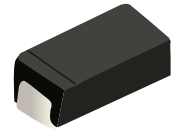


FEATURES

- | Glass Passivated Die Construction
- | Fast Recovery Time for High Efficiency
- | Low reverse leakage
- | Ideally Suited for Automatic Assembly



DO-214AC(SMA)



Schematic Symbol

MECHANICAL DATA

- | Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- | Moisture Sensitivity: Level 1 per J-STD-020
- | Polarity: Cathode line denotes the cathode end

APPROVALS

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

MAXIMUM RATINGS AND CHARACTERISTICS (T_A=25°C)

Parameter	Symbol	GS1A	GS1B	GS1D	GS1G	GS1J	GS1K	GS1M	Unit	
Marking		GS1A	GS1B	GS1D	GS1G	GS1J	GS1K	GS1M		
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V	
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700		
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000		
Maximum average forward rectified current	I _{F(AV)}	1.0								A
Surge(non-repetitive)forward current@60Hz Half-sine wave,1 cycle,Ta=25°C	I _{FSM}	30								
Typical reverse recovery time(Note 1)	t _{rr}	1.5								us
Typical Junction capacitance(Note 2)	C _j	12								pF
Non-repetitive peak reverse avalanche energy at 25°C,I _{AS} =1A,L=10mH	E _{RSM}	5								mJ
Operating junction temperature rang	T _J	-55~+150								°C
Storage temperature rang	T _{STG}	-55~+150								
Typical Thermal Resistance	R _{θJA}	75						85		°C/W
Typical Thermal Resistance	R _{θJL}	27						30		

 Note 1: Reverse recovery test conditions: I_F=0.5A,I_R=1.0A,I_{RR}=0.25A

Note 2: Measured at 1MHz and applied reverse voltage of 4.0V D.C.

ELECTRICAL CHARACTERISTICS (T_A=25°C)

Parameter	Symbol	GS1A	GS1B	GS1D	GS1G	GS1J	GS1K	GS1M	Unit
Maximum instantaneous forward voltage drop per diode(Note 3)@1A	V _F				1.1				V
Maximum reverse current @rated V _R	T _J =25°C				1				uA
	T _J =125°C				50				

