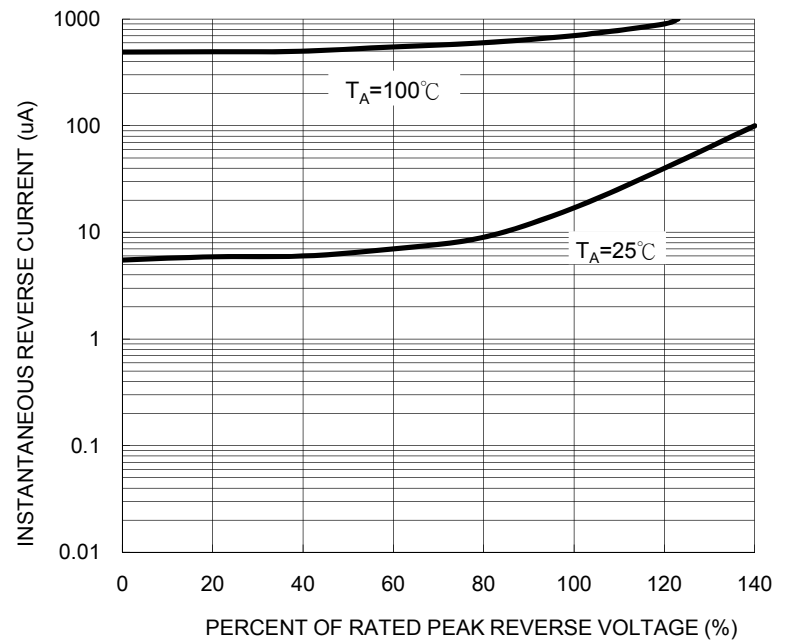


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

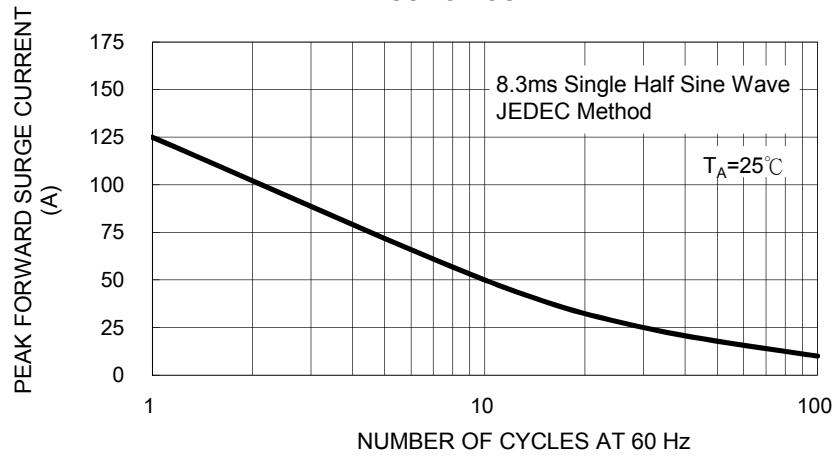


FIG.5- TYPICAL FORWARD CHARACTERISTICS

