

Features

- ✧ Low forward voltage drop
- ✧ High current capability
- ✧ High reliability
- ✧ High surge current capability
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

Mechanical Data

- ✧ Case: D²PAK Molded plastic
- ✧ Epoxy: UL 94V-0 rate flame retardant
- ✧ Terminals: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208 guaranteed
- ✧ Polarity: As marked
- ✧ High temperature soldering:
260°C/10 seconds/.16" (4.06mm) from case
- ✧ Weight: 1.70 grams

Ordering Information

Part No.	Package	Packing	Packing code	Packing code (Green)
SFS1001G	D2PAK	800 / 13" REEL	RN	RNG

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	SFS 1001G	SFS 1002G	SFS 1003G	SFS 1004G	SFS 1005G	SFS 1006G	SFS 1007G	SFS 1008G	Unit
Maximum Repetitive 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	$I_{F(AV)}$	10								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	125								A
Maximum Instantaneous Forward Voltage @ 5.0A	V_F	0.975			1.3		1.7			V
Maximum DC Reverse Current @ Rated DC Blocking Voltage	I_R	$T_A=25\text{ }^\circ\text{C}$ 1				$T_A=125\text{ }^\circ\text{C}$ 200				uA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	35								nS
Typical Junction Capacitance (Note 2)	C_j	70				50				pF
Typical Thermal Resistance	$R_{\theta JC}$	2								$^\circ\text{C/W}$
Operating Temperature Range	T_J	- 55 to + 150								$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 55 to + 150								$^\circ\text{C}$

Note 1: Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

Note 2: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.



RATINGS AND CHARACTERISTIC CURVES (SFS1001G THRU SFS1008G)

