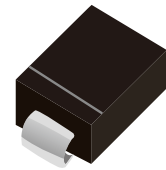


FEATURES

- | Ideal for automated placement
- | Glass passivated chip junction
- | High forward surge capability
- | Super fast reverse recovery time



DO-214AA(SMB)



Schematic Symbol

APPLICATIONS

- | For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, and telecommunication

APPROVALS

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

MAXIMUM RATINGS AND CHARACTERISTICS (T_A=25°C)

Parameter	Symbol	US5AB	US5BB	US5DB	US5FB	US5GB	US5JB	US5KB	US5MB	Unit
Marking		US5A	US5B	US5D	US5F	US5G	US5J	US5K	US5M	
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	300	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	210	280	420	560	700	
Maximum DC blocking voltage	V _{DC}	50	100	200	300	400	600	800	1000	
Average Rectified Output Current @60Hz sine wave, Resistance load, TL (FIG.1)	I _O	5.0								A
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25°C	I _{FSM}	150								
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25°C		300								
Maximum instantaneous forward voltage I _{FM} =5.0A		V _F	1.0		1.3		1.7		V	
Maximum DC reverse current at rated DC blocking voltage	T _J =25°C	I _R	5							μA
	T _J =125°C		100							
Typical junction capacitance Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C		C _J	72		46		52		pF	
Maximum reverse recovery time I _F =0.5A,I _R =1.0A, I _{rr} =0.25A		t _{rr}	50				75		ns	
Current squared time @1ms≤t≤8.3ms Tj=25°C		I ² t	94							A ² s
Typical Thermal Resistance ⁽¹⁾	R _{θJ-A}	48							°C/W	
	R _{θJ-L}	15								
	R _{θJ-C}	12								
Operating junction and storage temperature range		T _J ,T _{STG}	-55 to +150							°C

