

## Surface Mount Schottky Barrier Rectifier

Reverse Voltage - 20 to 200V Forward Current - 5.0A

### FEATURES

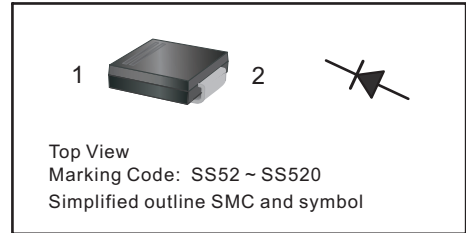
- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

### MECHANICAL DATA

- Case: SMC
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.22g / 0.0077oz

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



### Absolute Maximum Ratings and Electrical characteristics

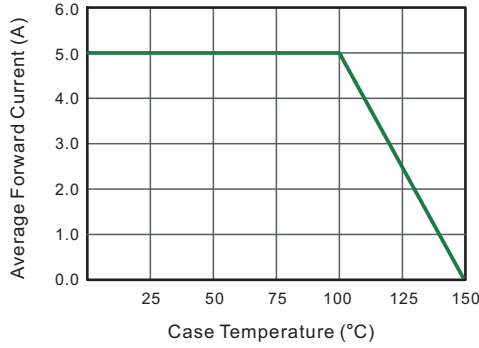
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

Parameter	Symbols	SS52CG	SS54CG	SS56CG	SS58CG	SS510CG	SS512CG	SS515CG	SS520CG	Units	
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	20	40	60	80	100	120	150	200	V	
Maximum RMS voltage	$V_{RMS}$	14	28	42	56	70	84	105	140	V	
Maximum DC Blocking Voltage	$V_{DC}$	20	40	60	80	100	120	150	200	V	
Maximum Average Forward Rectified Current	$I_{F(AV)}$	5.0								A	
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	175					150				A
Max Instantaneous Forward Voltage at 5 A	$V_F$	0.45	0.55	0.70		0.85				V	
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a = 100^\circ\text{C}$	$I_R$	1.0					50				mA
Typical Junction Capacitance <sup>(1)</sup>	$C_j$	600			400					pF	
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$	35								$^\circ\text{C}/\text{W}$	
Operating Junction Temperature Range	$T_j$	-55 ~ +150								$^\circ\text{C}$	
Storage Temperature Range	$T_{stg}$	-55 ~ +150								$^\circ\text{C}$	

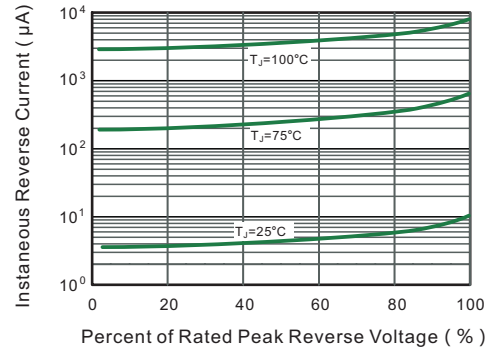
(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

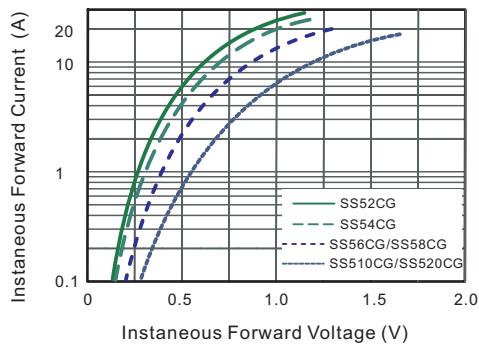
**Fig.1 Forward Current Derating Curve**



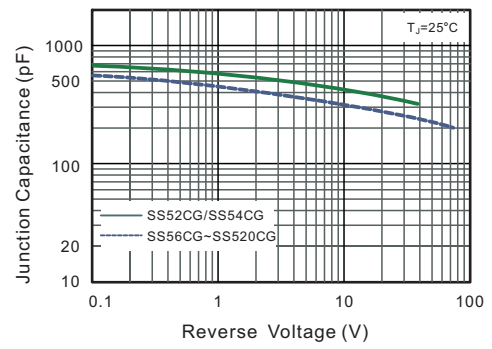
**Fig.2 Typical Reverse Characteristics**



