

### Features

- ✧ For surface mounted application
- ✧ Metal to silicon rectifier, majority carrier conduction
- ✧ Low forward voltage drop
- ✧ Easy pick and place
- ✧ High surge current capability
- ✧ Plastic material used carriers Underwriters Laboratory Classification 94V-0
- ✧ Epitaxial construction
- ✧ High temperature soldering:  
260°C/10 seconds at terminals
- ✧ Meet MSL level 1, per J-STD-020D,  
lead free maximum peak of 260°C
- ✧ 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: 16mm tape per EIA Std RS-481
- ✧ Weight: 0.21 gram

### Ordering Information (example)

Part No.	Package	Packing	Packing code	Green Compound Packing code
SK52C	SMC	850 / 7" REEL	R7	R7G

### 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	SK 52C	SK 53C	SK 54C	SK 55C	SK 56C	SK 59C	SK 510C	SK 515C	SK 520C	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	$I_{F(AV)}$	5									A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	120									A	
Maximum Instantaneous Forward Voltage (Note 1) @ 5 A	$V_F$	0.55			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					0.3					mA
		20			10		-					
		-					5					
Typical Thermal Resistance	$R_{\theta JL}$	17									$^\circ\text{C/W}$	
	$R_{\theta JA}$	50										
Operating Temperature Range	$T_J$	- 55 to + 150									$^\circ\text{C}$	
Storage Temperature Range	$T_{STG}$	- 55 to + 150									$^\circ\text{C}$	

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

RATINGS AND CHARACTERISTIC CURVES (SK52C THRU SK520C)

