

- ✧ Built-in strain relief
- ✧ Ideal for automated placement
- ✧ Easy pick and place
- ✧ Super fast recovery time for high efficiency
- ✧ Glass passivated chip junction
- ✧ High temperature soldering:
260°C/10 seconds at terminals
- ✧ Meet MSL level 1, per J-STD-020D,
lead free maximum peak of 260°C
- ✧ Plastic material used carries Underwriters
Laboratory Classification 94V-0
- ✧ Green compound with suffix "G" on packing
code & prefix "G" on datecode



Mechanical Data

- ✧ Cases: Molded plastic
- ✧ Terminals: Pure tin plated, lead free
- ✧ Polarity: Indicated by cathode band
- ✧ Packing: 12mm tape per EIA STD RS-481
- ✧ Weight: 0.093 grams

Ordering Information (example)

Part No.	Package	Packing	Packing code	Packing code (Green)
ES2A	SMB	850 / 7" REEL	R5	R5G

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	ES 2A	ES 2B	ES 2C	ES 2D	ES 2F	ES 2G	ES 2H	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	500	
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	350	
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	500	
Maximum Average Forward Rectified Current	$I_{F(AV)}$	2							
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	50							
Maximum Instantaneous Forward Voltage (Note 1) @ 2 A	V_F	0.95				1.3			
Maximum DC Reverse Current @ $T_A=25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125\text{ }^\circ\text{C}$	I_R	10				350			
Maximum Reverse Recovery Time (Note 2)	T_{rr}	35							
Typical Junction Capacitance (Note 3)	C_j	25				20			
Maximum Thermal Resistance	$R_{\theta JA}$ $R_{\theta JL}$	75				20			
Operating Temperature Range	T_J	- 55 to + 150							
Storage Temperature Range	T_{STG}	- 55 to + 150							

