

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 °C T _A =100 °C T _A =125 °C	I _R	0.5					0.3				mA
		20			10		-				
		-					5				
Typical Thermal Resistance	R _{θjL}	17									°C/W
	R _{θjA}	50									
Operating Temperature Range	T _J	- 55 to + 150									°C
Storage Temperature Range	T _{STG}	- 55 to + 150									°C

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

RATINGS AND CHARACTERISTIC CURVES (SK52C THRU SK520C)

FIG.1 FORWARD CURRENT DERATING CURVE

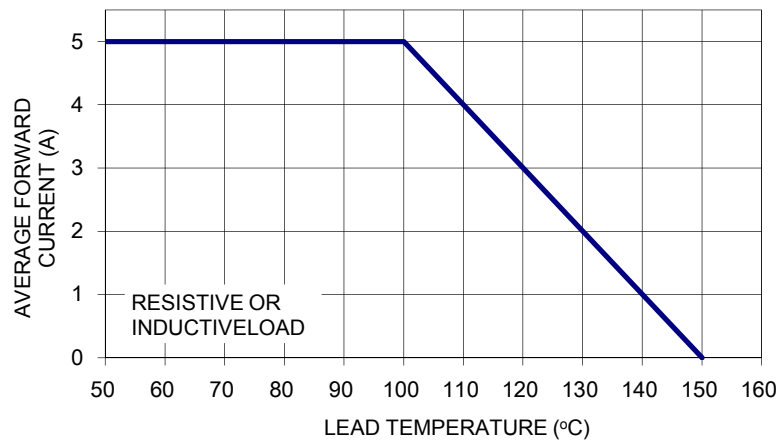


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

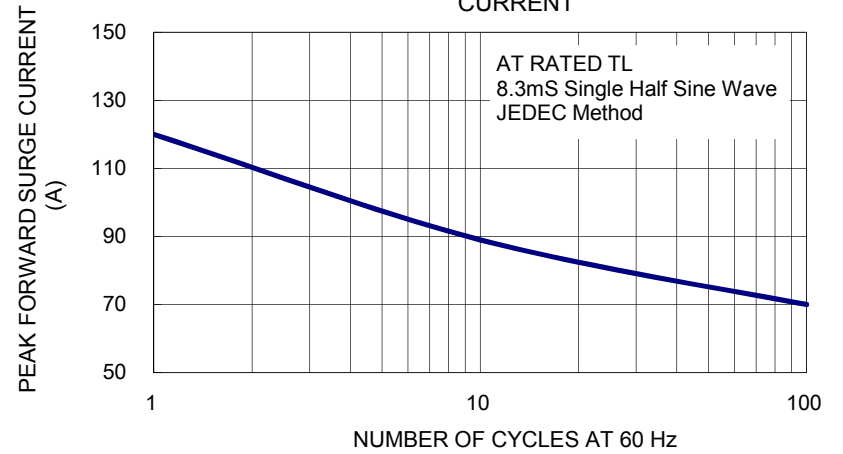


FIG. 3 TYPICAL FORWARD CHARACTERISTICS

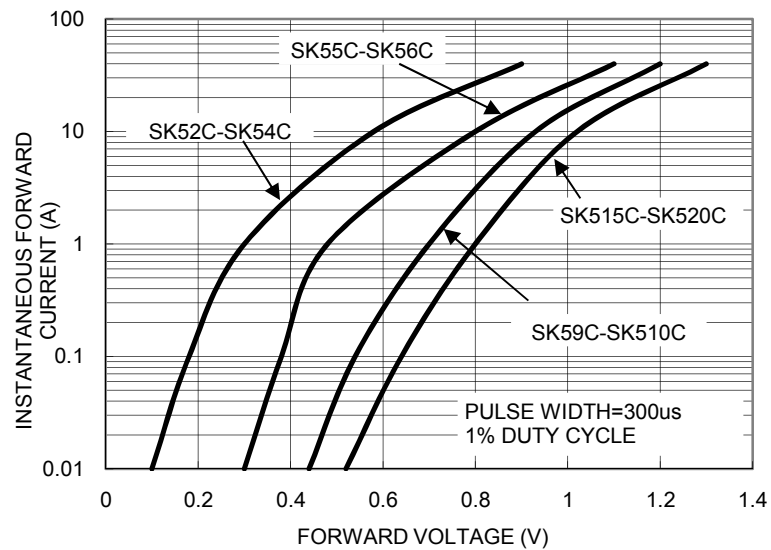


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

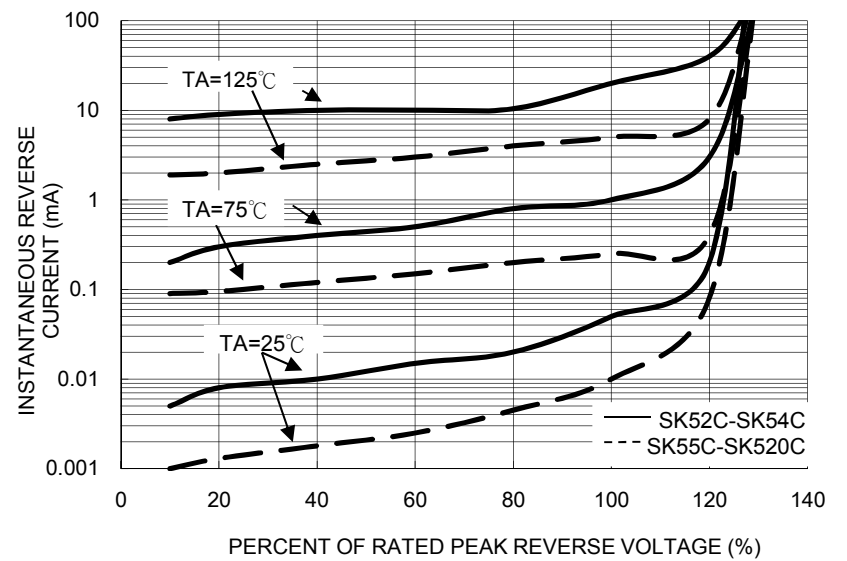


FIG. 5 TYPICAL JUNCTION CAPACITANCE

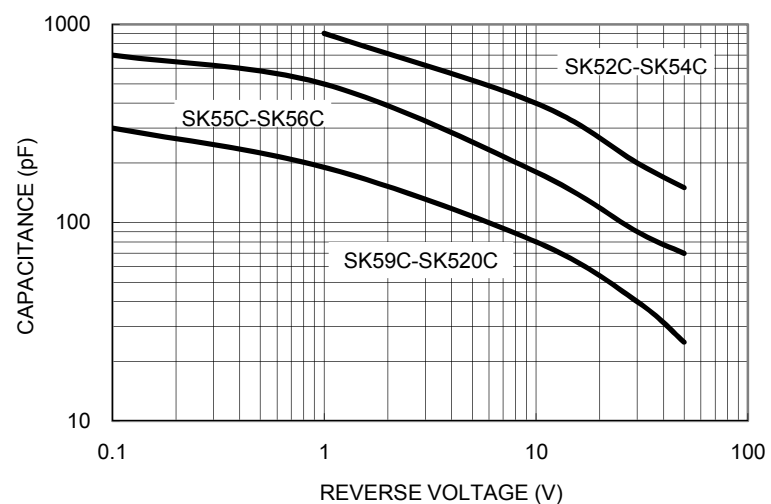
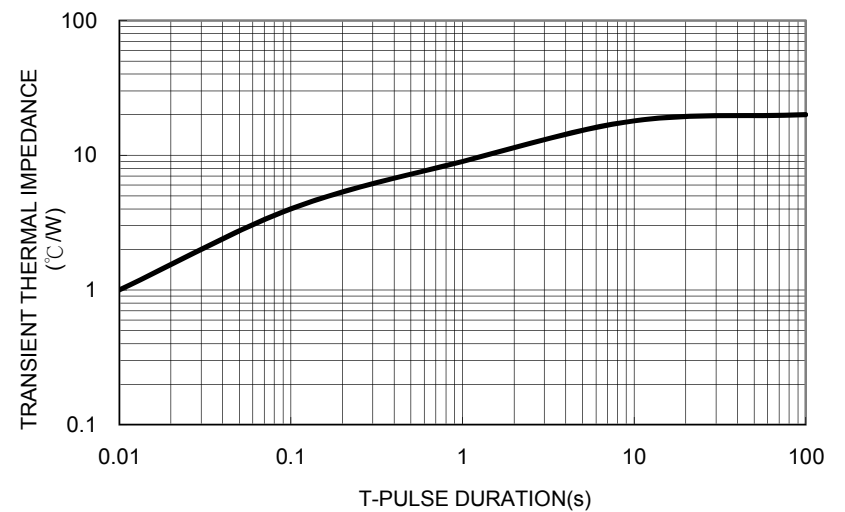