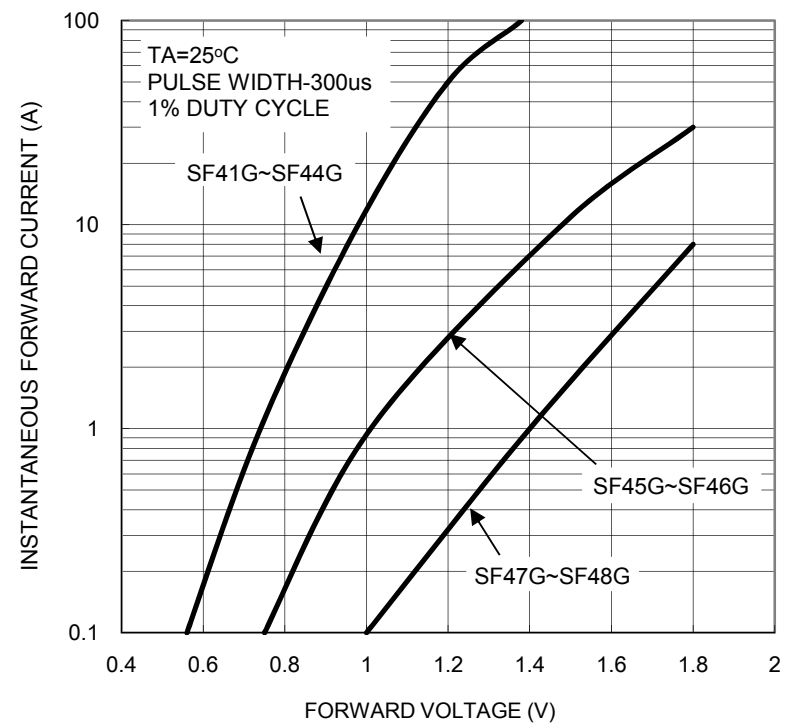


FIG. 4- TYPICAL JUNCTION CAPACITANCE

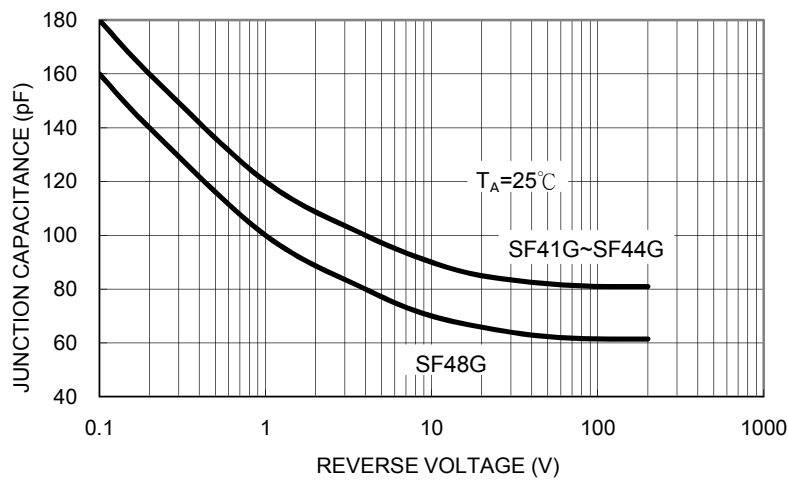
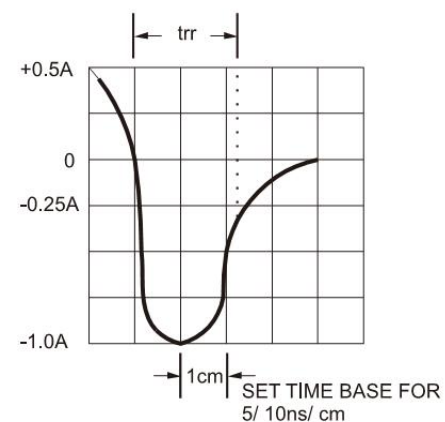
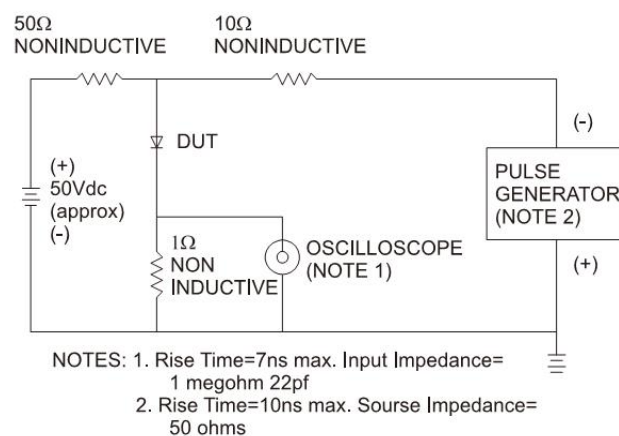