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

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

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

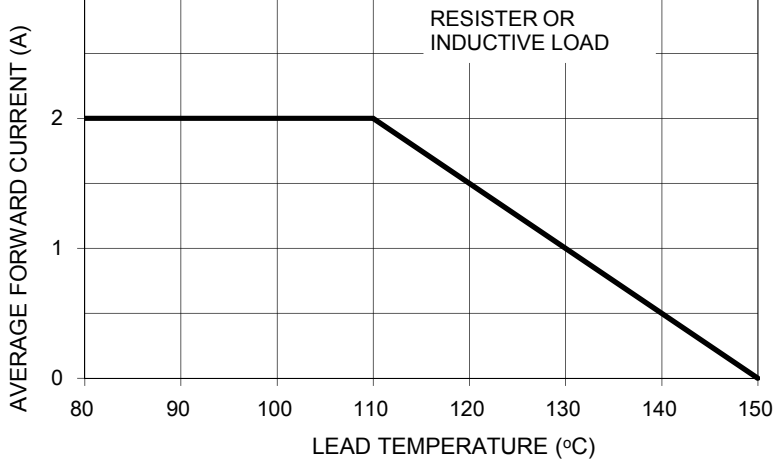


FIG. 3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

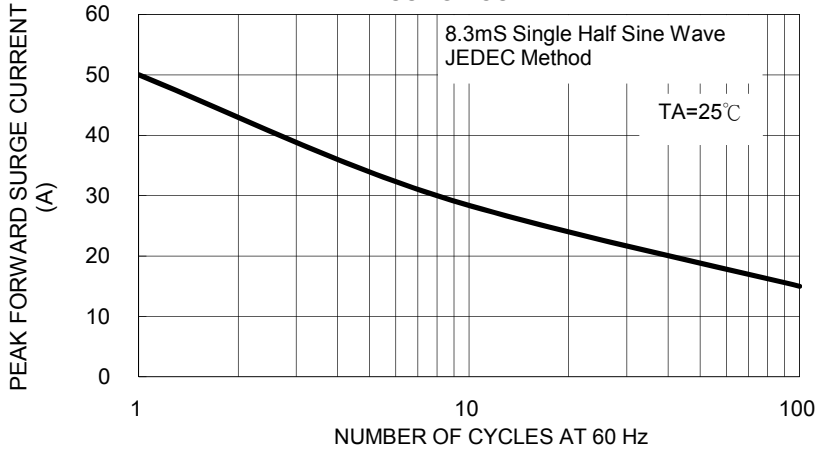


FIG. 4- TYPICAL JUNCTION CAPACITANCE

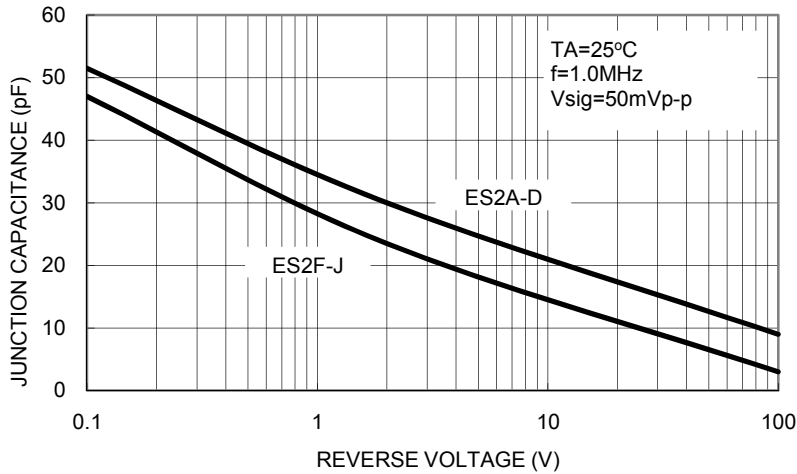


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

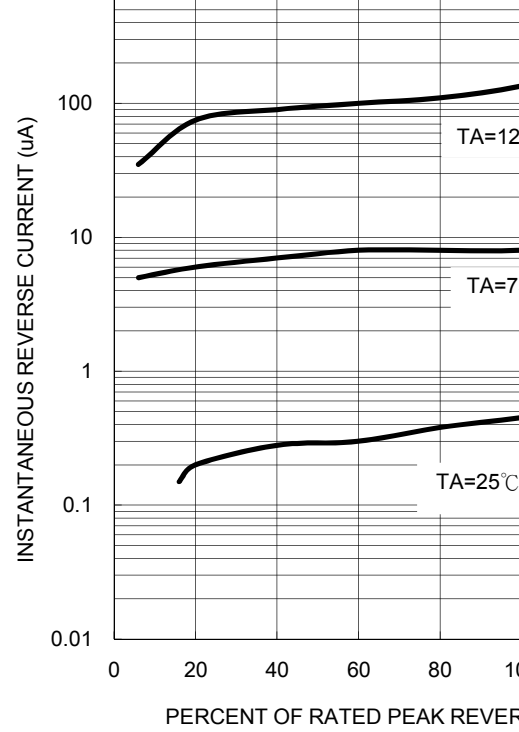
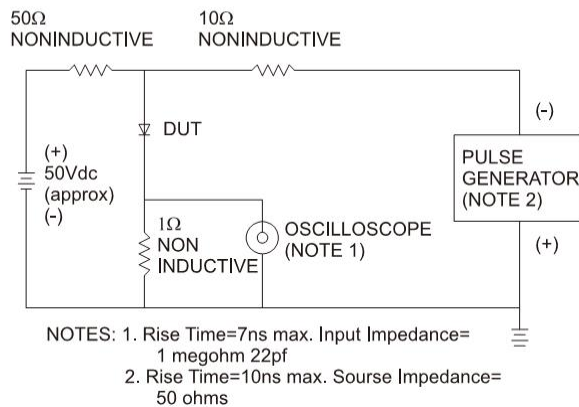
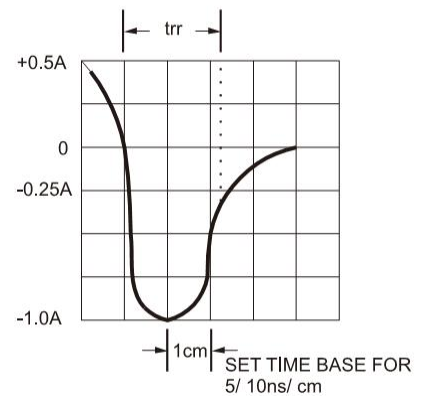
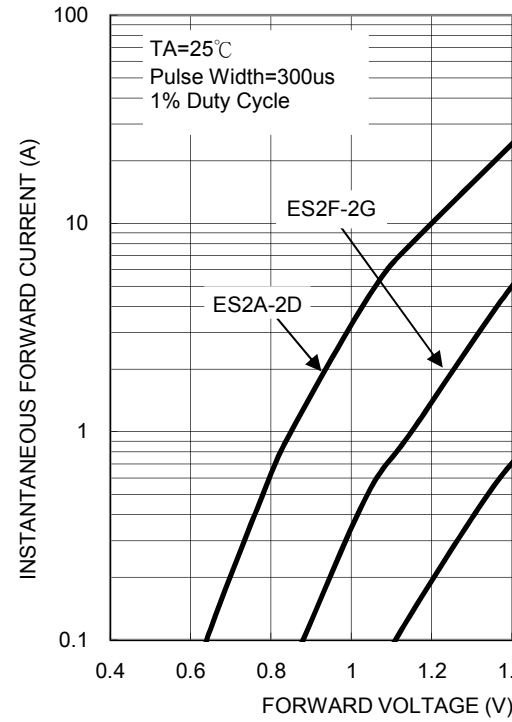