Note

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad areas

CHARACTERISTIC CURVES

Fig. 1- I_o -TL Curve

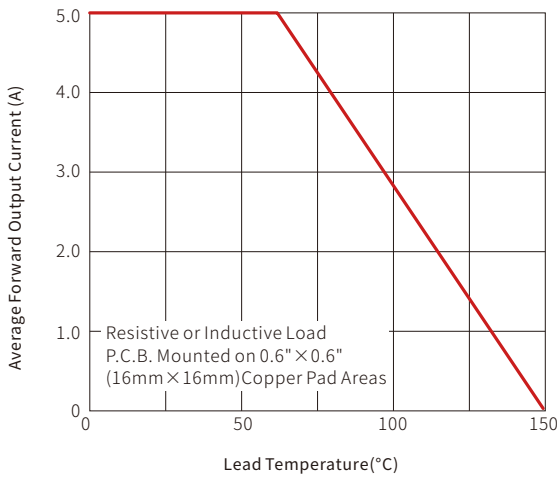


Fig. 2-Forward Surge Current Capability

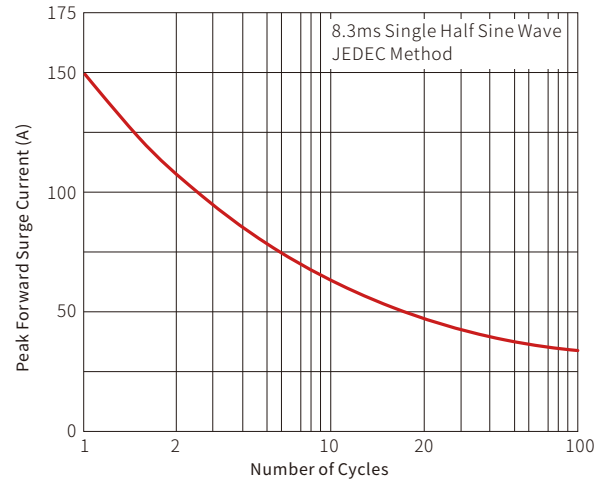


Fig. 3-Typical Forward Voltage

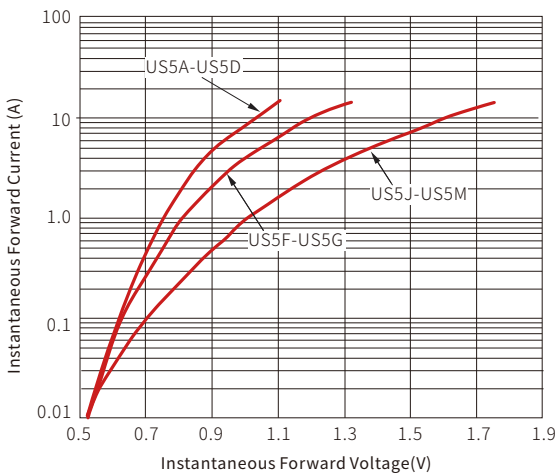
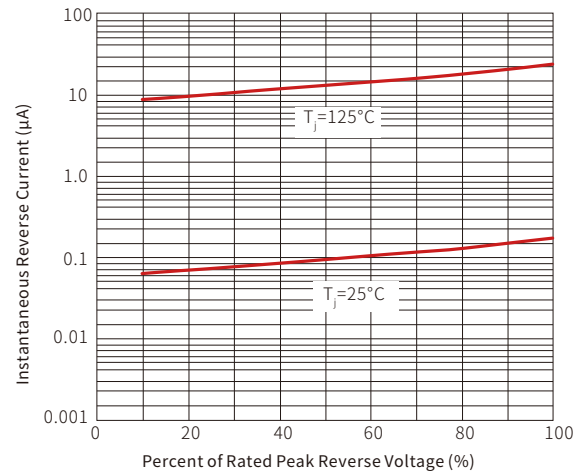
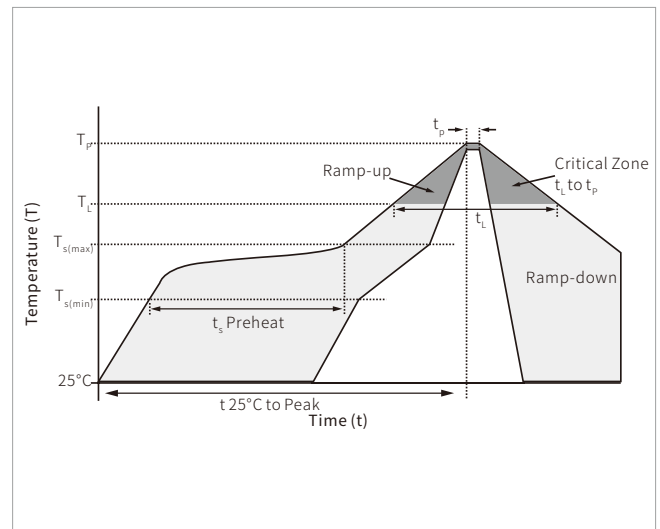


Fig. 4-Typical Reverse Characteristics

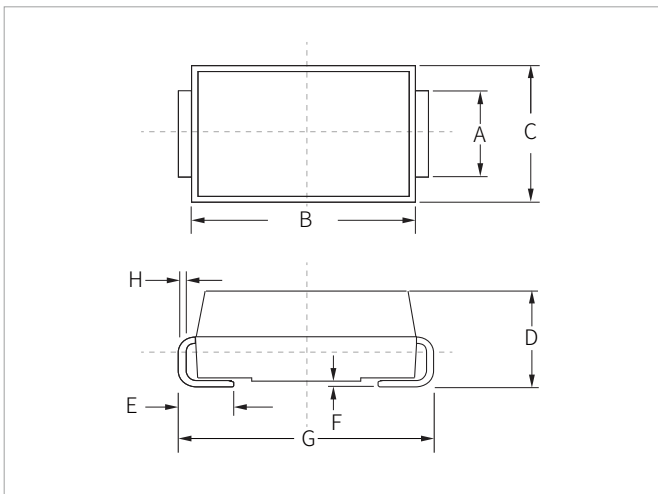


SOLDERING PARAMETERS

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_s)	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

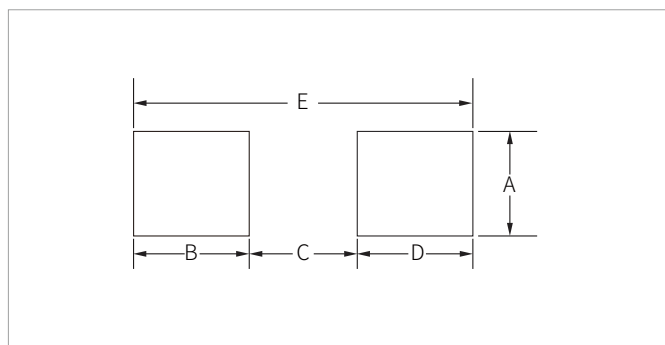


DO-214AA(SMB) PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.80	2.20	0.071	0.087
B	4.30	4.70	0.170	0.185
C	3.40	3.90	0.134	0.153
D	2.15	2.75	0.085	0.108
E	1.00	1.50	0.039	0.059
F	0.02	0.20	0.001	0.008
G	5.10	5.50	0.200	0.216
H	0.15	0.30	0.006	0.012

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.20	-	0.087	-
B	1.45	-	0.057	-
C	-	2.55	-	0.010
D	1.45	-	0.057	-
E	5.60REF		0.220REF	

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
US5AB-US5MB	DO-214AA(SMB)	3000PCS	13"

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By QR Code

Website



Wechat

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

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