

Features

- ✧ For surface mounted application
- ✧ Metal to silicon rectifier, majority carrier conduction
- ✧ Low forward voltage drop
- ✧ Easy pick and place
- ✧ High surge current capability
- ✧ Meet MSL level 1, per J-STD-020D, lead free maximum peak of 260°C
- ✧ Plastic material used carriers Underwriters Laboratory Classification 94V-0
- ✧ Epitaxial construction
- ✧ High temperature soldering: 260°C/10 seconds at terminals
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode



Mechanical Data

- ✧ Case: Molded plastic
- ✧ Terminals: Pure tin plated, lead free
- ✧ Polarity: Indicated by cathode band
- ✧ Packaging: 12mm tape per EIA STD RS-481
- ✧ Weight: 0.1 gram

Ordering Information (example)

Part No.	Package	Packing	Packing code	Packing code (Green)
SK32B	SMB	850 / 7" REEL	R5	R5G

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	SK 32B	SK 33B	SK 34B	SK 35B	SK 36B	SK 39B	SK 310B	SK 315B	SK 320B	Unit	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	50	60	90	100	150	200	V	
Maximum RMS Voltage	V_{RMS}	14	21	28	35	42	63	70	105	140	V	
Maximum DC Blocking Voltage	V_{DC}	20	30	40	50	60	90	100	150	200	V	
Maximum Average Forward Rectified Current	$I_{F(AV)}$	3									A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load	I_{FSM}	70									A	
Maximum Instantaneous Forward Voltage (Note 1) @ 3 A	V_F	0.5			0.75		0.85		0.95		V	
Maximum Reverse Current @ Rated VR $T_A=25\text{ }^\circ\text{C}$ $T_A=100\text{ }^\circ\text{C}$ $T_A=125\text{ }^\circ\text{C}$	I_R	0.5					0.1					mA
		10			5		-					
		-					2					
Typical Thermal Resistance	$R_{\theta JL}$	17									$^\circ\text{C/W}$	
	$R_{\theta JA}$	75										
Operating Temperature Range	T_J	- 55 to + 125				- 55 to + 150						$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 55 to + 150										$^\circ\text{C}$

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

RATINGS AND CHARACTERISTIC CURVES (SK32B THRU SK320B)