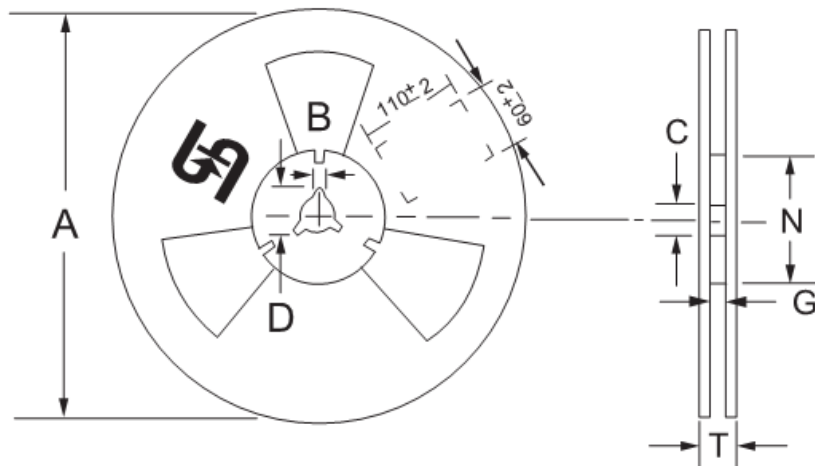
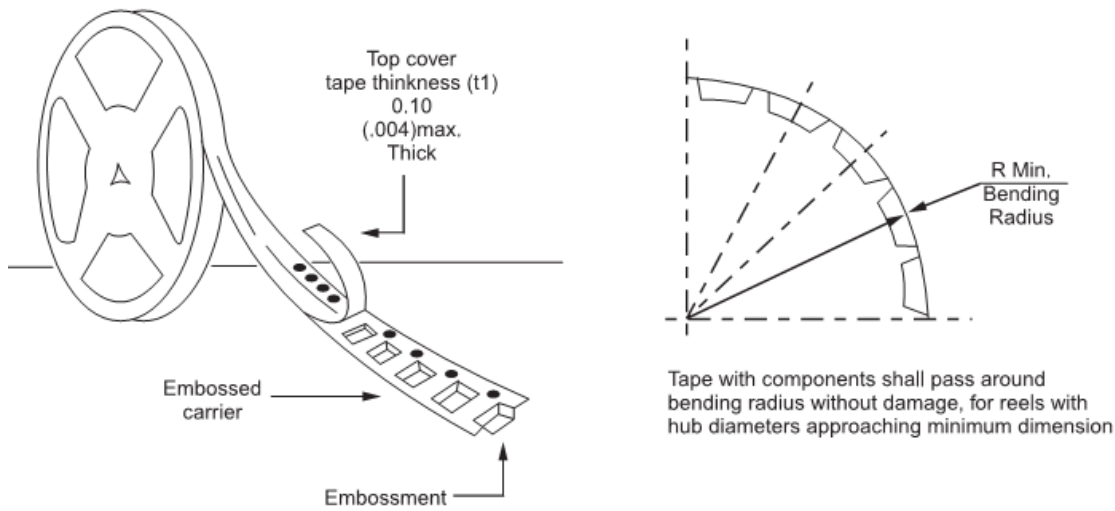
FIG. 5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



