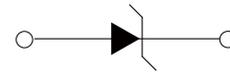


## FEATURES

- | Low power loss high efficiency
- | Ideal for automated placement
- | Guard ring for over-voltage protection
- | High surge current capability



DO-214AC(SMA)



Schematic Symbol

## APPLICATIONS

- | Polarity: Color band denotes cathode end
- | Mounting Position: Any

## APPROVALS

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

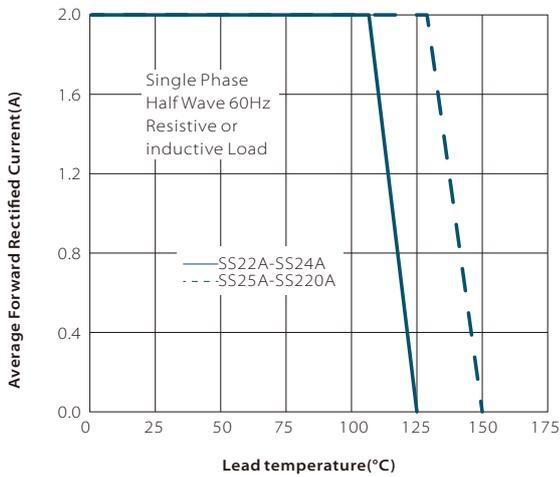
## ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C)

Parameter	Symbol	SS22A	SS23A	SS24A	SS25A	SS26A	SS28A	SS210A	SS215A	SS220A	Unit
Marking		SS22	SS23	SS24	SS25	SS26	SS28	SS210	SS215	SS220	
Repetitive peak reverse voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	150	200	V
Reverse voltage,total RMS Value	V <sub>RMS</sub>	14	21	28	35	42	56	70	105	140	V
Maximum DC blocking voltage	V <sub>DC</sub>	20	30	40	50	60	80	100	150	200	V
Maximum average forward rectified current	I <sub>F(AV)</sub> <sup>(1)</sup>	2.0									A
Surge Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I <sub>FSM</sub>	50									A
Maximum Instantaneous forward voltage I <sub>F</sub> =2A,T <sub>a</sub> =25°C	V <sub>F</sub>	0.45	0.55	0.70			0.85			V	
Maximum DC reverse current at rated DC blocking voltage	T <sub>A</sub> =25°C	0.2					0.05				mA
	T <sub>A</sub> =100°C	10					5				mA
Typical junction capacitance 4.0V,1MHz	C <sub>J</sub>	220				180					V/μs
Typical thermal resistance Note 1	R <sub>θJA</sub>	88									°C/W
Operating junction temperature range	T <sub>J</sub>	-55 to +125									°C
Storage temperature range	T <sub>STG</sub>	-55 to +150									°C

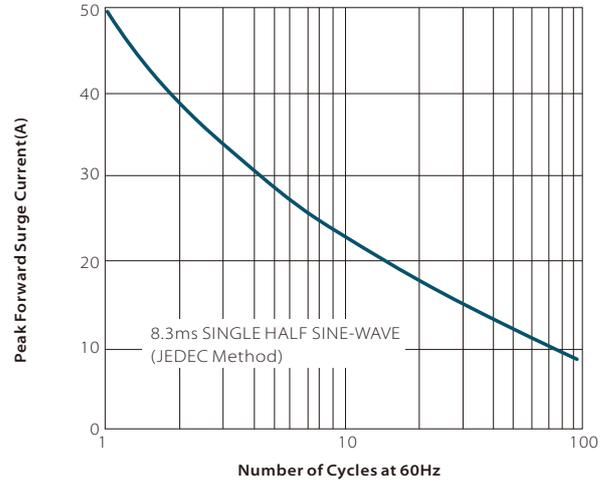
Note1):Mounted on PCB with 5.0x5.0mm copper pads.