FIG.1 FORWARD CURRENT DERATING CURVE

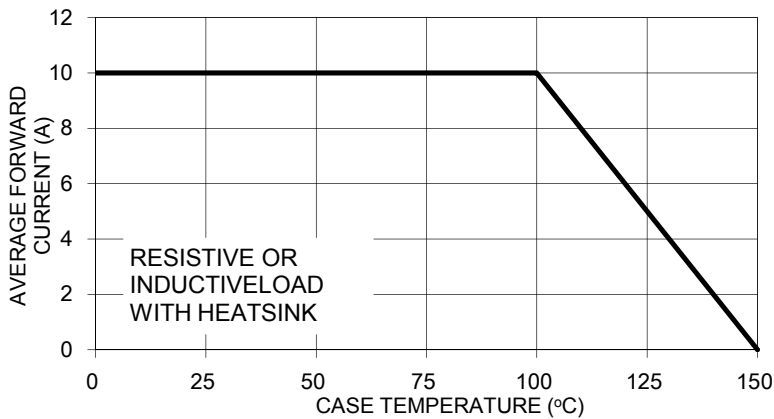


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

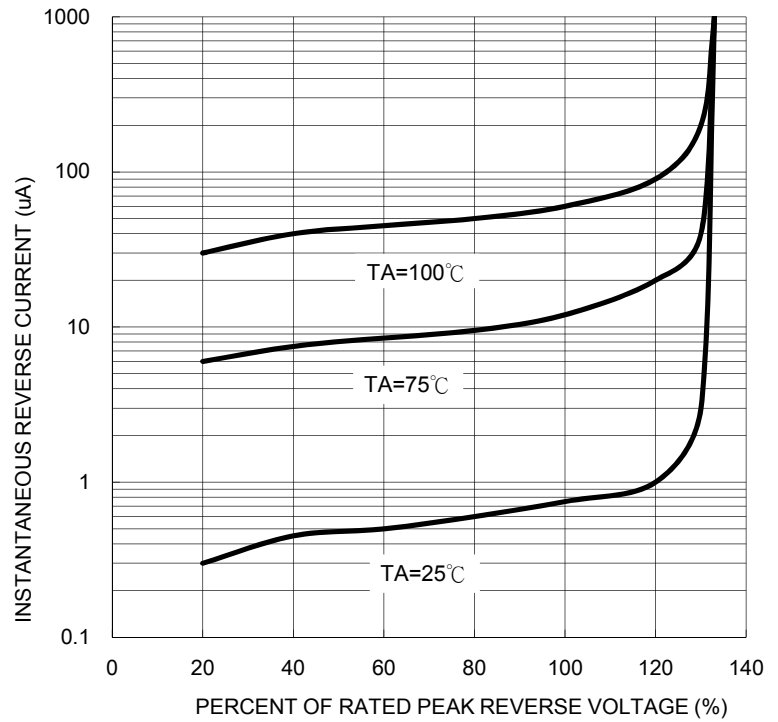


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

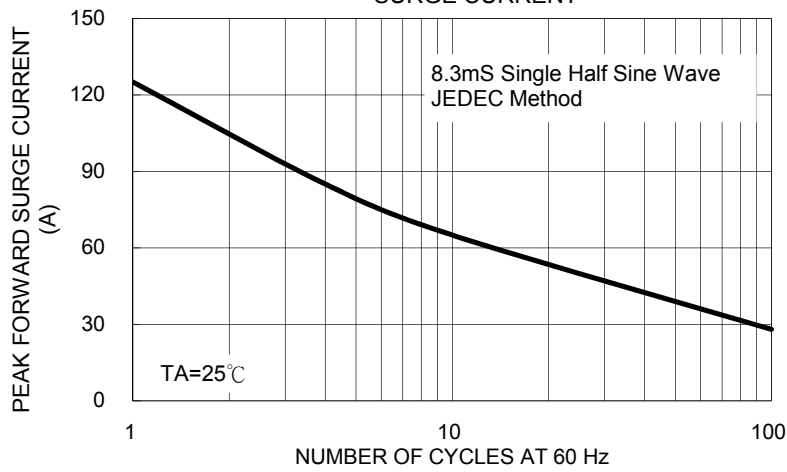


