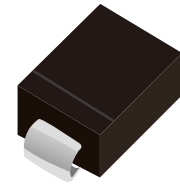
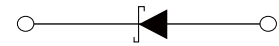


## FEATURES

- | Guardring for overvoltage protection
- | Low power loss
- | Extremely fast switching
- | High forward surge capability
- | High frequency operation



DO-214AA(SMB)



Schematic Symbol

## APPLICATIONS

- | For use in low voltage high frequency.
- | Inverters, freewheeling, DC/DC converters, and polarity protection applications.

## 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	SS 1020	SS 1030	SS 1040	SS 1050	SS 1060	SS 1080	SS 10100	SS 10150	SS 10200	Unit	
Marking		SS 1020	SS 1030	SS 1040	SS 1050	SS 1060	SS 1080	SS 10100	SS 10150	SS 10200		
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	20	30	40	50	60	80	100	150	200	V	
Average Rectified Output Current @60Hz Sine Wave, Resistance Load, TL (Fig.1)	I <sub>O</sub>	10.0									A	
Surge(Non-Repetitive)forward Current @60Hz Half-sine Wave,1 Cycle, Ta=25°C	I <sub>FSM</sub>	180.0									A	
Maximum Instantaneous Forward Voltage Drop Per Diode I <sub>FM</sub> =10.0A	V <sub>F</sub>	0.55			0.70		0.85		0.95		V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	T <sub>A</sub> =25°C	0.2					0.1				mA	
	T <sub>A</sub> =100°C	20					5.0				mA	
Typical Thermal Resistance	R <sub>θJ-A</sub>	65 <sup>(1)</sup>									°C/W	
Typical Thermal Resistance	R <sub>θJ-L</sub>	8 <sup>(1)</sup>									°C/W	
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +150					-55 to +175					°C
Storage Temperature Range	T <sub>STG</sub>	-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<sub>o</sub>-T<sub>L</sub> Curve