FIG. 1 FORWARD CURRENT DERATING CURVE

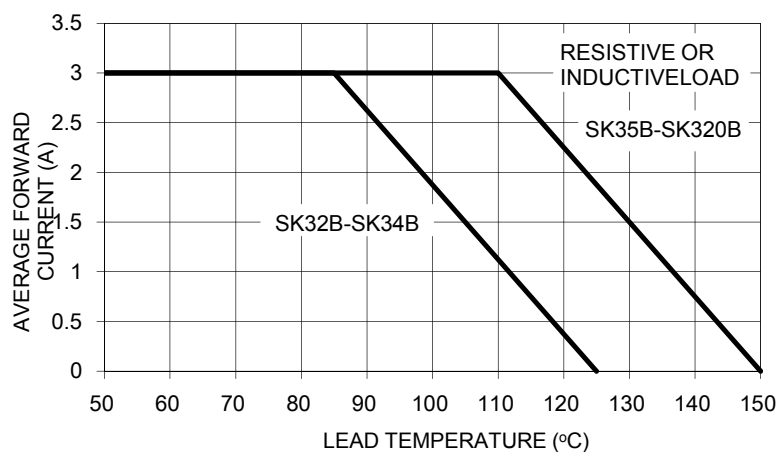


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

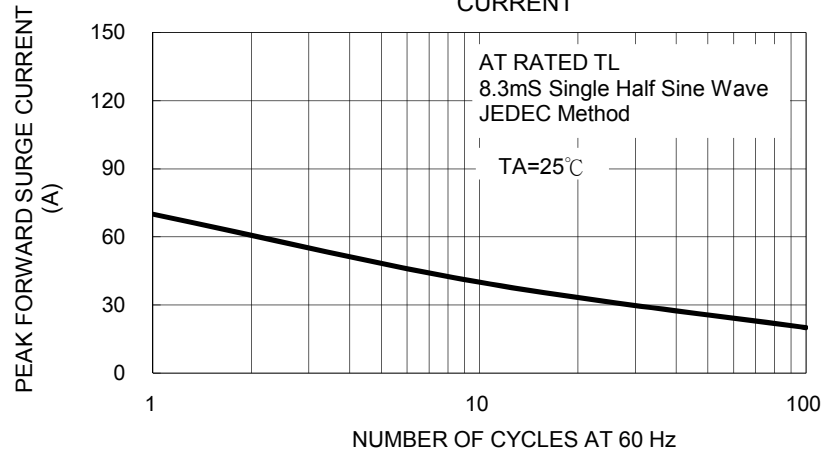


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

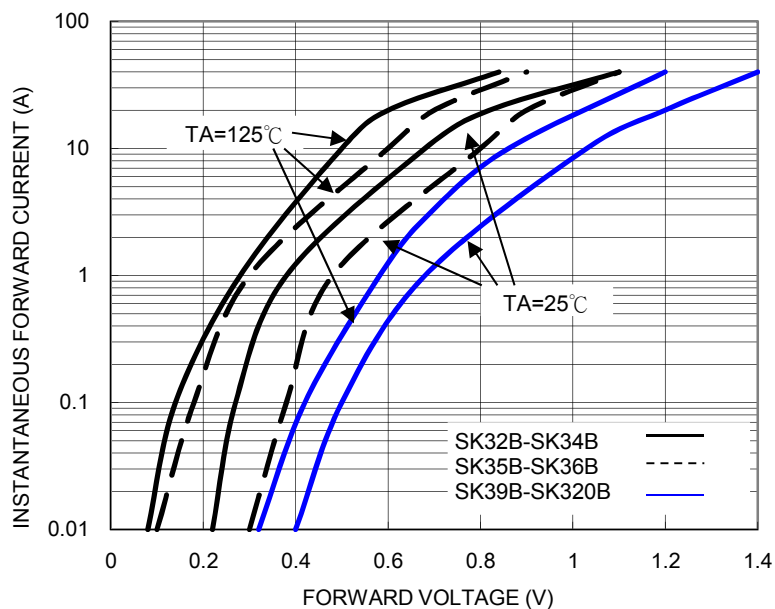


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

