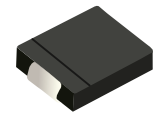


## FEATURES

- | Low leakage current
- | High efficiency
- | Heatsink design
- | Moisture sensitivity: level 1, per J-STD-020
- | Low forward voltage drop



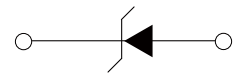
DO-214AB(SMC)



Marking

## MECHANICAL DATA

- | Case:DO-214AB(SMC)
- | Molding compound meets UL 94 V-0 flammability



Schematic Symbol

## APPROVALS

<b>RoHS</b>	Compliance with 2011/65/EU
<b>HF</b>	Compliance with IEC61249-2-21:2003

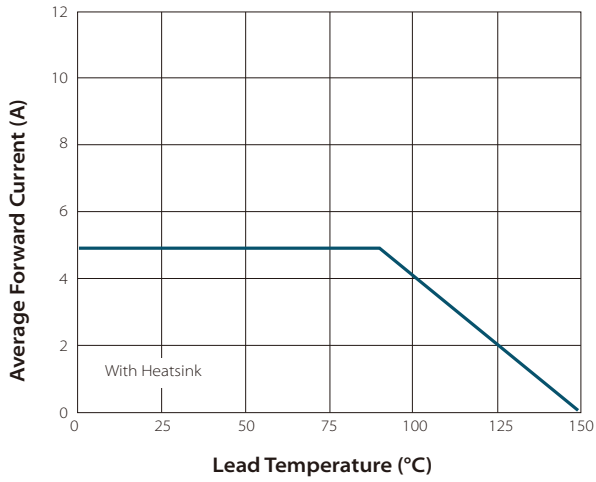
## MAXIMUM RATINGS (T<sub>A</sub> = 25°C)

Parameter	Symbol	Value	Unit	
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	100	V	
Maximum average forward rectified current	I <sub>F(AV)</sub>	5	A	
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load per diode	I <sub>FSM</sub>	120	A	
Maximum instantaneous forward voltage per diode I <sub>F</sub> =5A (Note 1)	V <sub>F</sub>	T <sub>J</sub> = 25°C	0.60	V
		T <sub>J</sub> = 125°C	0.55	V
Maximum instantaneous reverse current per diode at rated reverse voltage	I <sub>R</sub>	T <sub>J</sub> = 25°C	30	uA
		T <sub>J</sub> = 125°C	0.5	mA
Typical thermal resistance	R <sub>θJL</sub>	11	°C/W	
Operating temperature range	T <sub>J</sub>	-55 to 150	°C	
Storage temperature range	T <sub>STG</sub>	-55 to 150	°C	

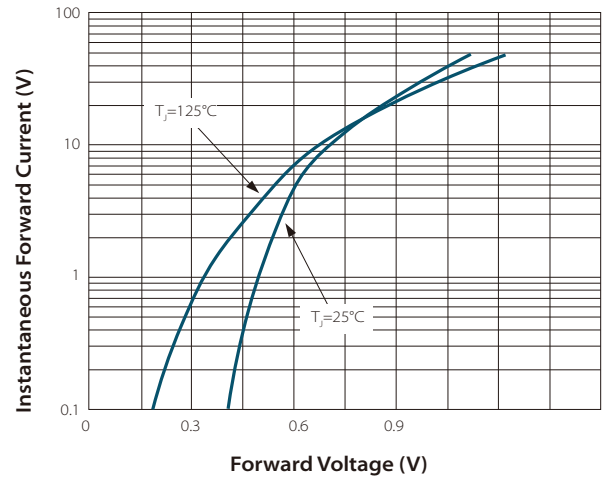
Note 1: Pulse Test with Pulse Width=300μs, 1% Duty Cycle

# CHARACTERISTIC CURVES

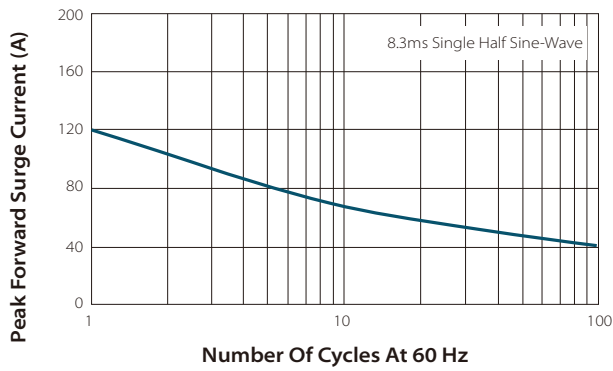
**Fig.1 Forward Current Derating Curve**



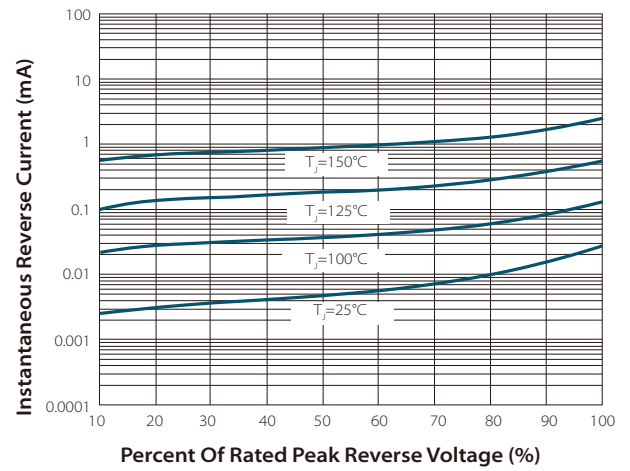
**Fig.2 Typical Forward Characteristics**