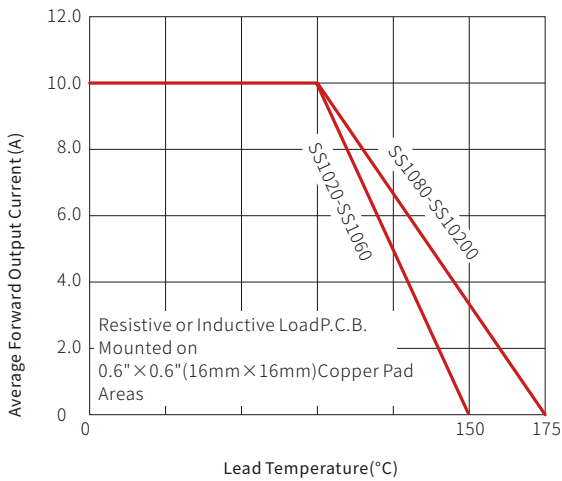


Fig. 2-Maximum Non-Repetitive Forward Surge Current

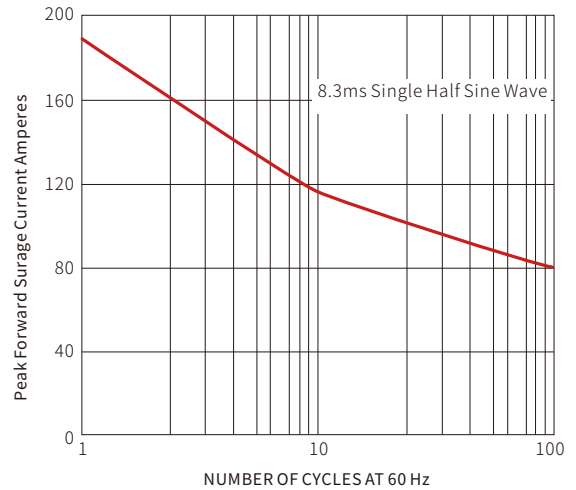


Fig. 3-Forward Voltage

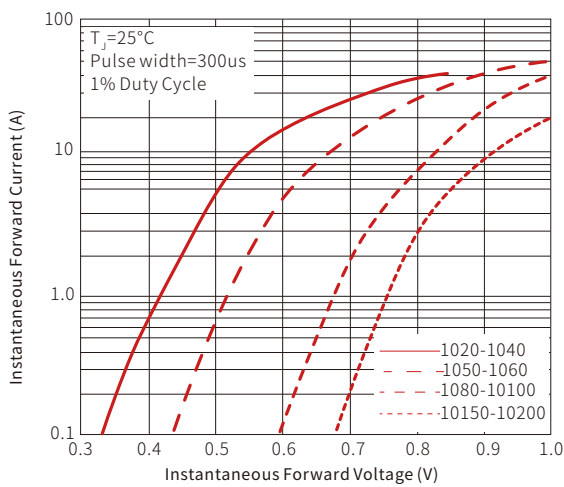
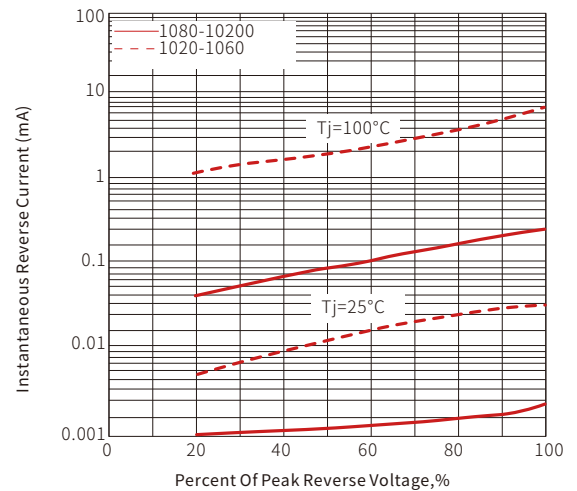
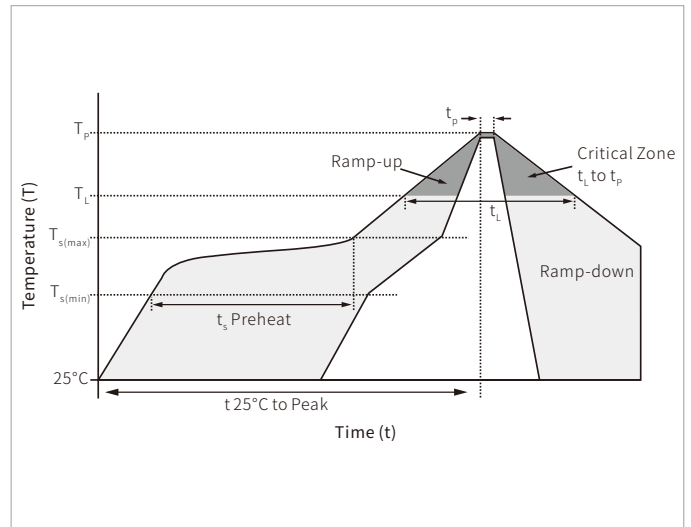


Fig. 4-Typical Reverse Characteristics

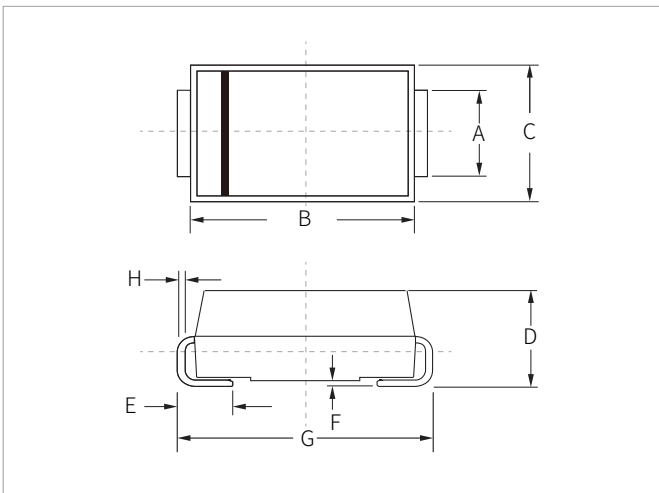


## SOLDERING PARAMETERS

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

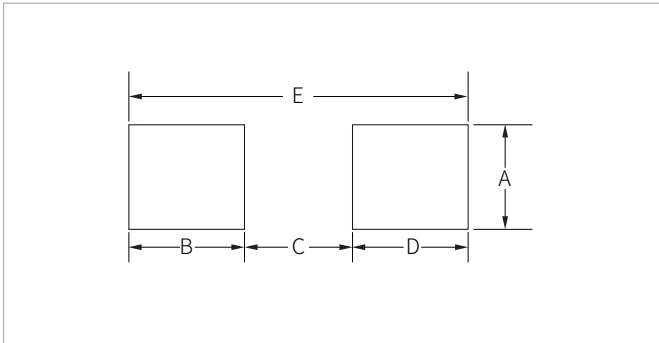


## DO-214AA(SMB) PACKAGE INFORMATION



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	2.55	0.085	0.100
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
SS1020-SS10200	DO-214AA(SMB)	3000PCS	13"

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