FIG. 5 TYPICAL FORWARD CHARACTERISTICS

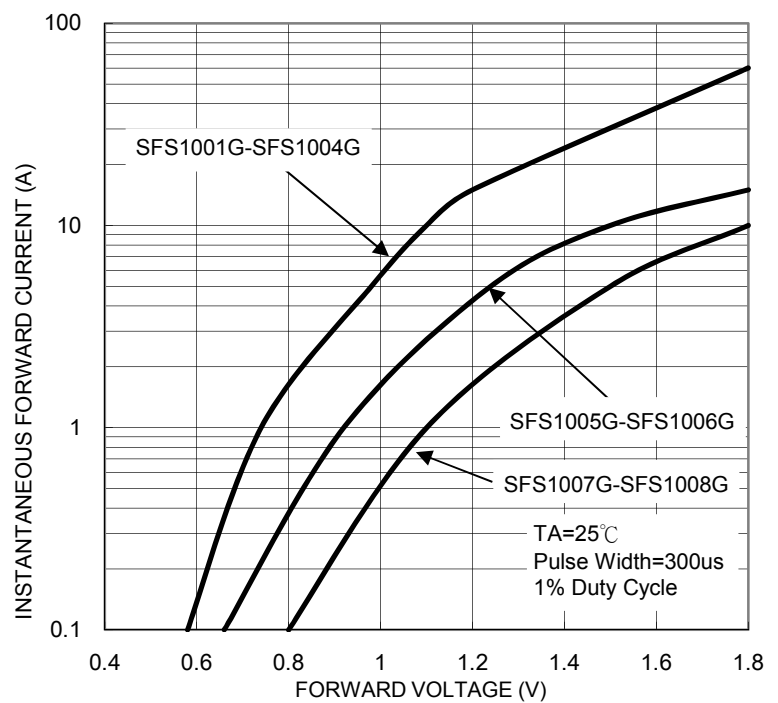


FIG. 4 TYPICAL JUNCTION CAPACITANCE

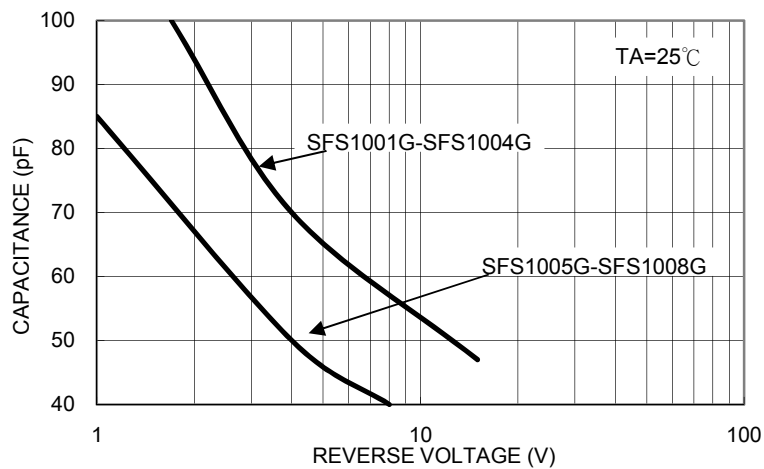
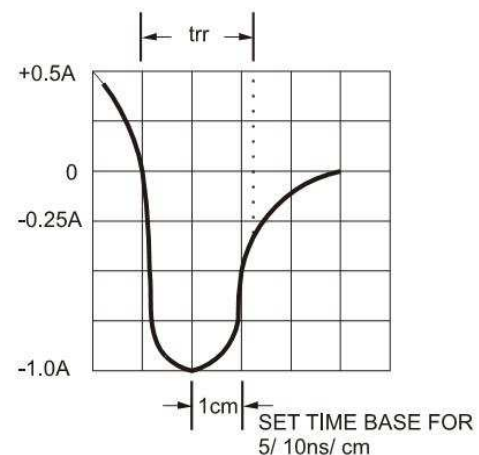
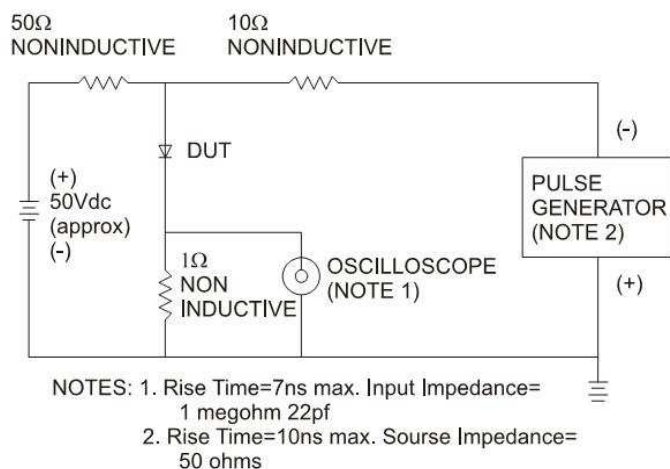