Note 3: Pulse test with P_w=300uS,1% duty Cycle

CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

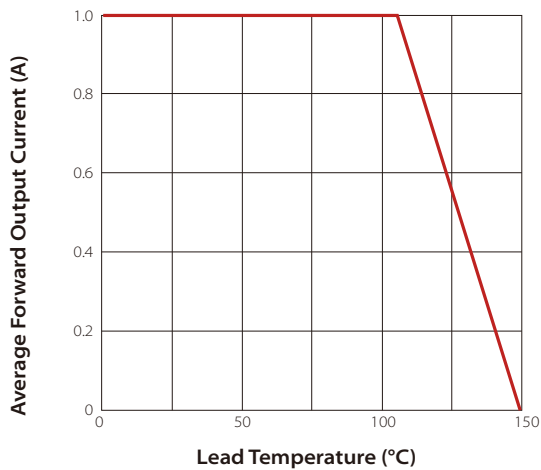


Fig.2 Forward Surge Current Capability

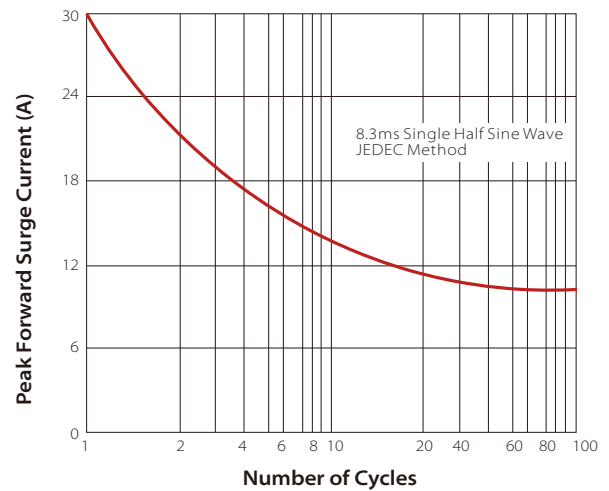


Fig.3 Typical Forward Voltage

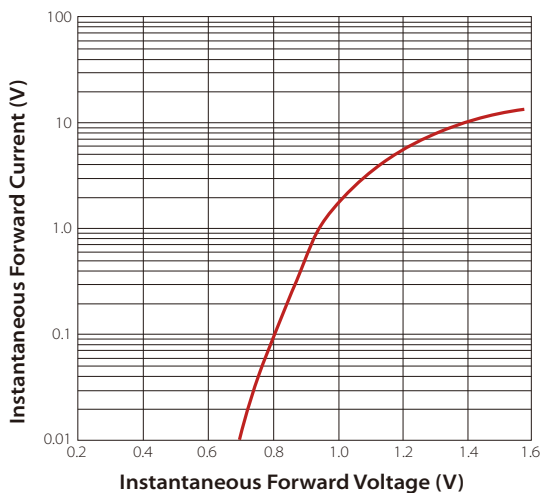
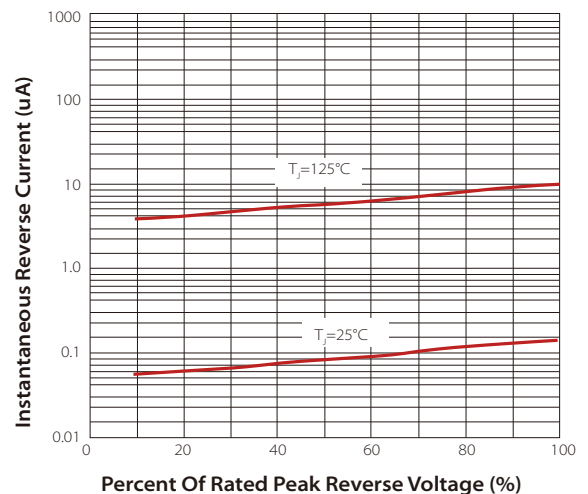
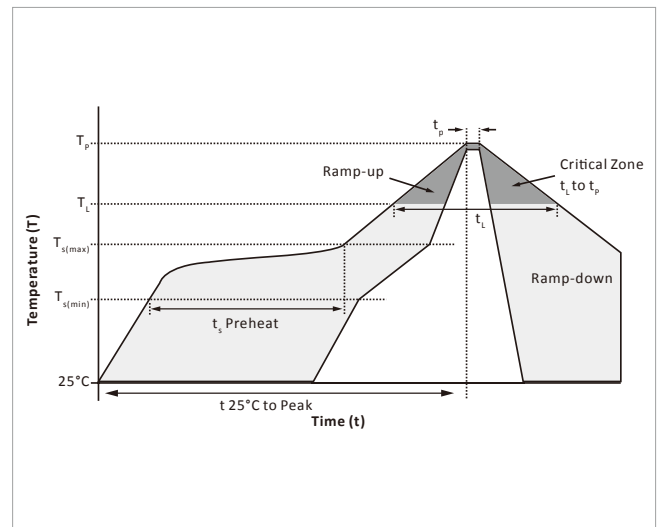


Fig.4 Typical Reverse Characteristics

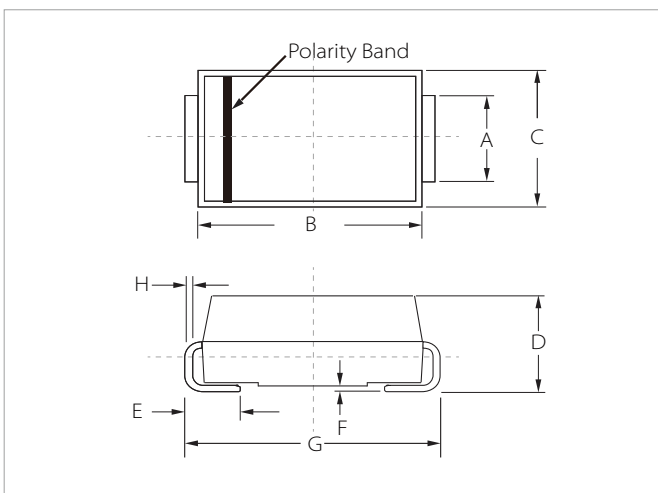


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_p)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(max)}$ 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

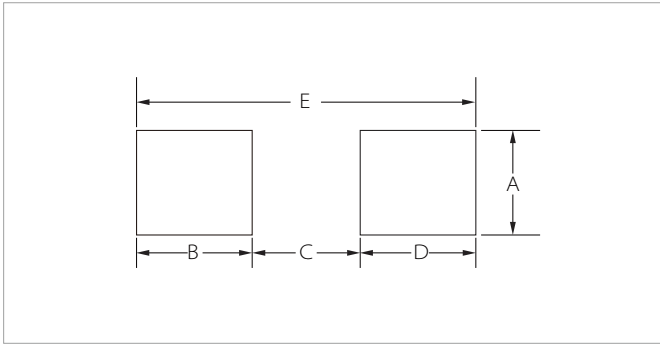


DO-214AC(SMA) PACKAGE INFORMATION



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	Component Package	QTY/Reel	Reel Size
GS1A-GS1M	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 network: 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.