FIG. 1 FORWARD CURRENT DERATING CURVE

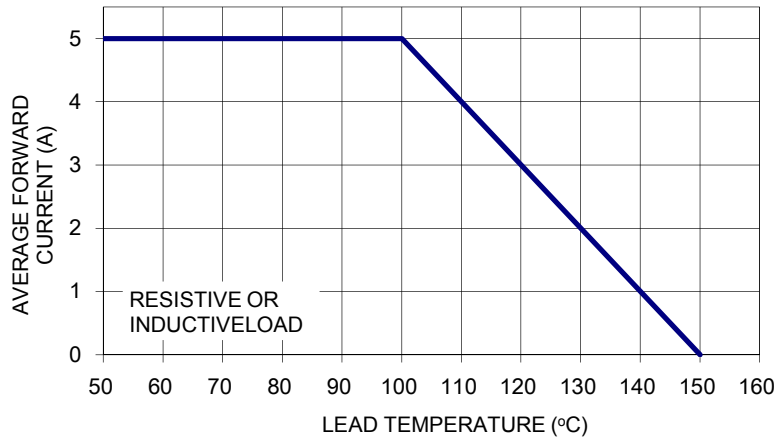


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

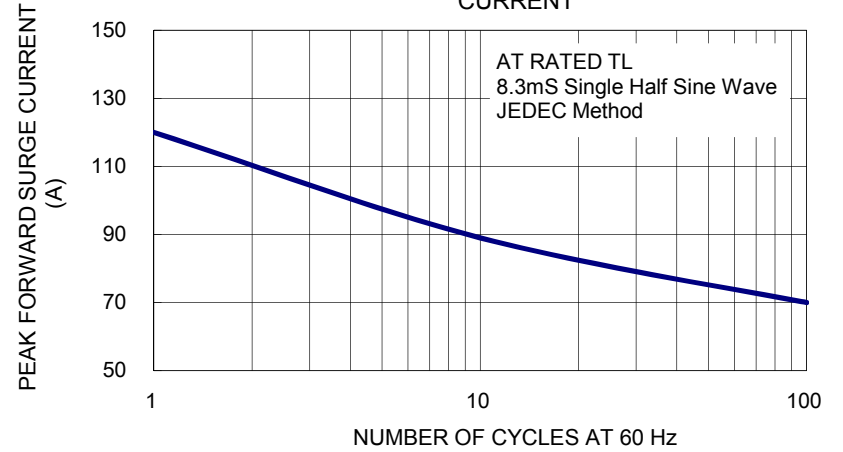


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

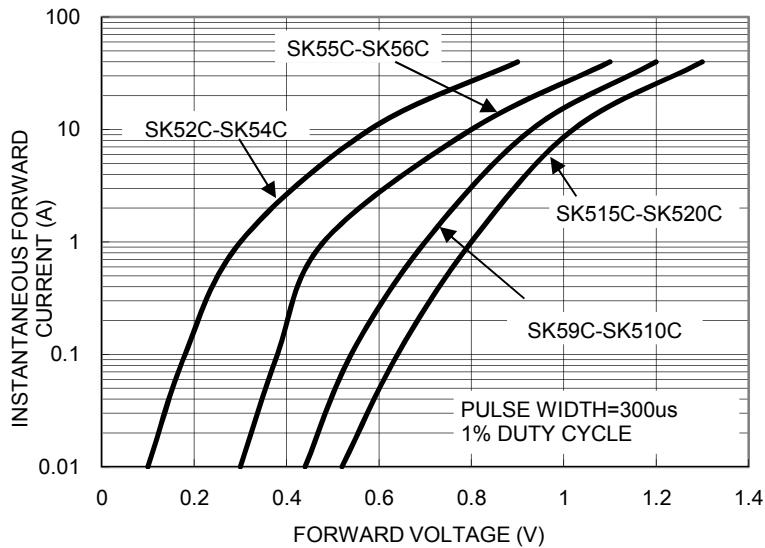


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

