

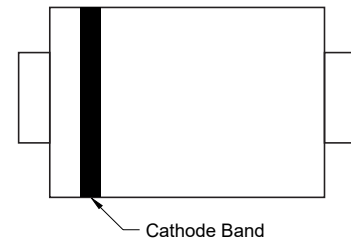
## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 200 Volts Forward Current - 5.0 Ampere

### 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

DO-214AB/SMC **RoHS**  
COMPLIANT



Cathode Band

### Mechanical Data

Case : DO-214AB/SMC molded plastic body

Terminals :Solderable per MIL-STD-750,Method2026

Polarity : Cathode line denotes the cathode end

Position: Any

Approx. Weight : 0.22g / 0.0077oz

### Equivalent circuit



### 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	SS52C	SS54C	SS56C	SS58C	SS510C	SS512C	SS515C	SS520C	UNITS
		SS52	SS54	SS56	SS58	SS510	SS512	SS515	SS520	
Marking Code										
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 @Fig.1	$I_{F(AV)}$	5.0								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	175				150				A
Maximum instantaneous forward voltage at 5.0A	$V_F$	0.45	0.55	0.70		0.85		0.95		V
Maximum DC reverse current at rated DC blocking voltage $T_A=25^{\circ}C$ $T_A=125^{\circ}C$	$I_R$	1.0								mA
		50								
Typical junction capacitance (NOTE 1)	$C_J$	600			400					pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	35								°C/W
Operating junction temperature range	$T_J$	-55 to +150								°C
Storage temperature range	$T_{STG}$	-55 to +150								°C

**Note:**1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2.PC.B.mounted with 1.5"X1.5"(3.81 X3.81 cm) copper pad areas.

