

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

MECHANICAL DATA

- Polarity: Color Band Denotes Cathode End
- Mounting Position: Any

APPROVALS

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

ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$)

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 _{RRM}	20	30	40	50	60	80	100	150	200	V
Reverse Voltage,total RMS Value		V _{RMS}	14	21	28	35	42	56	70	105	140	V
Maximum DC Blocking Voltage		V _{DC}	20	30	40	50	60	80	100	150	200	V
Maximum Average Forward Rectified Current		I _{F(AV)} ¹⁾	2.0									A
Surge Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load Per Diode		I _{FSM}	50									A
Maximum Instantaneous Forward Voltage I _F =2A,T _A =25°C		V _F	0.45	0.55		0.70		0.85			V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A =25°C	I _R	0.2					0.05			mA	
	T _A =100°C		10					5			mA	
Typical Junction Capacitance 4.0V,1MHz		C _J	220				180					V/μs
Typical Thermal Resistance Note 1		R _{θJA}	88									°C/W
Operating Junction Temperature Range		T _J	-55 to +125									°C
Storage Temperature Range		T _{STG}	-55 to +150									°C

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

CHARACTERISTIC CURVES

Fig. 1- Forward Current Derating Curve

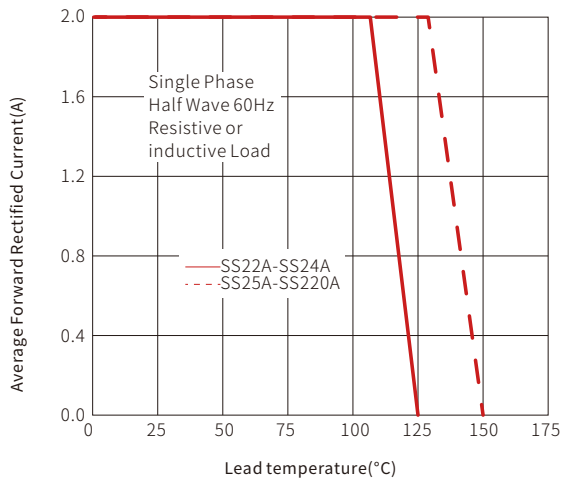


Fig. 2- Maximum Non-Repetitive Peak Forward Surge Current

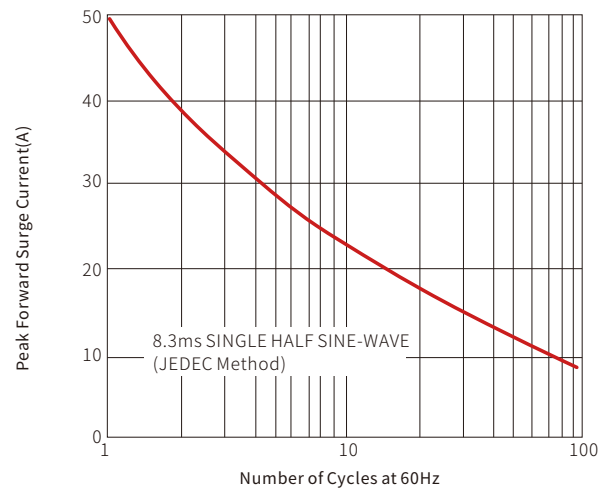


Fig. 3- Typical Reverse Characteristics

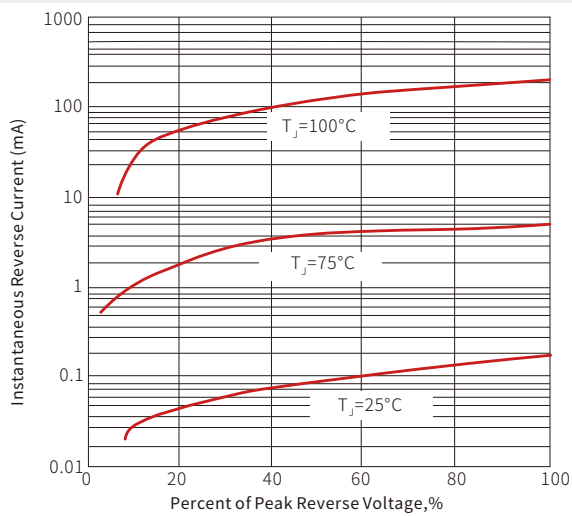


Fig. 4- Typical Instantaneous Forward Characteristics

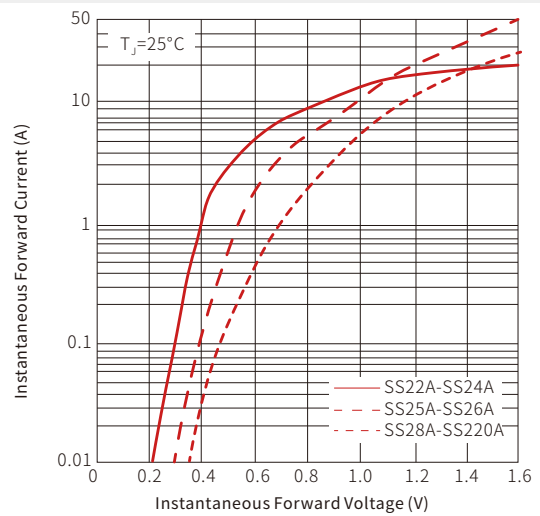


Fig. 5-Typical Junction Capacitance

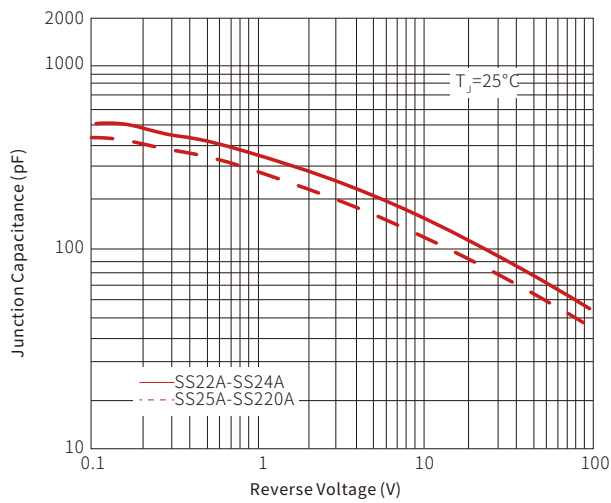
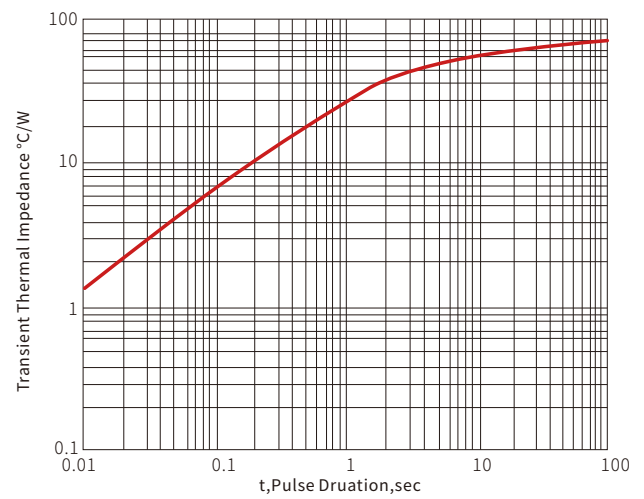
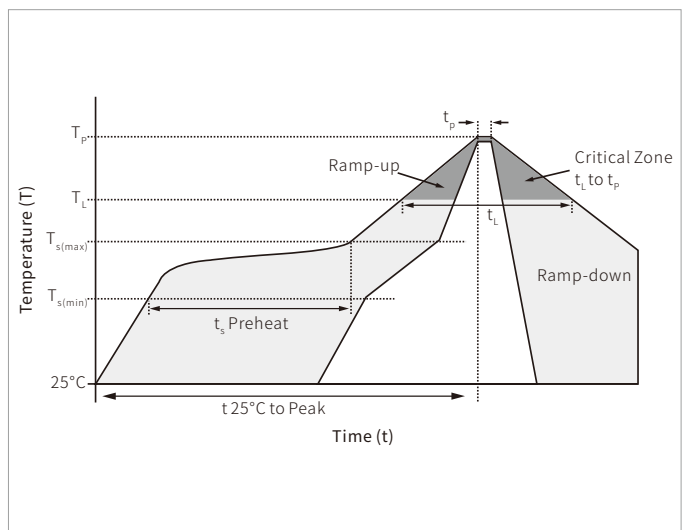


