



Surface Mount Schottky Barrier Rectifier

Reverse Voltage - 40 V

Forward Current - 5.0 A

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
- Hireliability application and automotive grade AEC-Q101 qualified

MECHANICAL DATA

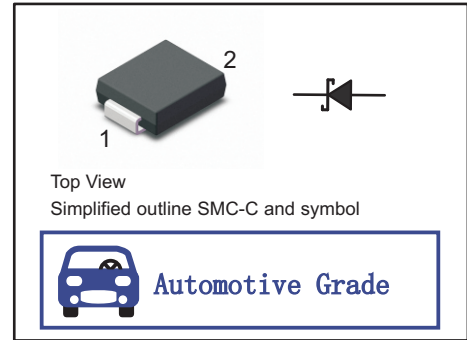
- Case: SMC-C
- Terminals: Solderable per MIL-STD-750, Method 2026
- Halogen free and RoHS compliant
- Approx. Weight: 0.22g / 0.0077oz

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 %

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Parameter	Symbols	AT-SS54CCM	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	40	V
Maximum RMS voltage	V_{RMS}	28	V
Maximum DC Blocking Voltage	V_{DC}	40	V
Maximum Average Forward Rectified Current @ Fig.1	$I_{F(AV)}$	5.0	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load	I_{FSM}	120	A
Peak Forward Surge Current, 1.0ms Single Half Sine-wave Superimposed on Rated Load	I_{FSM}	240	A
I^2t Rating for fusing ($3ms \leq t \leq 8.3ms$)	I^2t	59.7	A ² S
Max Instantaneous Forward Voltage @5 A	V_F	0.55	V
Maximum DC Reverse Current $T_a = 25^\circ C$ at Rated DC Reverse Voltage $T_a = 100^\circ C$	I_R	0.5 50	mA
Typical Junction Capacitance ⁽¹⁾	C_j	280	pF
Typical Thermal Resistance ⁽²⁾	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	37 10 13	°C/W
Operating Junction Temperature Range	T_j	-55 ~ +150	°C
Storage Temperature Range	T_{stg}	-55 ~ +150	°C

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

(2) P.C.B. mounted with 1.5" X 1.5" (3.81 X 3.81 cm) copper pad areas.