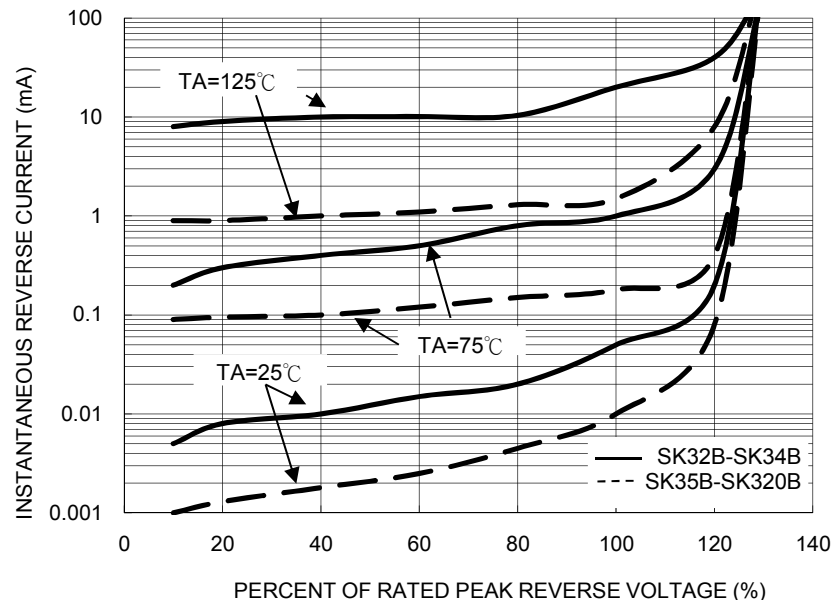


FIG. 5 TYPICAL JUNCTION CAPACITANCE

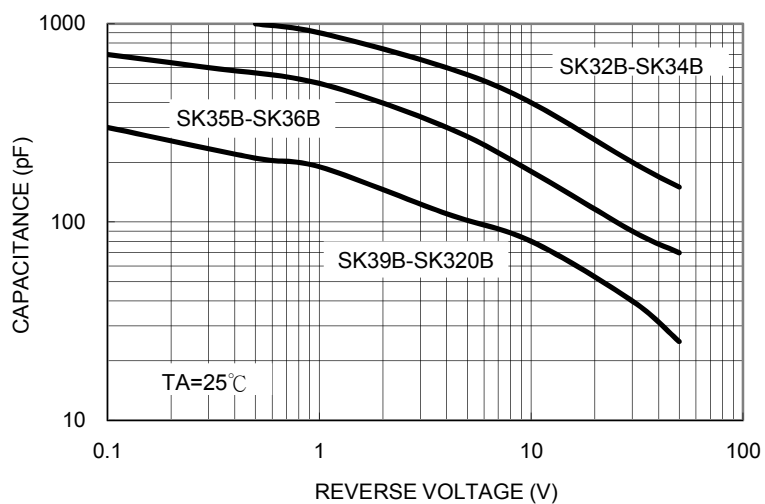
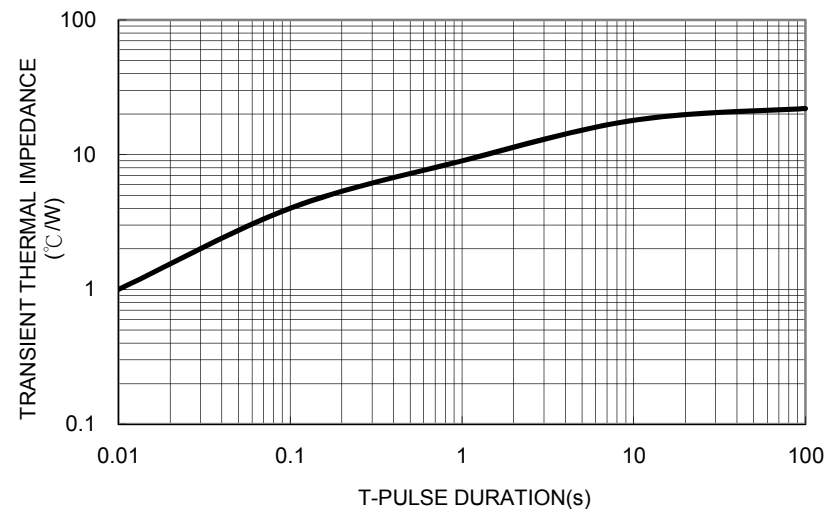


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE

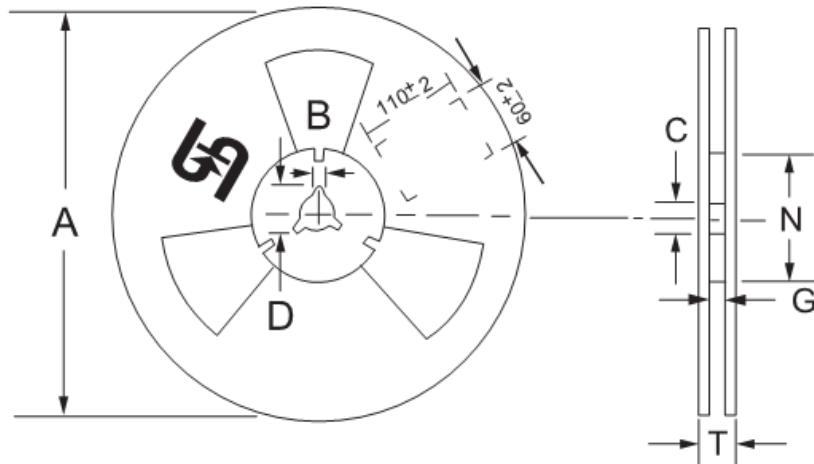
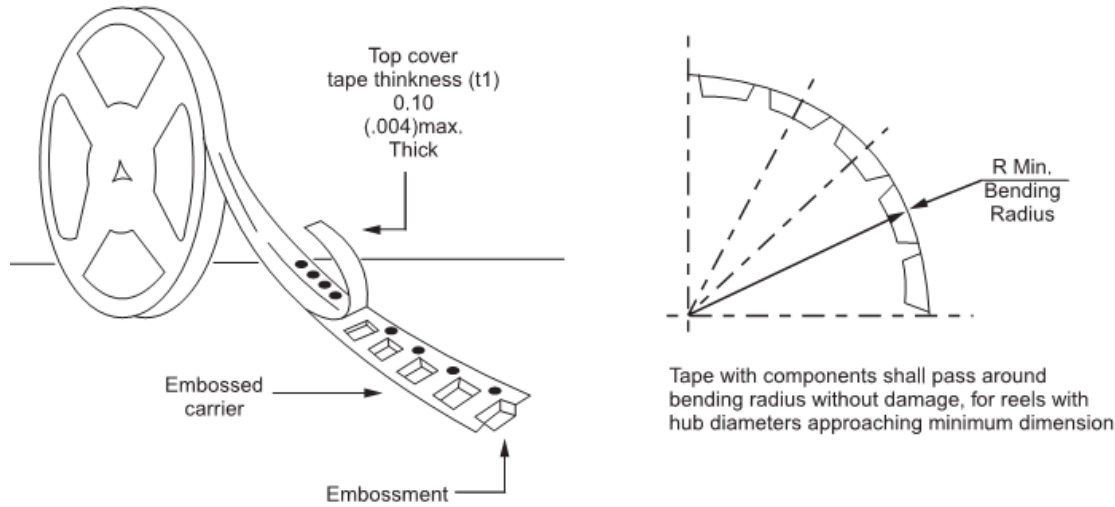