## Typical Characteristics

Fig.1 Forward Current Derating Curve

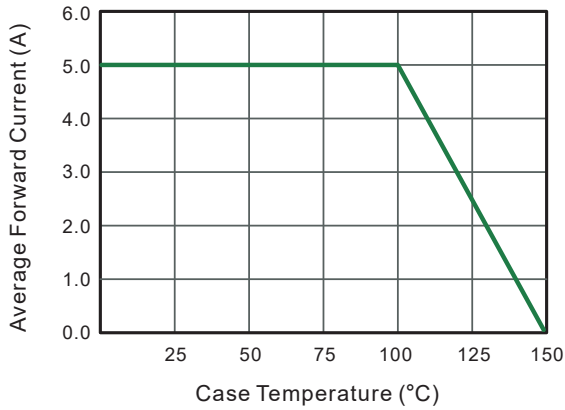


Fig.2 Typical Reverse Characteristics

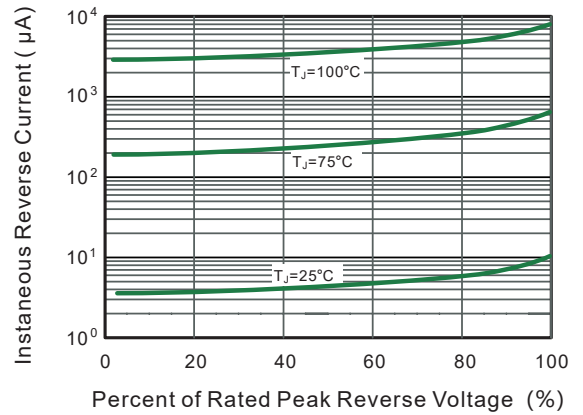


Fig.3 Typical Forward Characteristic

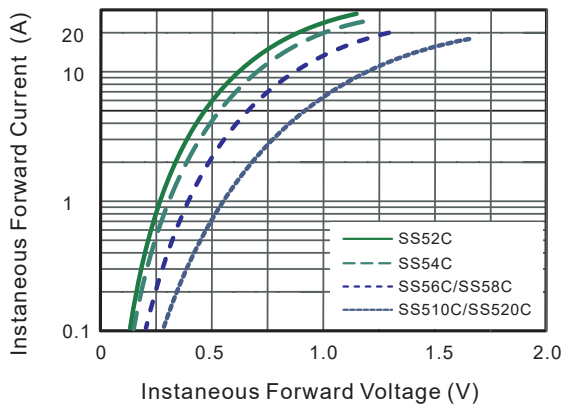


Fig.4 Typical Junction Capacitance

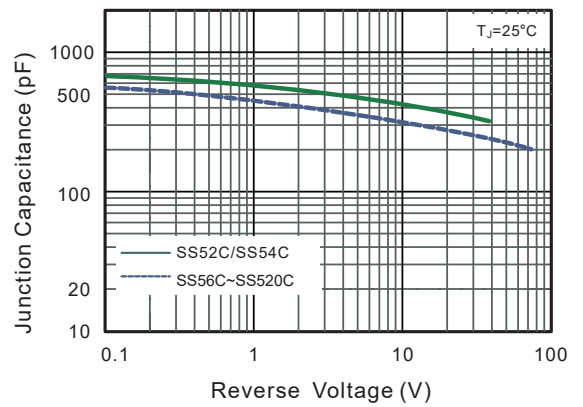


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

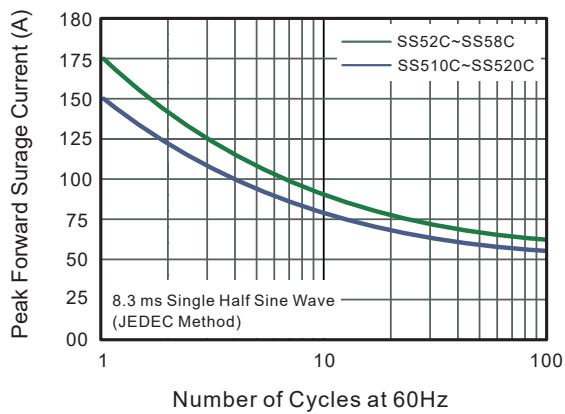
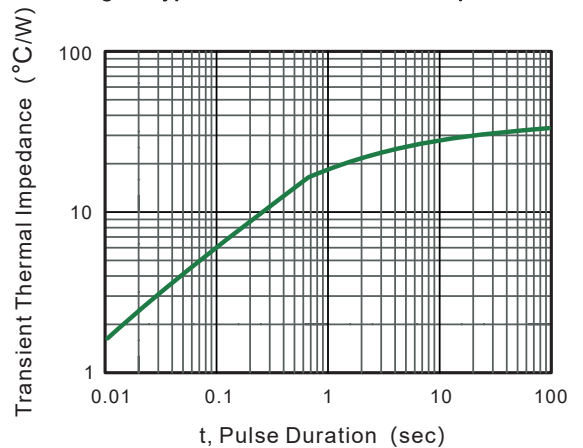
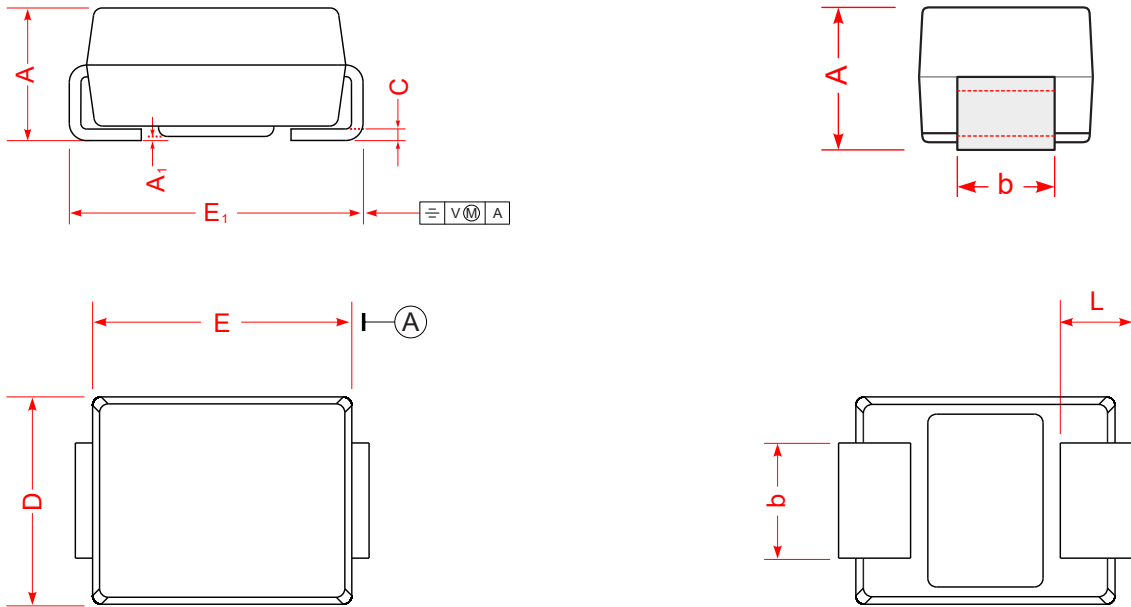


Fig.6- Typical Transient Thermal Impedance

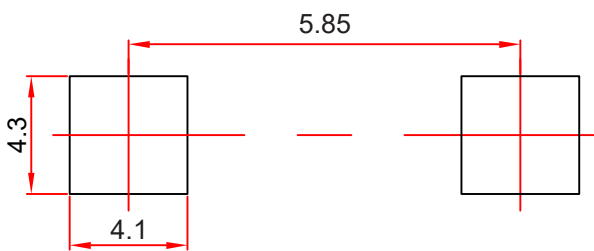


## DO-214AB/SMC Package Outline Dimensions



Symbol	imensions In Millimeters		imensions In Inches	
	Min	Max	Min	Max
A	2.00	2.62	0.078	0.103
C	0.15	0.31	0.006	0.012
D	5.60	6.20	0.220	0.244
E	6.50	7.00	0.256	0.276
E <sub>1</sub>	7.60	8.00	0.229	0.315
b	2.75	3.25	0.108	0.128
L	0.90	1.60	0.035	0.063
A <sub>1</sub>	0.2 REF		0.008 REF	

## DO-214AB/SMC Suggested Pad Layout



- Note:
1. Controlling dimension: in/millimeters.
  2. General tolerance:  $\pm 0.05$ mm.
  3. The pad layout is for reference purposes only.