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

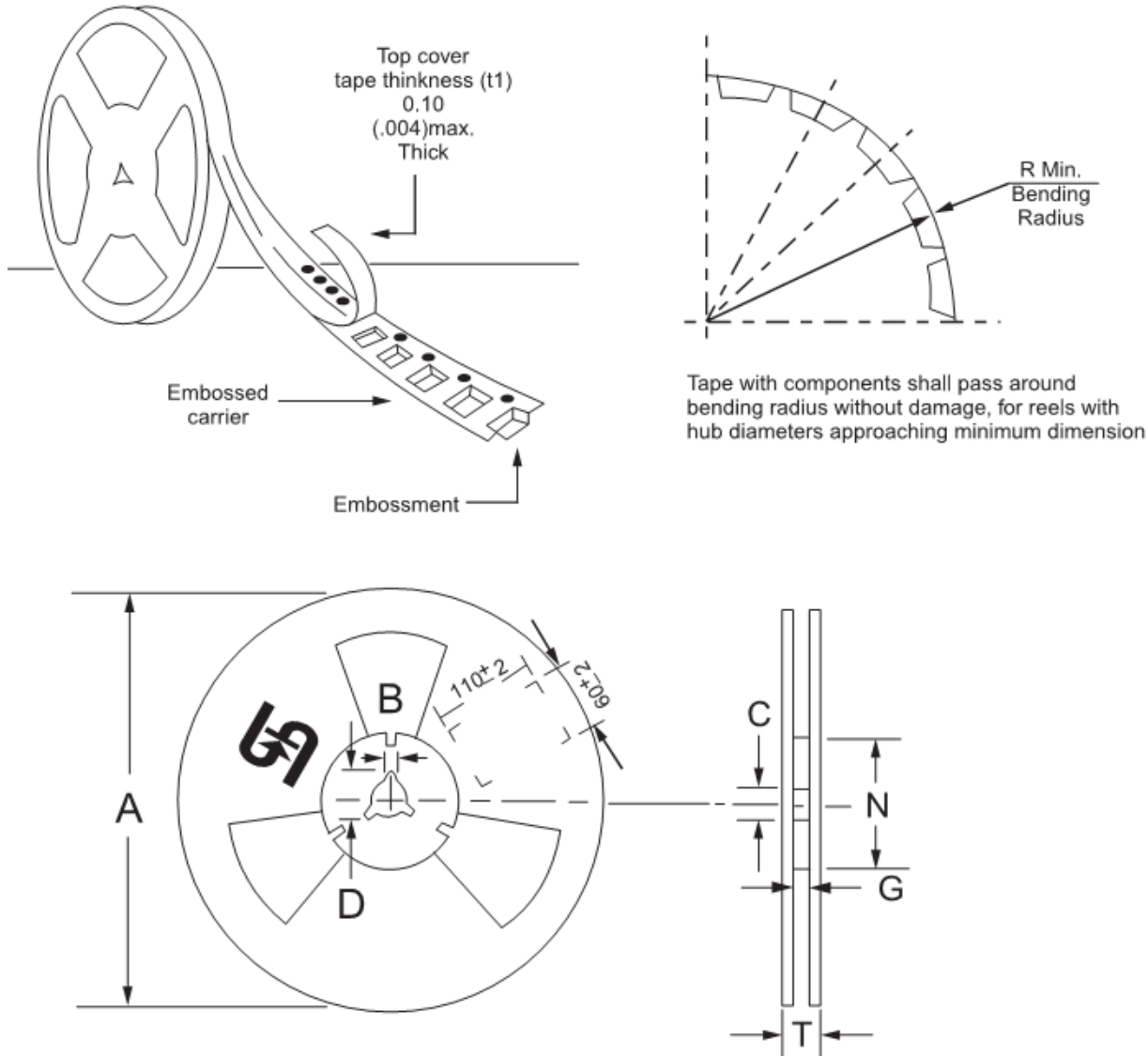


Ordering Information

Part No.	Package	Packing	Packing code	Packing code (Green)
SFS100xG	D2PAK	800 / 13" REEL	RN	RNG
		50 / Tube	C0	C0G

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

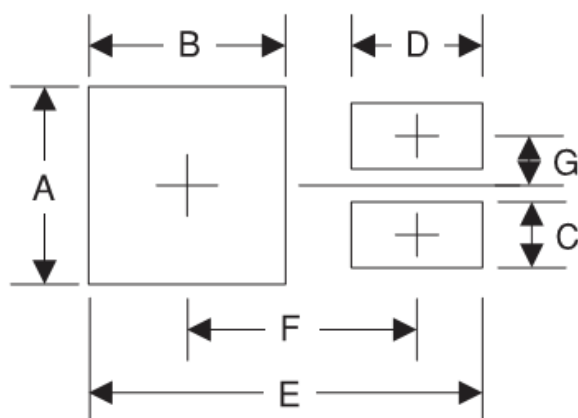
Tape & Reel specification



Reel Size	Tape Size	A	B	C	D	N	G	T
		max	±0.5	±0.5	min	±0.5	+2.0;-0	max
13"	24mm	330	2	13	20.2	75	24.4	30.4

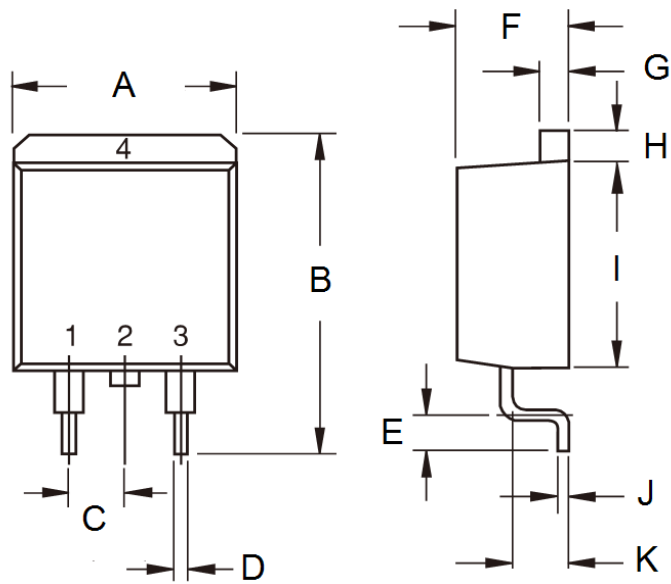
Unit (mm)

Suggested PAD Layout

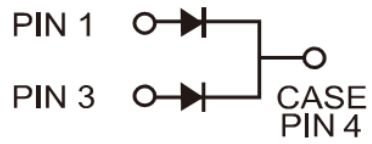


Symbol	Unit(mm)
A	10.8
B	7
C	1.1
D	3.5
E	16.9
F	9.5
G	2.5

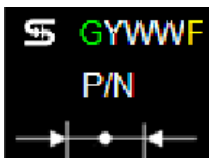
Dimensions



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	-	10.5	-	0.413
B	14.60	15.88	0.575	0.625
C	2.41	2.67	0.095	0.105
D	0.68	0.94	0.027	0.037
E	2.29	2.79	0.090	0.110
F	4.44	4.70	0.175	0.185
G	1.14	1.40	0.045	0.055
H	1.14	1.40	0.045	0.055
I	8.25	9.25	0.325	0.364
J	0.36	0.53	0.014	0.021
K	2.03	2.79	0.080	0.110



Marking Diagram



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