Ordering information

Part No.	Package	Packing	Packing code	Packing code (Green)
SK3XB (Note)	SMB	850 / 7" REEL	R5	R5G
	SMB	3K / 13" REEL	R4	R4G
	SMB	3K / 13" Plastic REEL	M4	M4G

Note: "x" is Device Code from "2" thru "20".

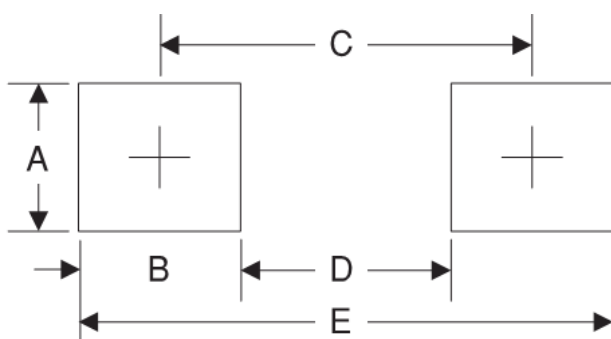
Tape & Reel specification



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

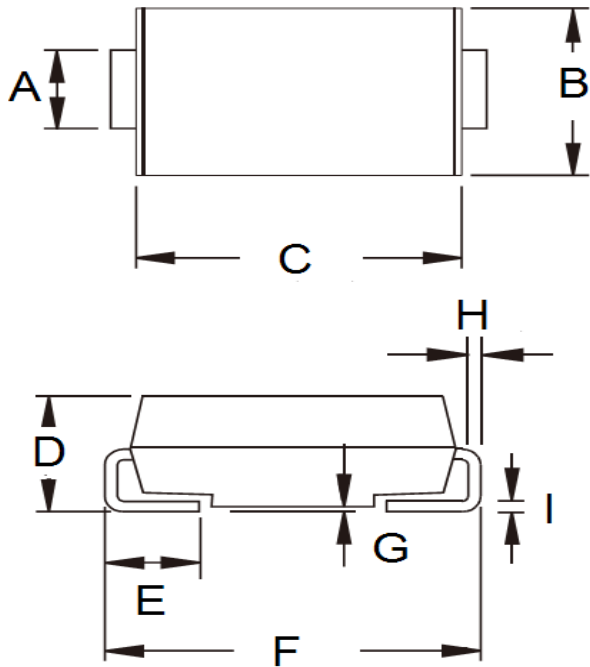
Unit (mm)

Suggested PAD Layout



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

Dimensions



DIM.	Unit(mm)		Unit(inch)	
	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