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

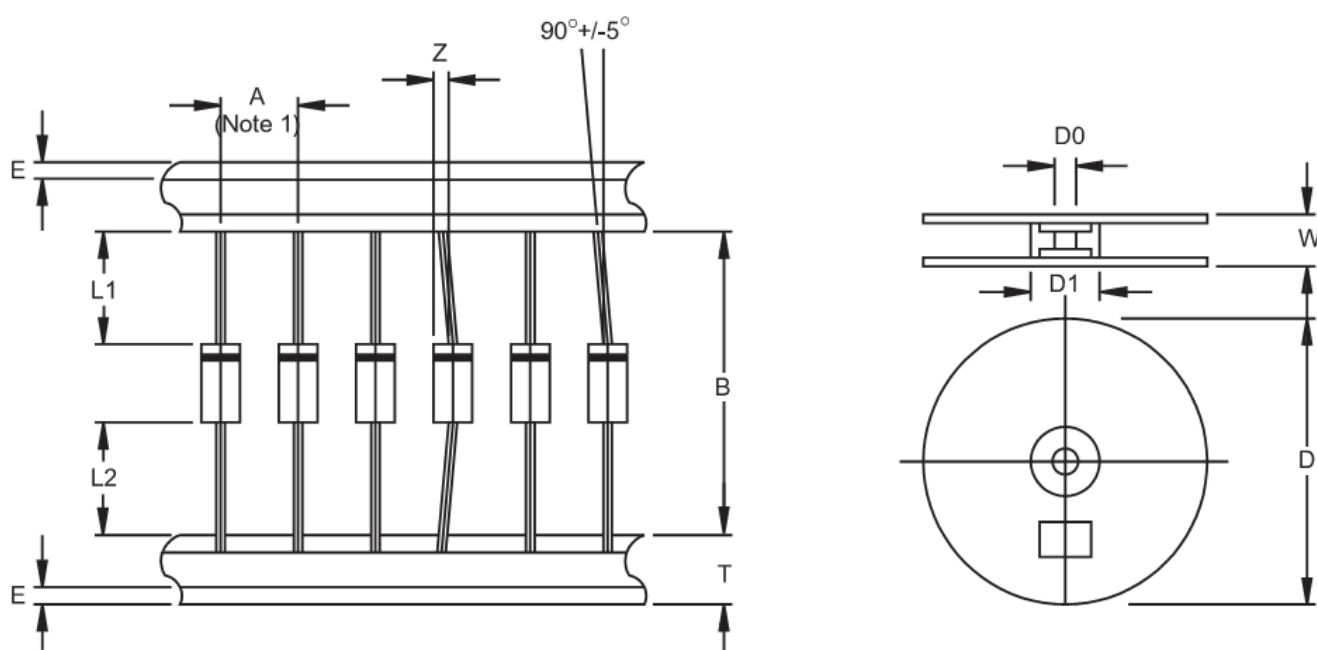


Ordering information

Part No.	Package	Packing	INNER TAPE	Packing code	Packing code (Green)
SF4xG (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	Forming		X0	X0G

Note: "xx" is Device Code from "1" thru "8".

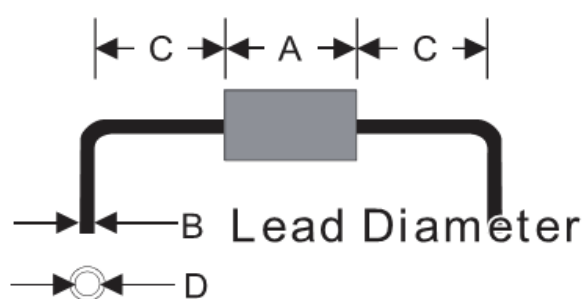
AXIAL LEAD TAPING SPECIFICATIONS



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

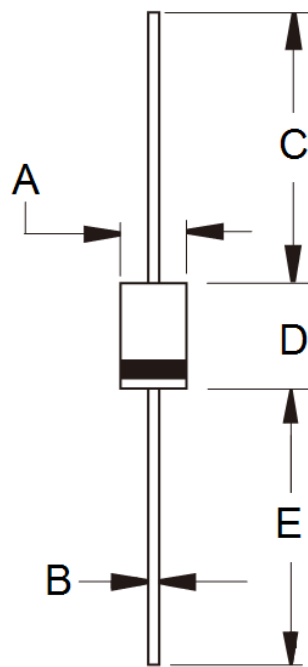
Unit (mm)

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
- F = Factory Code

Mouser Electronics

Authorized Distributor

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[SF41G](#) [SF42G](#) [SF43G](#) [SF44G](#) [SF45G](#) [SF46G](#) [SF47G](#) [SF48G](#)