

Features

- ✧ UL Recognized File #E-326854
- ✧ Glass passivated junction chip
- ✧ 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: 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: 1.33 grams

Ordering Information

Part No.	Package	Packing	Packing code	Green Compound Packing code
SFAS80xG	D2PAK	800 / 13" REEL	RN	RNG

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

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	SFAS 801G	SFAS 802G	SFAS 803G	SFAS 804G	SFAS 805G	SFAS 806G	SFAS 807G	SFAS 808G	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	$I_{F(AV)}$	8								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 @ 8.0A	V_F	0.95			1.3		1.7			V
Maximum Reverse Current @ Rated VR $T_A=25\text{ }^\circ\text{C}$ $T_A=100\text{ }^\circ\text{C}$	I_R	10 400								uA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	35								nS
Typical Junction Capacitance (Note 2)	C_j	80				60				pF
Typical Thermal Resistance	$R_{\theta JC}$	2.2								°C/W
Operating Temperature Range	T_J	- 65 to + 150								°C
Storage Temperature Range	T_{STG}	- 65 to + 150								°C

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

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

RATINGS AND CHARACTERISTIC CURVES (SFAS801G THRU SFAS808G)

FIG.1 FORWARD CURRENT DERATING CURVE

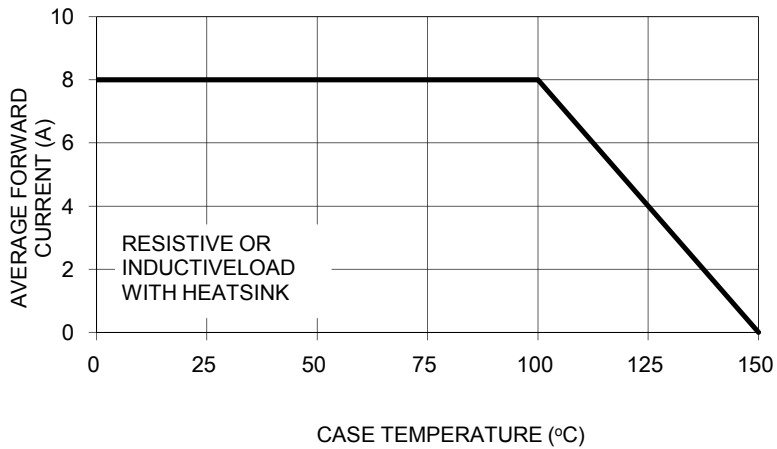


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

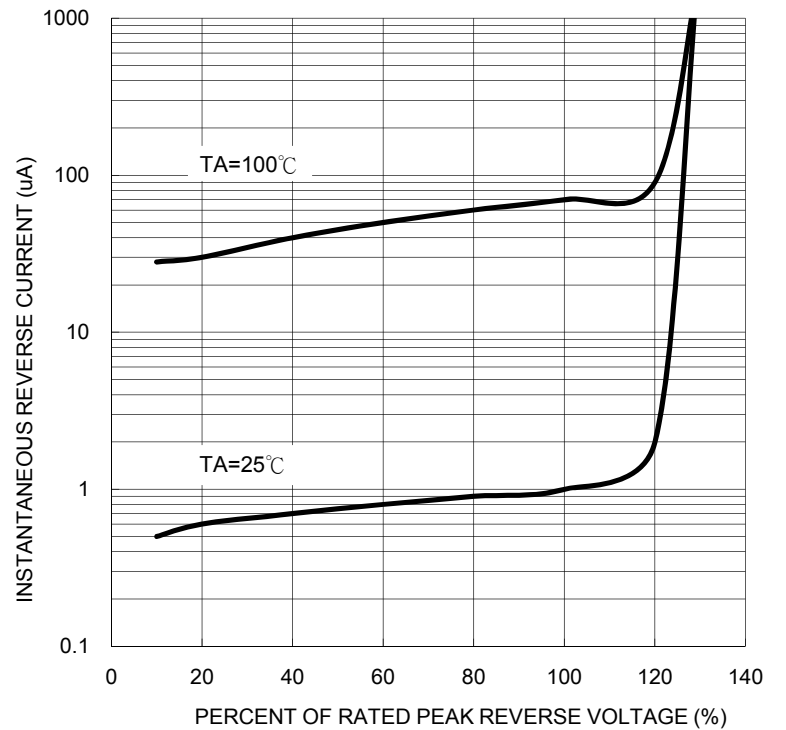


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

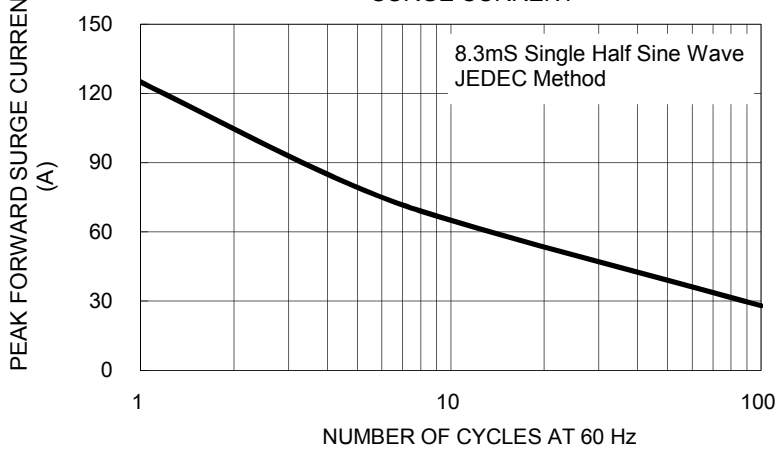


FIG. 5 TYPICAL FORWARD CHARACTERISTICS

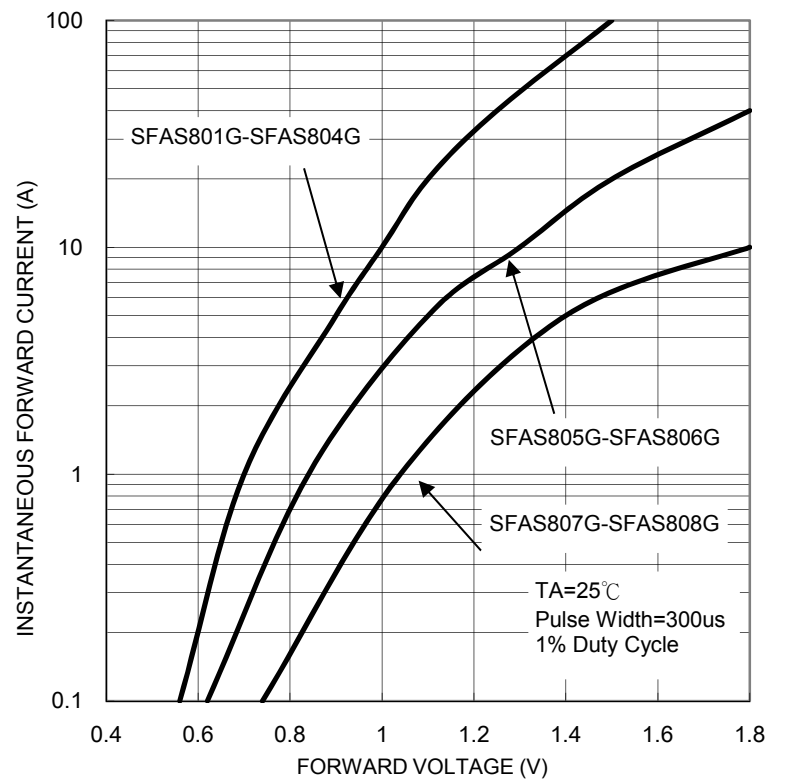


FIG. 4 TYPICAL JUNCTION CAPACITANCE

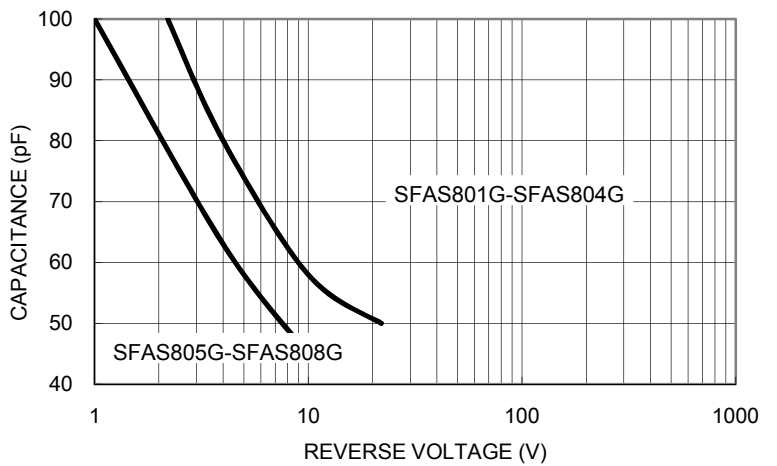
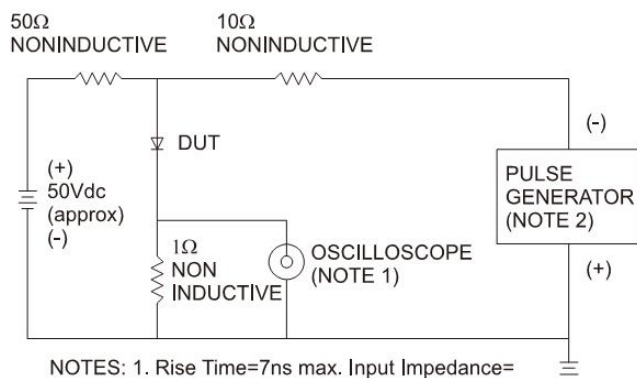
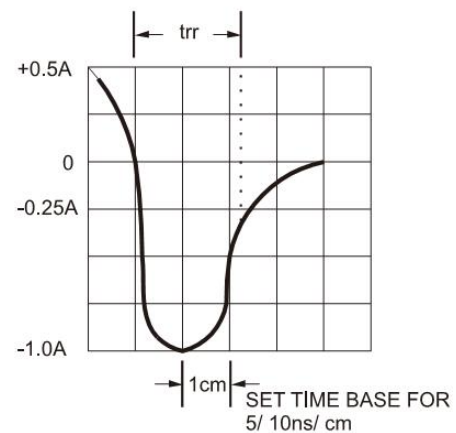


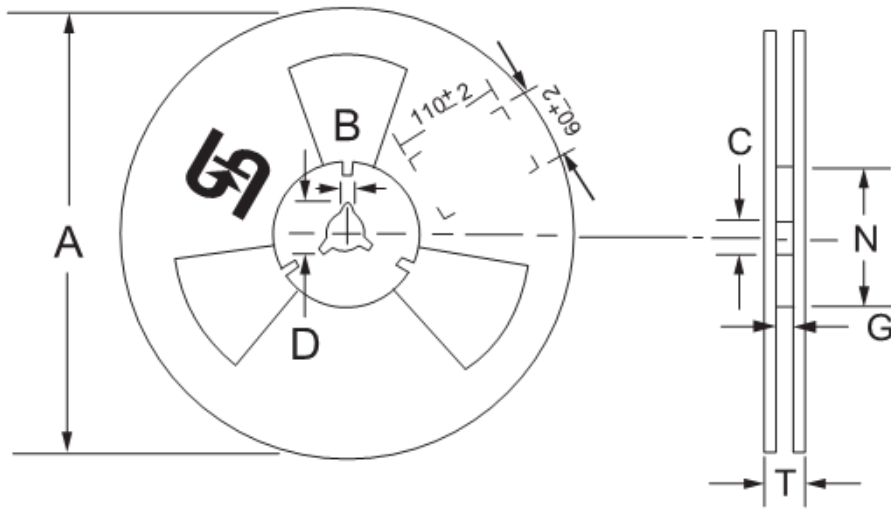
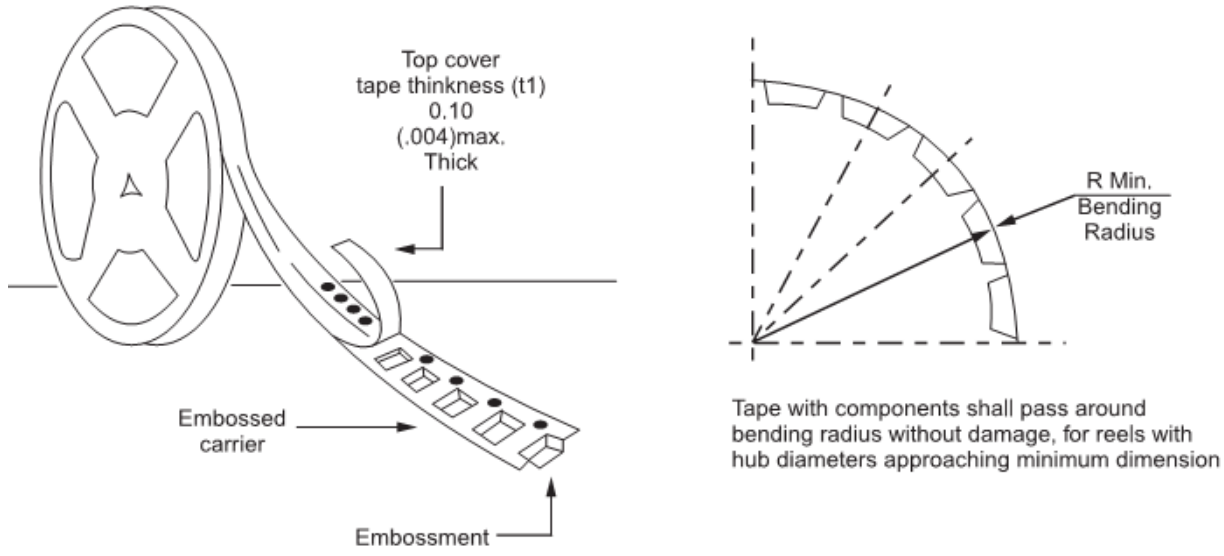
FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM



NOTES: 1. Rise Time=7ns max. Input Impedance= 1 megohm 22pf
2. Rise Time=10ns max. Source Impedance= 50 ohms



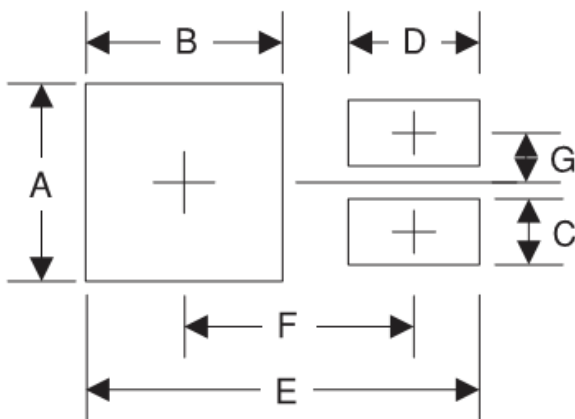
Tape & Reel specification



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

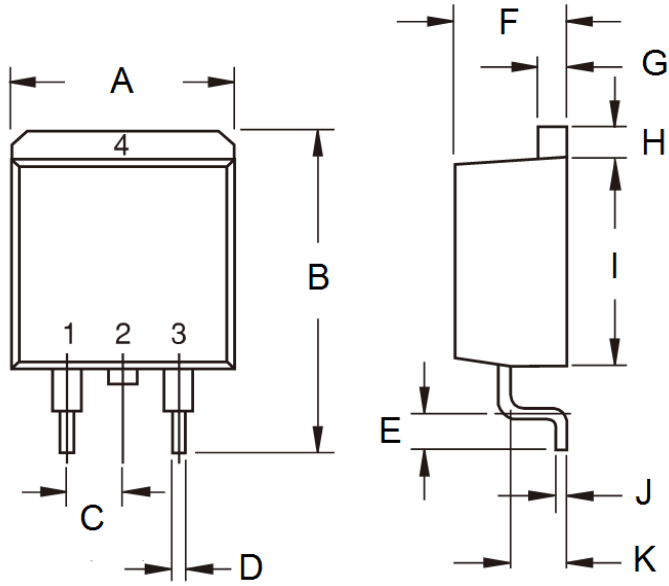
Unit (mm)

Suggested PAD Layout

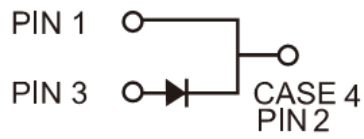


Symbol	Unit(mm)
A	10.8
B	7
C	1.1
D	3.5
E	16.9
F	9.5
G	2.5

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