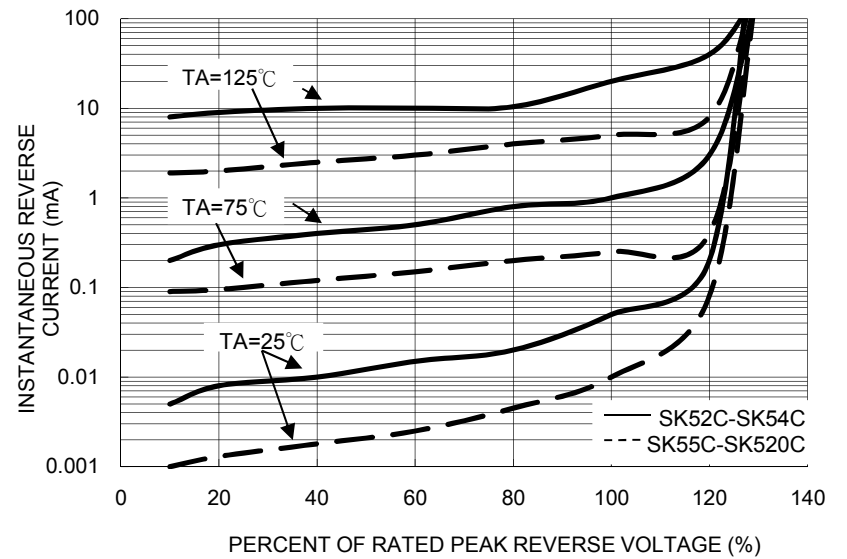


FIG. 5 TYPICAL JUNCTION CAPACITANCE

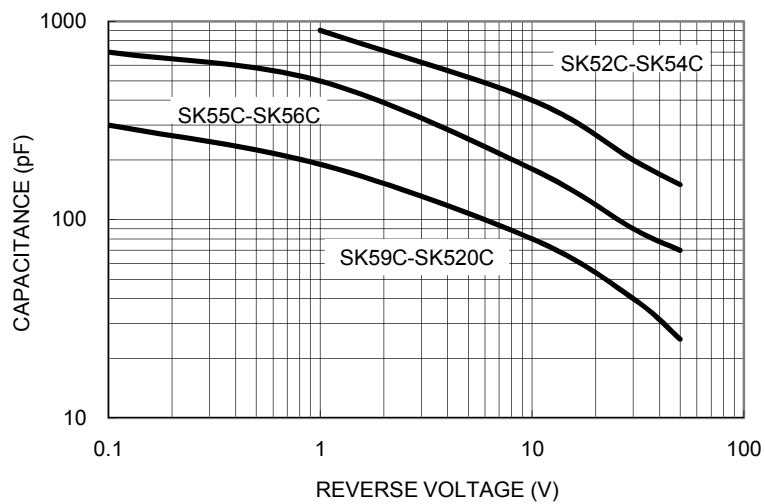
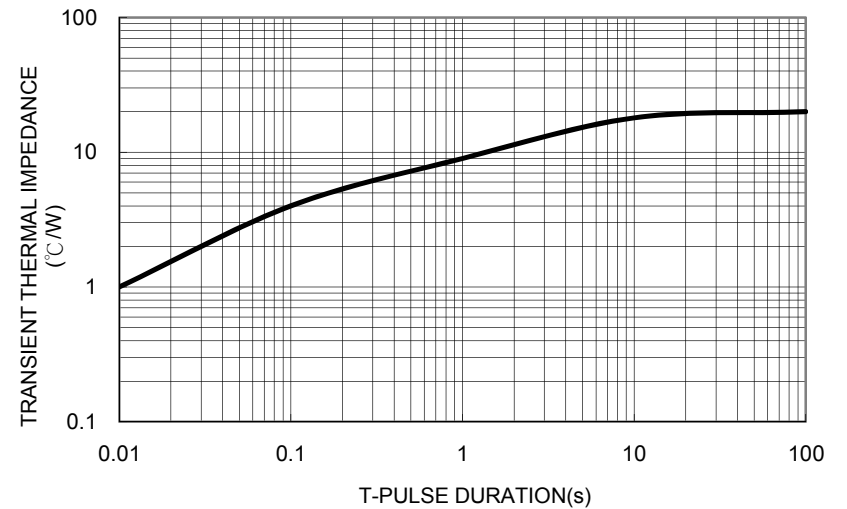


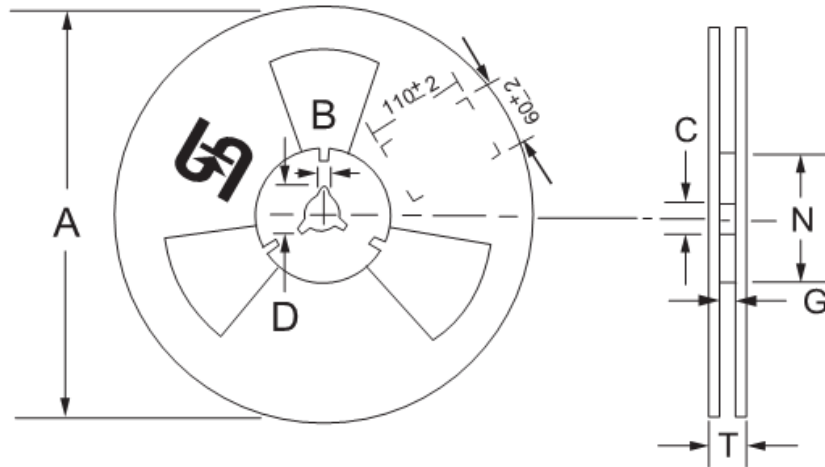
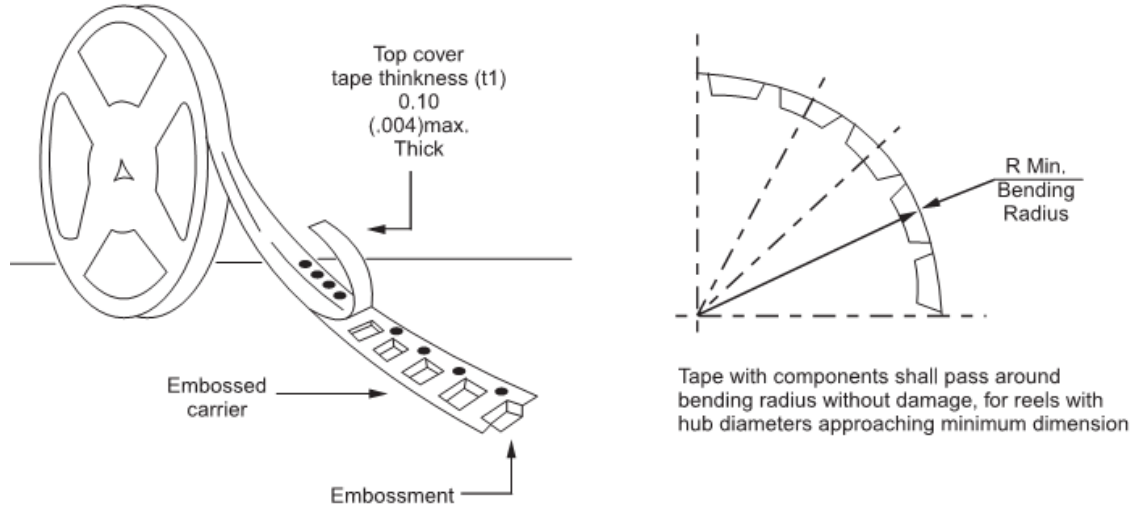
FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE



**Ordering information**

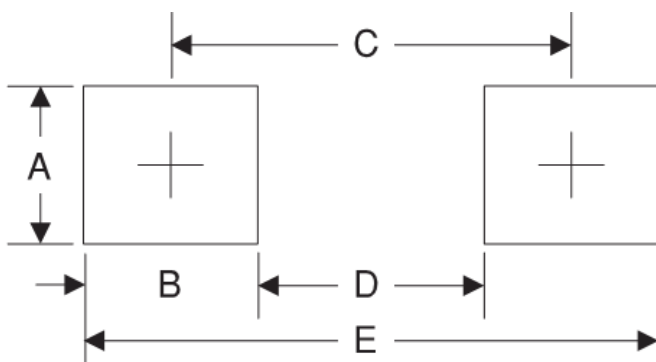
Part No.	Package	Packing	Packing code	Green Compound Packing code
SK5xC (Note)	SMC	850 / 7" REEL	R7	R7G
	SMC	3K / 13" REEL	R6	R6G

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

**Tape & Reel specification**


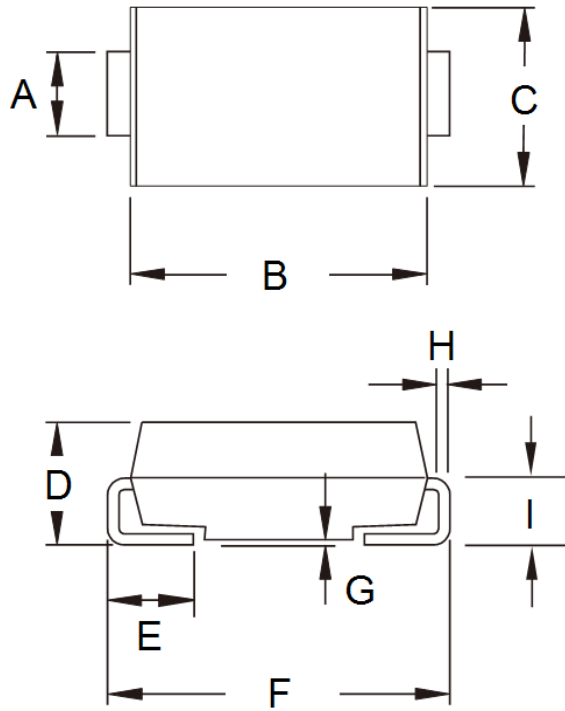
Reel Size	Tape Size	A	B	C	D	N	G	T
		$\pm 2.0$	$\pm 0.4$	$+0.5; -0.2$	min	$\pm 1.0$	$+0.8; -0$	max
7"	16mm	178	1.9	13	21	62	16.2	18.6
Reel Size	Tape Size	A	B	C	D	N	G	T
		max	$\pm 0.5$	$\pm 0.5$	min	$\pm 0.5$	$+2.0; -0$	max
13"	16mm	330	2	13	20.2	75	16.4	22.4

Unit (mm)

**Suggested PAD Layout**


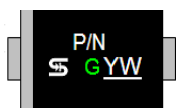
Symbol	Unit(mm)
A	3.3
B	2.5
C	6.8
D	4.4
E	9.3

**Dimensions**



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	2.90	3.20	0.114	0.126
B	6.60	7.11	0.260	0.280
C	5.59	6.22	0.220	0.245
D	2.00	2.62	0.079	0.103
E	1.00	1.60	0.039	0.063
F	7.75	8.13	0.305	0.320
G	0.10	0.20	0.004	0.008
H	0.15	0.31	0.006	0.012
I	1.26	1.56	0.050	0.061

**Marking Diagram**



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