ES2x (Note)	SMB	3K / 13" REEL	R4	R4G
	SMB	3K / 13" Plastic REEL	M4	M4G

Note: "x" is Device Code from "A" thru "J".

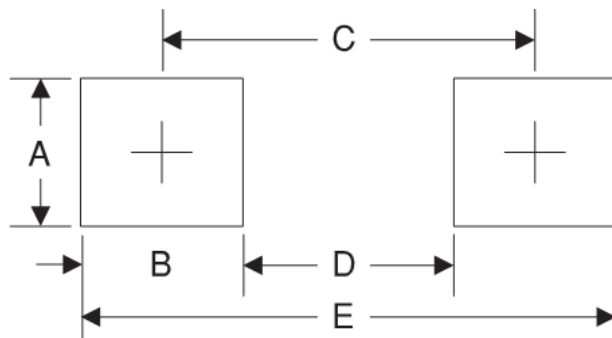
Tape & Reel specification



Reel Size	Tape Size	A	B	C	D	N	G	T
		±2.0	±0.4	+0.5;-0.2	min	±1.0	+0.8;-0	max
7"	12mm	178	1.9	13	21	62	12.2	14.6
Reel Size	Tape Size	A	B	C	D	N	G	T
		max	±0.5	±0.5	min	±0.5	+2.0;-0	max
13"	12mm	330	2	13	20.2	75	12.4	18.4

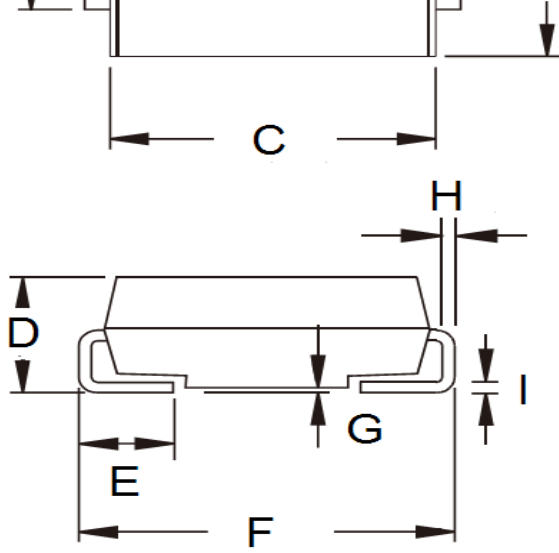
Unit (mm)

Suggested PAD Layout



Symbol	Unit(mm)
A	2.3
B	2.5
C	4.3
D	1.8
E	6.7

Version:G



	Min	Max	Min	Max
A	1.95	2.10	0.077	0.083
B	3.48	3.73	0.137	0.147
C	4.25	4.75	0.167	0.187
D	1.99	2.61	0.078	0.103
E	0.90	1.41	0.035	0.056
F	5.10	5.30	0.201	0.209
G	0.10	0.20	0.004	0.008
H	0.15	0.31	0.006	0.012
I	0.15	0.31	0.006	0.012

Marking Diagram



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