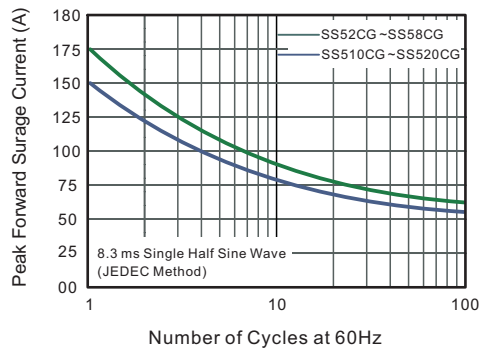
**Fig.3 Typical Forward Characteristic**



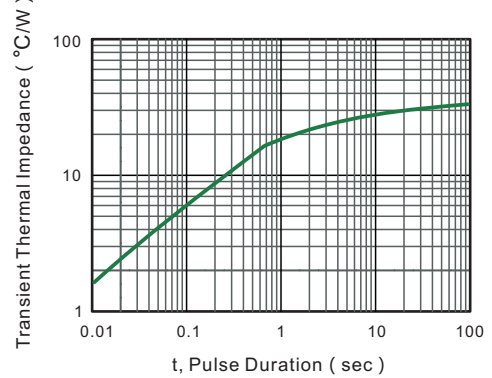
**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



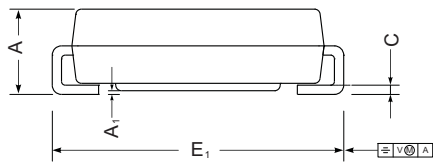
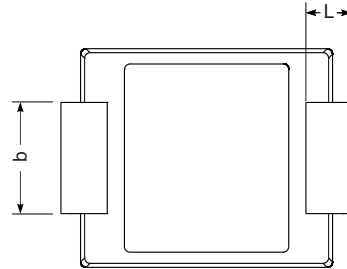
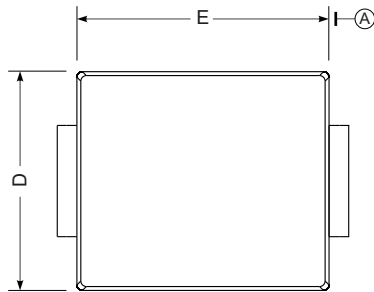
**Fig.6- Typical Transient Thermal Impedance**



## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

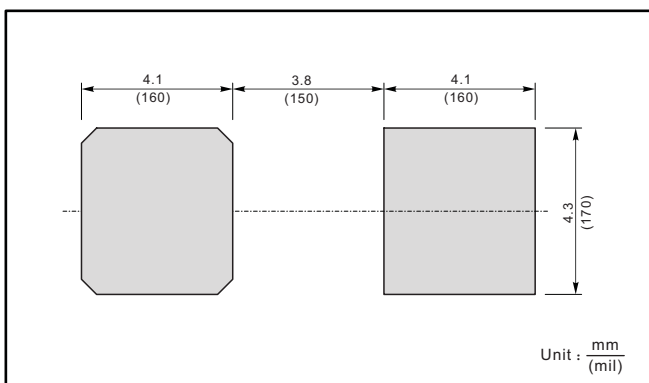
SMC



### SMC mechanical data

UNIT		A	E	D	E <sub>1</sub>	A <sub>1</sub>	C	L	b
mm	max	2.62	7.0	6.2	8.0	0.21	0.31	1.6	3.25
	min	2.00	6.5	5.6	7.6	0.05	0.15	0.9	2.75
mil	max	103	276	244	315	8.3	12	63	128
	min	79	256	220	299	2.0	5.9	35	108

### The recommended mounting pad size



### Marking

Type number	Marking code
SS52CG	SS52
SS54CG	SS54
SS56CG	SS56
SS58CG	SS58
SS510CG	SS510
SS512CG	SS512
SS515CG	SS515
SS520CG	SS520

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