Fig. 6-Typical Transient Thermal Impedance

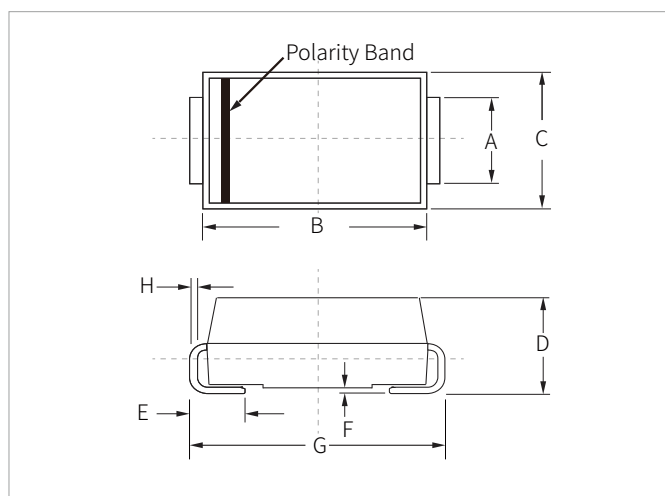


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(\min)}$)	150 $^\circ\text{C}$
	Temperature Max ($T_{s(\max)}$)	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
$T_{s(\max)}$ 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_L)	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 $^\circ\text{C}$

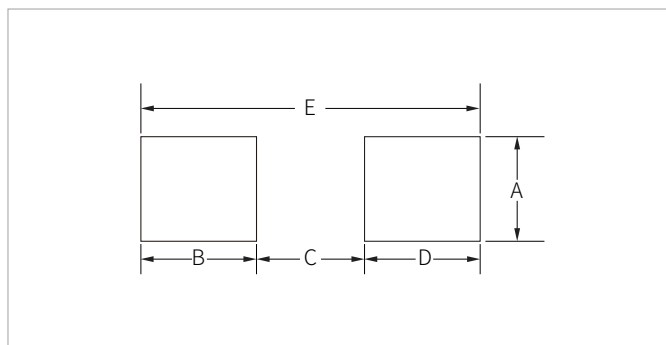


DO-214AC(SMA) PACKAGE INFORMATION



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	2.40	2.80	0.094	0.110
D	2.00	2.40	0.079	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"

Headquarters

No.3387 Shendu Road
Pujiang I&E Park
Minhang Shanghai China
201000

Hotline

400-021-5756

Web

<https://www.semiware.com>

Sales Center

Tel: 86-21-3463-7458
Email: sales18@semiware.com

Customer Service

Tel: 86-21-5484-1001
Email: sales17@semiware.com

Technical Support

Tel: 86-21-3463-7654
Email: fae01@semiware.com

Complaint & Suggestions

Tel: 86-21-3463-7172
Ext: 8868
Email: cs03@semiware.com

By QR Code

Website



Wechat

To find your local partner within Semiware' s global website: www.semiware.com

© 2022 Semiware Semiconductor Inc.

The content of this document has been carefully checked and understood. However, neither Semiware nor its subsidiaries assume any liability whatsoever for any errors or inaccuracies of this document and the consequences thereof. Published specifications are subject to change without notice. Product suitability for any area of application must ultimately be determined by the customer. In all cases, products must never be operated outside their published specifications. Semiware does not guarantee the availability of all published products. This disclaimer shall be governed by substantive Chinese law and resulting disputes shall be settled by the courts at the place of business of Semiware. Latest publications and a complete disclaimer can be downloaded from the Semiware website. All trademarks recognized.