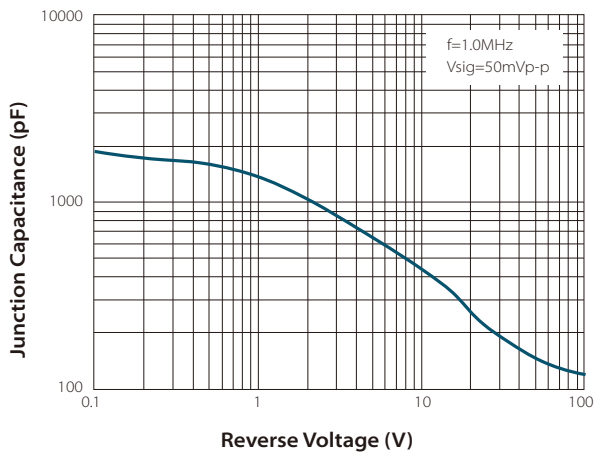


**Fig.3 Maximum Non-repetitive Forward Surge Current**



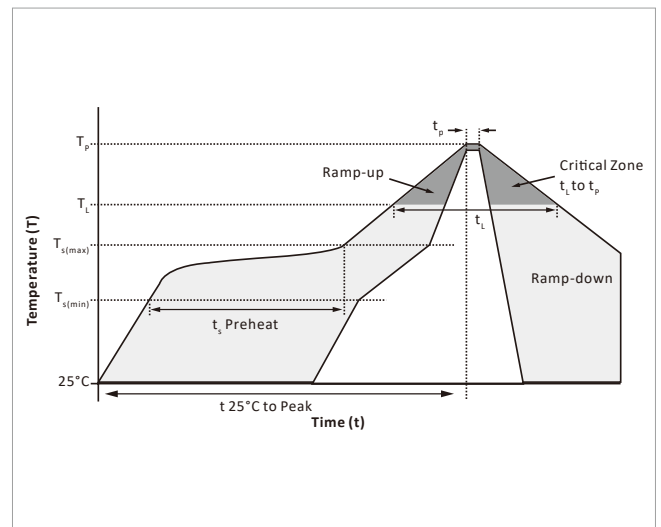
**Fig.4 Typical Reverse Characteristics**



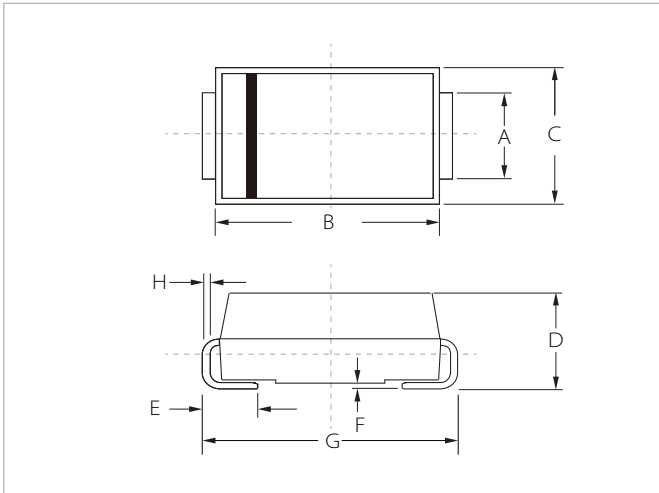
**Fig.5 Typical Junction Capacitance**


## SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ( $T_{s(\text{min})}$ )	150°C
	Temperature Max ( $T_{s(\text{max})}$ )	200°C
	Time (min to max) ( $t_s$ )	60 – 180 secs
Average ramp up rate (Liquidus Temp ( $T_L$ ) to peak)		3°C/second max
$T_{s(\text{max})}$ to $T_L$ - Ramp-up Rate		3°C/second max
Reflow	Temperature ( $T_L$ ) (Liquidus)	217°C
	Time (min to max) ( $t_L$ )	60 – 150 seconds
Peak Temperature ( $T_p$ )		260°C
Time within 5°C of actual peak Temperature ( $t_p$ )		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature ( $T_p$ )		8 minutes max.
Do not exceed		260°C

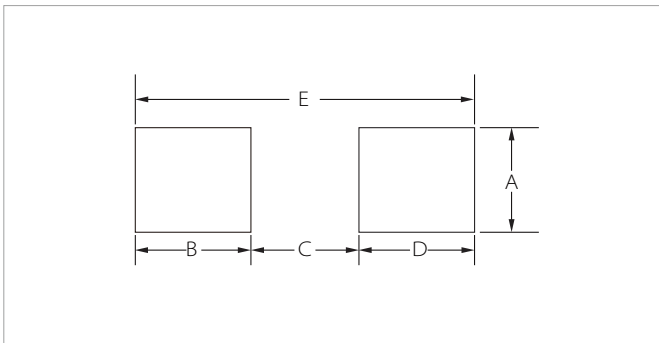


## DO-214AB(SMC) PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.20	0.110	0.126
B	6.60	7.20	0.260	0.283
C	5.70	6.10	0.224	0.240
D	2.15	2.75	0.085	0.108
E	1.00	1.60	0.039	0.063
F	0.02	0.20	0.000	0.008
G	7.60	8.00	0.299	0.315
H	0.15	0.30	0.006	0.012

## RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.30	-	0.129	-
B	2.40	-	0.094	-
C	-	4.20	-	0.165
D	2.40	-	0.094	-
E	8.20REF		0.323REF	

## ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SS510CLF	DO-214AB(SMC)	3000PCS	13"

To find your local partner within Semiwell's website : [www.semiwell.com.cn](http://www.semiwell.com.cn)

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