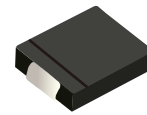


FEATURES

- | Guardring For Overvoltage Protection
- | Low Power Loss
- | Extremely Fast Switching
- | High Forward Surge Capability
- | High Frequency Operation
- | Meet AEC-Q101 Requirements



DO-214AB(SMC)



Schematic Symbol

MECHANICAL DATA

- | Case : Molded Plastic Body
- | Polarity : Polarity Symbol Marking on Body
- | Mounting Position : Any

APPROVALS

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

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

Parameter	Symbol	SS 102CQ	SS 103CQ	SS 104CQ	SS 105CQ	SS 106CQ	SS 108CQ	SS 1010CQ	SS 1015CQ	SS 1020CQ	Unit
Marking		SS102	SS103	SS104	SS105	SS106	SS108	SS1010	SS1015	SS1020	
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	20	30	40	50	60	80	100	150	200	V
Average Rectified Output Current @60Hz Sine Wave, Resistance Load, TL (Fig.1)	I _O	10.0									A
Surge(Non-Repetitive)forward Current @60Hz Half-sine Wave,1 Cycle, Ta=25°C	I _{FSM}	120.0									A
Maximum Instantaneous Forward Voltage Drop Per Diode I _{FM} =10.0A	V _F	0.55			0.70		0.85		0.95		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A =25°C	0.2					0.1				mA
	T _A =100°C	20					5.0				mA
Typical Thermal Resistance	R _{θJ-A}	65 ⁽¹⁾									°C/W
Typical Thermal Resistance	R _{θJ-L}	8 ⁽¹⁾									°C/W
Operating Junction Temperature Range	T _J	-55 to +150					-55 to +175				°C
Storage Temperature Range	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