# CHARACTERISTIC CURVES

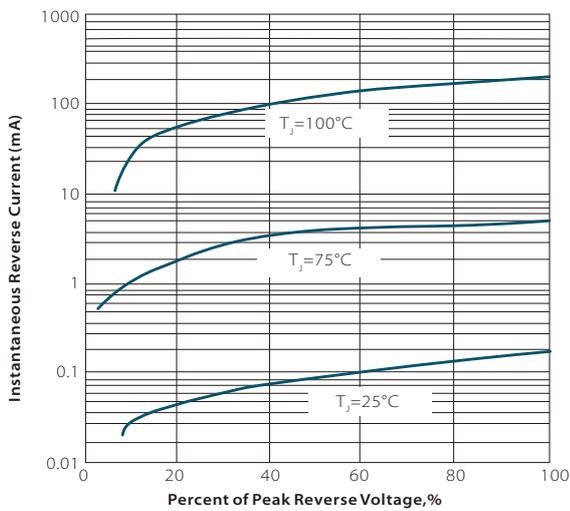
**Fig. 1- Forward Current Derating Curve**



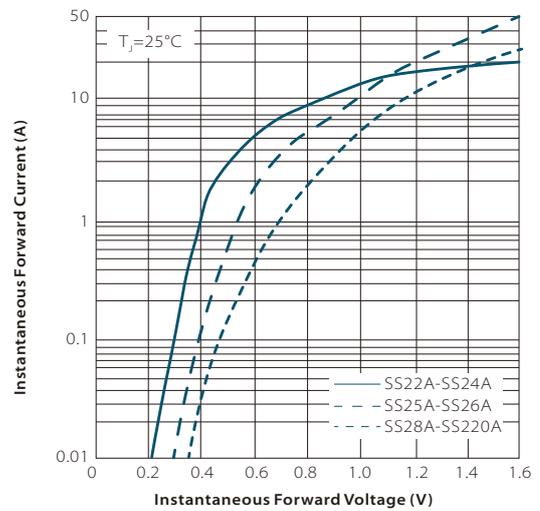
**Fig. 2-Maximum Non-Repetitive Peak Forward Surge Current**

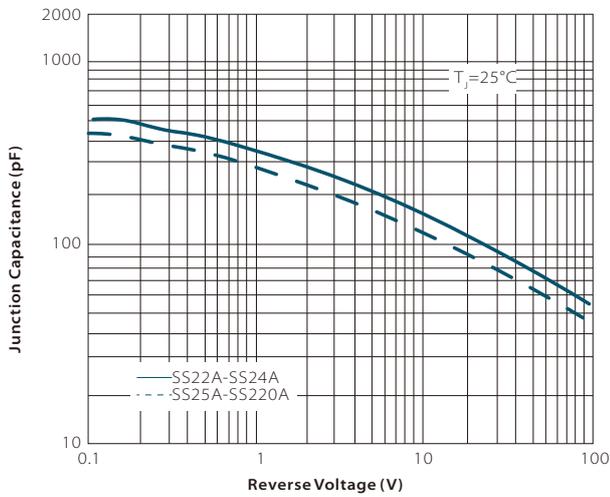
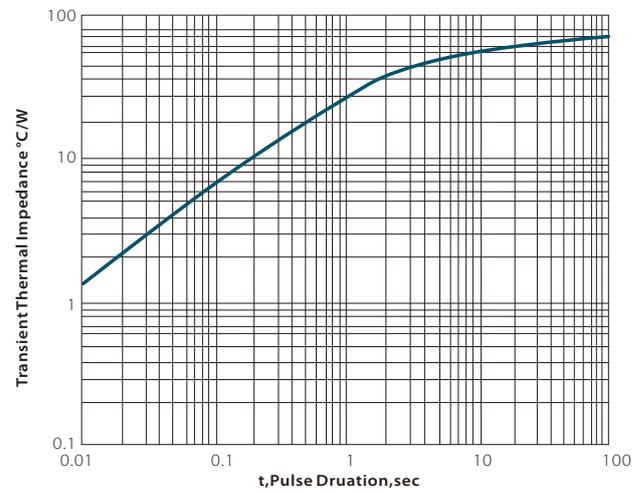