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE

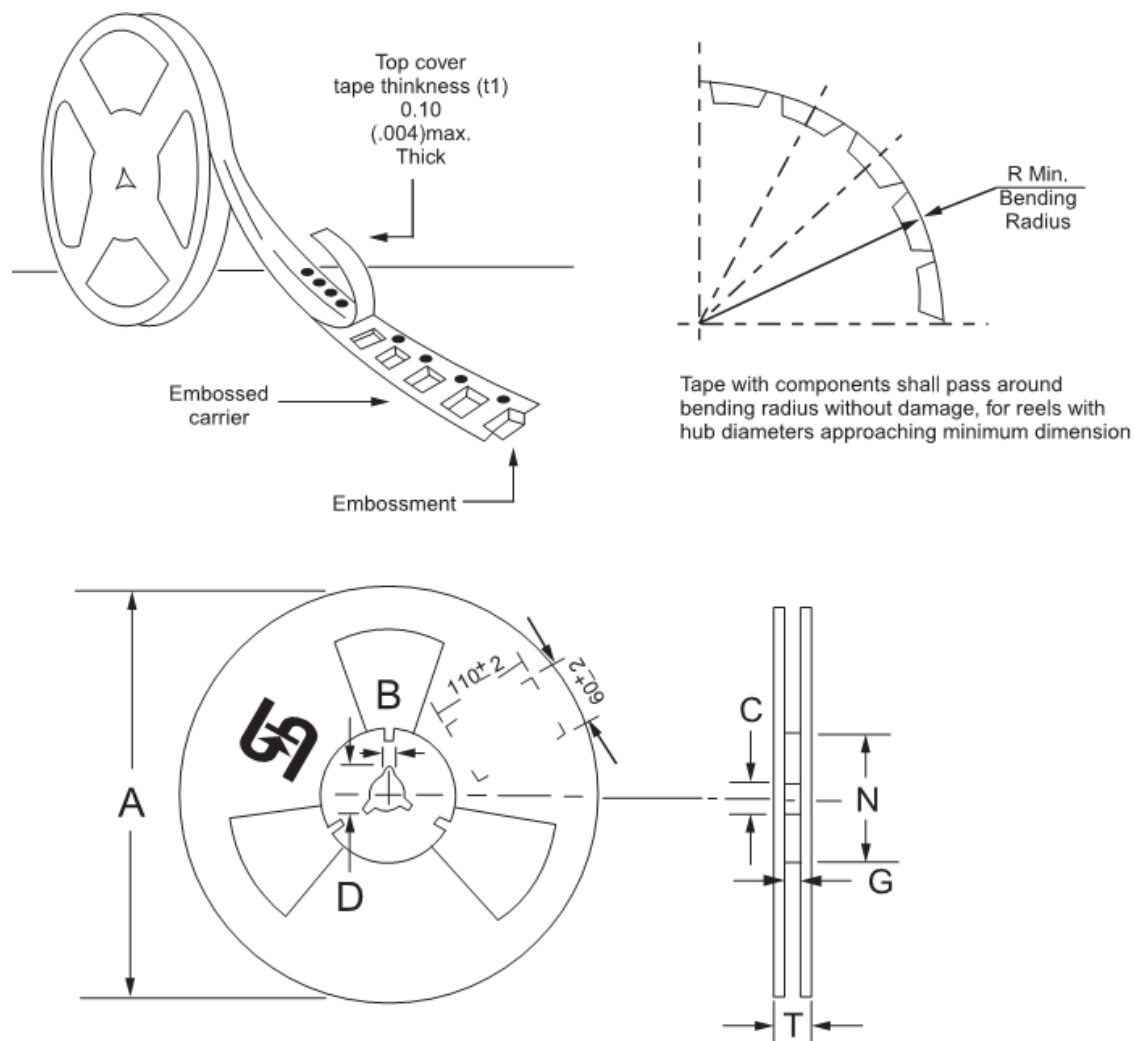


Ordering information

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".

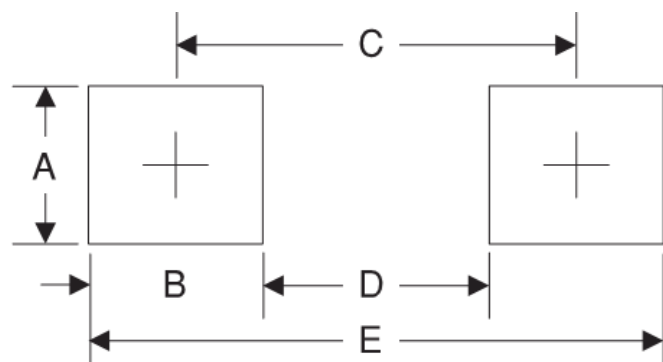
Tape & Reel specification



Reel Size	Tape Size	A	B	C	D	N	G	T