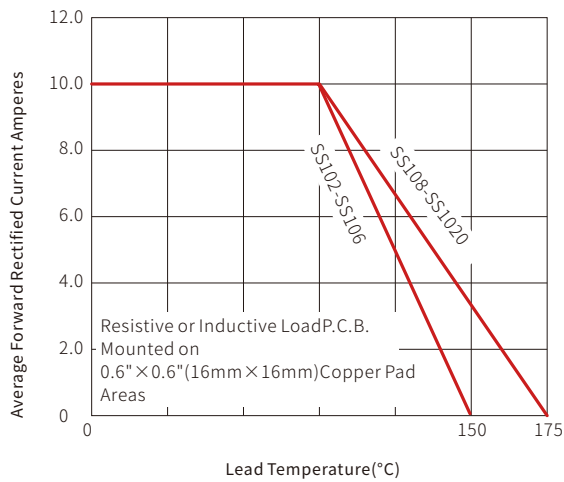


Fig. 2-Forward Surge Current Capability

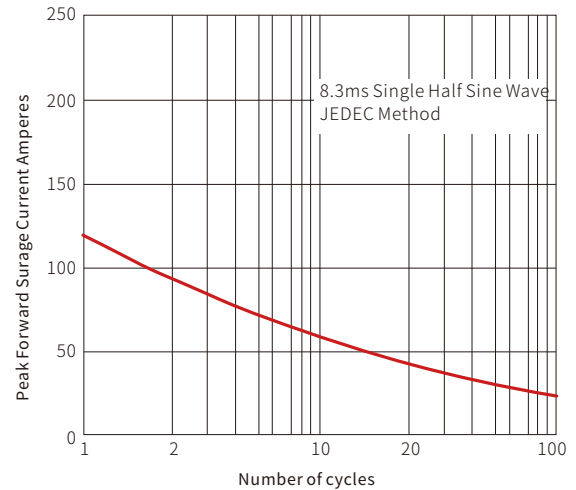


Fig. 3-Forward Voltage

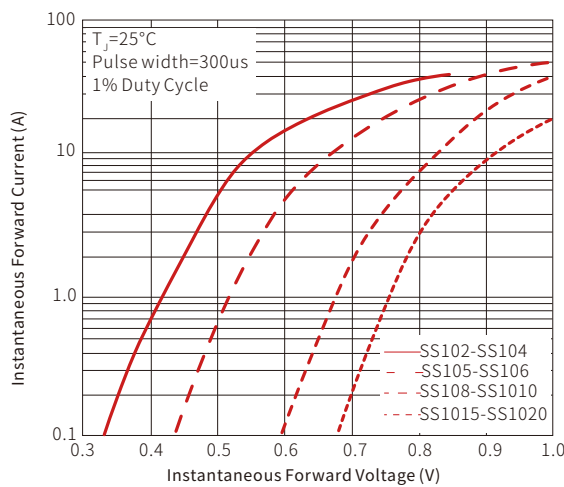
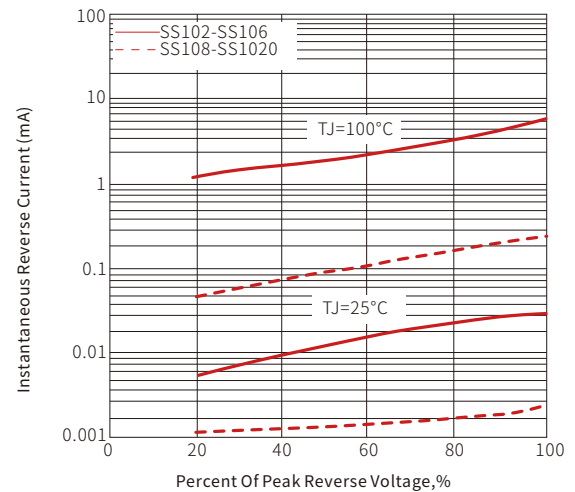
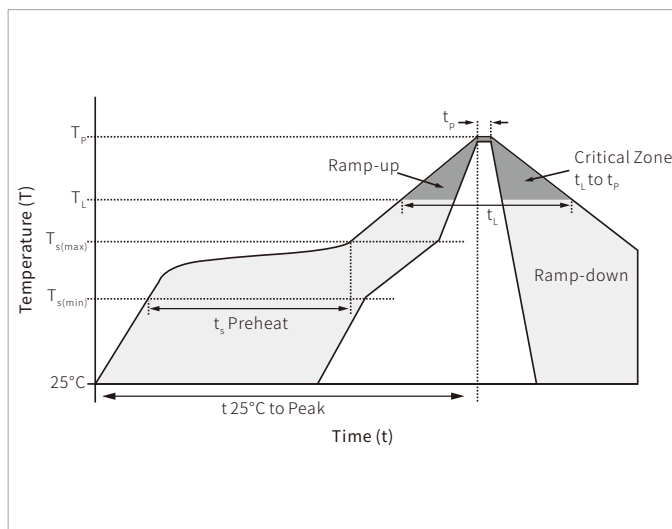


Fig. 4-Typical Reverse Characteristics

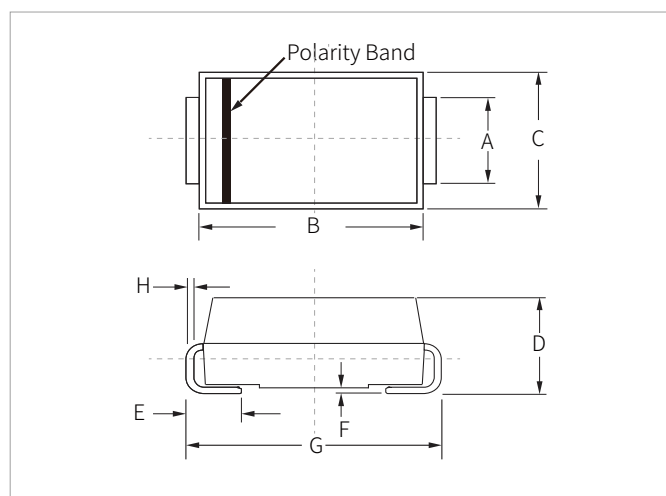


SOLDERING PARAMETERS

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

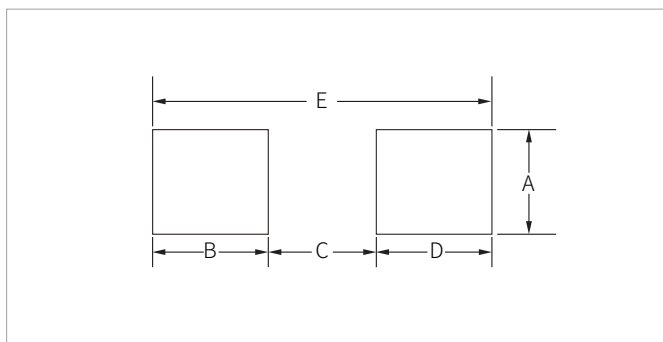


DO-214AB(SMC) PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	2.80	3.20	0.110	0.126
B	6.60	7.20	0.260	0.283
C	5.70	6.10	0.224	0.240
D	2.15	2.75	0.085	0.108
E	1.00	1.60	0.039	0.063
F	0.02	0.20	0.000	0.008
G	7.60	8.00	0.299	0.315
H	0.15	0.30	0.006	0.012

RECOMMENDED PAD LAYOUT DIMENSIONS



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.30	-	0.129	-
B	2.40	-	0.094	-
C	-	4.20	-	0.165
D	2.40	-	0.094	-
E	8.20REF		0.323REF	

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
SS102CQ-SS1020CQ	DO-214AB(SMC)	3000PCS	13"

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By QR Code

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