Fig.1 Forward Current Derating Curve

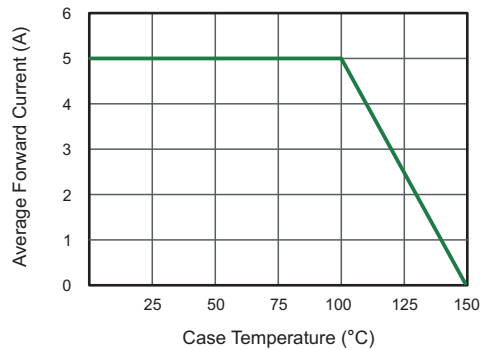


Fig.2 Typical Reverse Characteristics

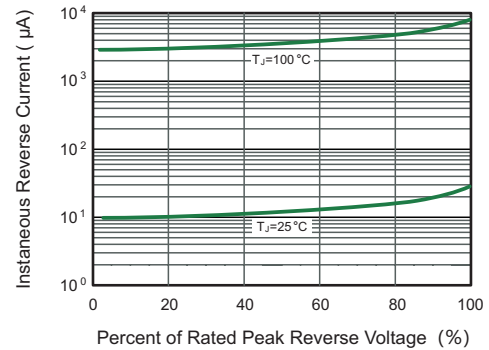


Fig.3 Typical Forward Characteristic

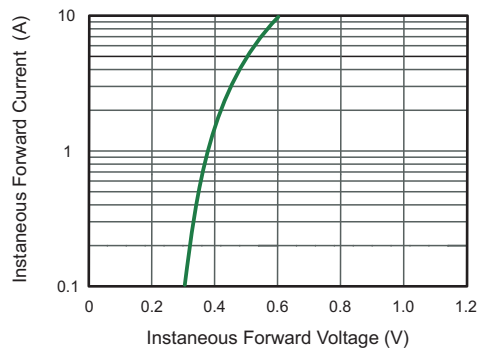


Fig.4 Typical Junction Capacitance

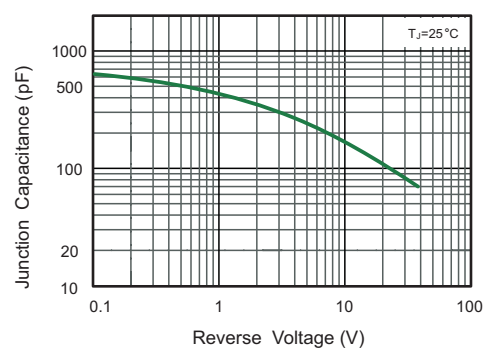
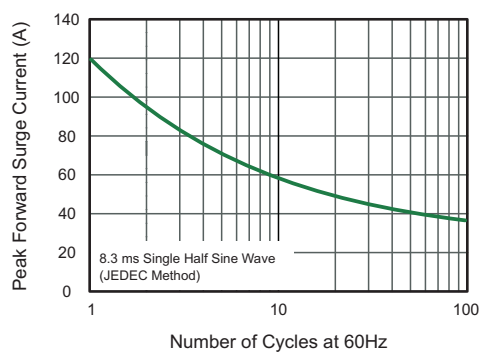


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

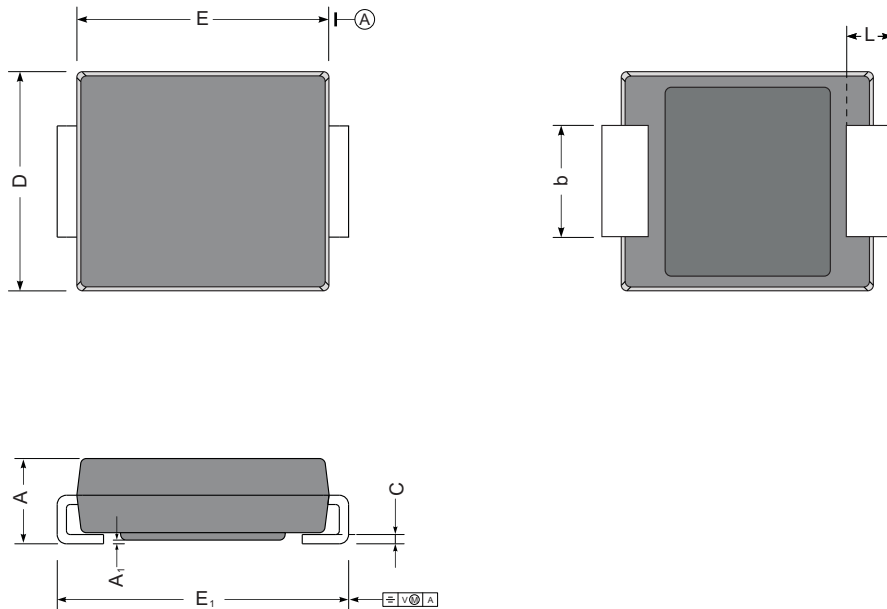




PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

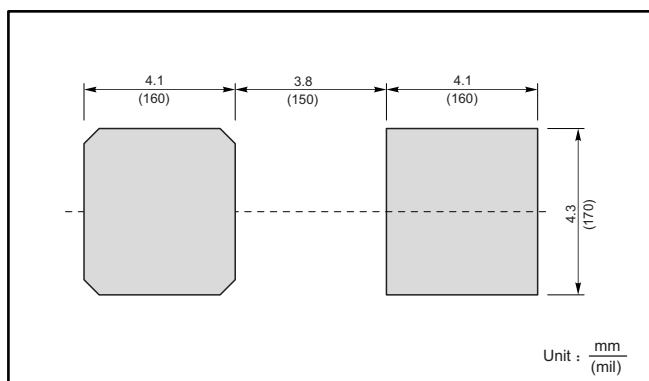
SMC-C



SMC-C mechanical data

UNIT		A	E	D	E ₁	A ₁	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
AT-SS54CCM	SS54



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