**Fig. 3-Typical Reverse Characteristics**



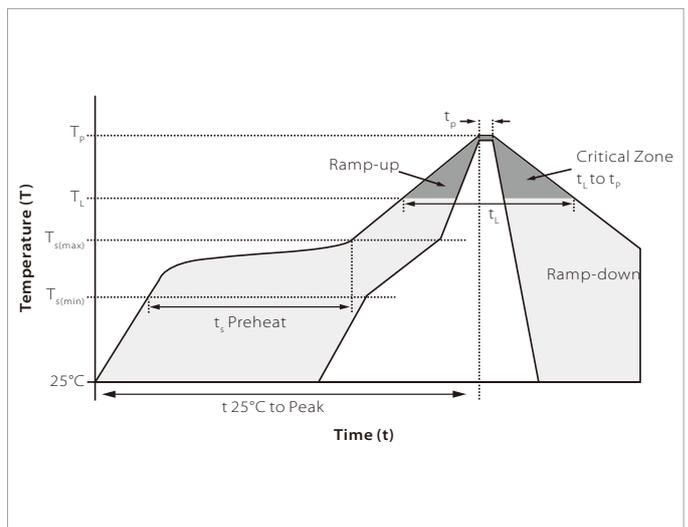
**Fig. 4-Typical Instantaneous Forward Characteristics**



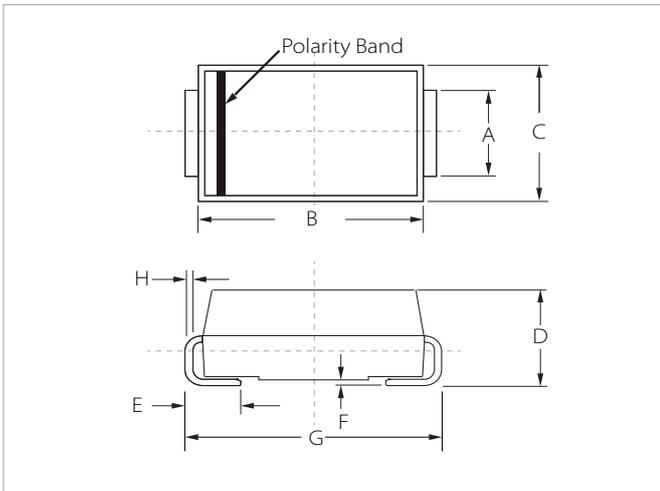
**Fig. 5-Typical Junction Capacitance**

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


## SOLDERING PARAMETERS

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

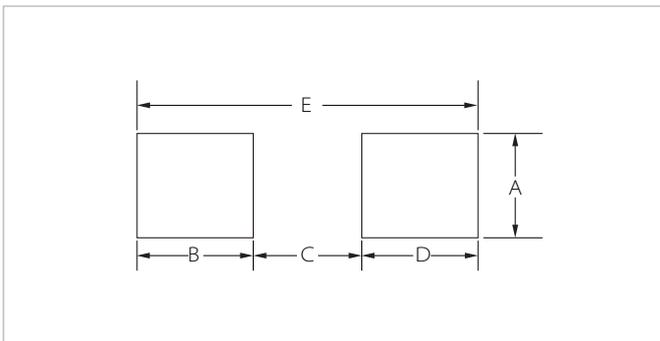


## DO-214AC(SMA) PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.20	1.60	0.047	0.063
B	4.20	4.60	0.165	0.181
C	2.60	2.80	0.102	0.110
D	2.10	2.40	0.083	0.094
E	0.76	1.52	0.030	0.060
F	0.02	0.20	0.001	0.008
G	4.85	5.25	0.191	0.207
H	0.15	0.30	0.006	0.012

## RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.63	-	0.064	-
B	1.45	-	0.057	-
C	-	2.80	-	0.090
D	1.45	-	0.057	-
E	5.28REF		0.208REF	

## ORDERING INFORMATION

Part Number	Size	QTY/Reel	Reel Size
SS22A-220A	DO-214AC(SMA)	5000PCS	13"

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

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