		±2.0	±0.4	+0.5;-0.2	min	±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	±0.5	±0.5	min	±0.5	+2.0;-0	max
13"	16mm	330	2	13	20.2	75	16.4	22.4

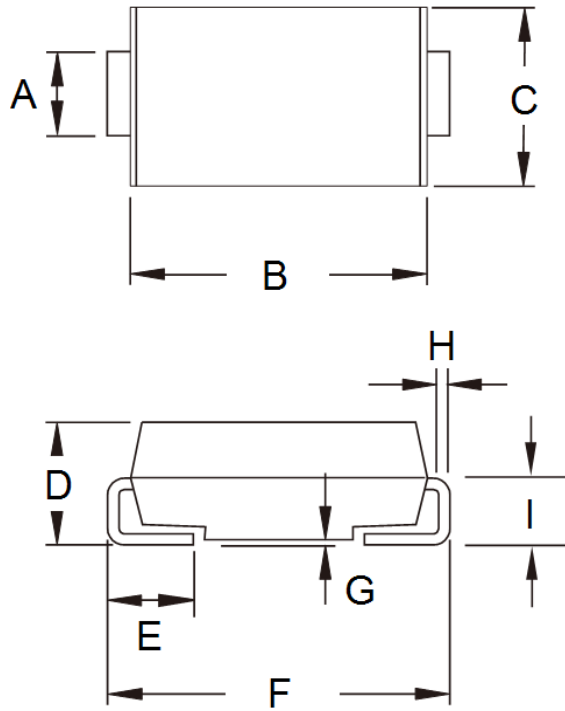
Unit (mm)

Suggested PAD Layout



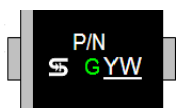
Symbol	Unit(mm)
A	3.3
B	2.5
C	6.8
D	4.4
E	9.3

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