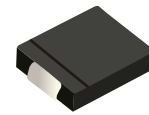


FEATURES

- | Glass passivated junction chip
- | Low forward voltage drop
- | High current capability
- | Easy pick and place
- | High surge current capability



DO-214AB(SMC)



Schematic Symbol

MECHANICAL DATA

- | Case: Molded plastic
- | Terminals: Pure tin plated, lead free
- | Polarity: Indicated by cathode band

APPROVALS

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

MAXIMUM RATINGS AND CHARACTERISTICS (T_A=25°C)

Parameter	Symbol	S3TC	S3WC	S3YC	Unit
Marking		S3T	S3W	S3Y	
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	1300	1600	2000	V
Maximum RMS Voltage	V _{RMS}	910	1120	1400	
Maximum DC Blocking Voltage	V _{DC}	1300	1600	2000	
Maximum Average Forward Rectified Current @TL =105°C	I _(AV)	3.0			A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	100			A
Maximum Instantaneous Forward Voltage I _{FM} =3.0A	V _F	1.15			V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A =25°C	10.0			μA
	T _A =125°C	250			
Typical Junction Capacitance (Note 2)	C _J	60			pF
Typical Reverse Recovery Time (Note 1)	t _{rr}	2.0			uS
Typical Thermal Resistance (Note 3)	R _{θJ-A}	47			°C/W
	R _{θJ-L}	13			
Operating Junction And Storage Temperature Range	T _J ,T _{STG}	-55 to +150			°C

- Note1. Reverse Recovery Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A
 2. Measured at 1 MHz and Applied VR=4.0 Volts
 3. Measured on P.C. Board with 0.4" x 0.4" (10mm x 10mm) Copper Pad Areas.

CHARACTERISTIC CURVES

Fig. 1- Maximum Forward Current Derating Curve

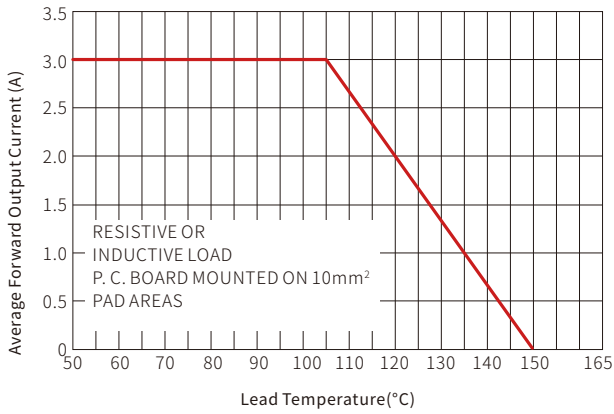


Fig. 2-Typical Reverse Characteristics

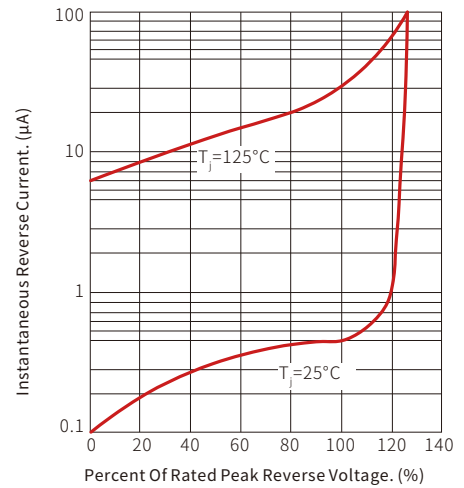


Fig. 3-Maximum Non-repetitive Forward Surge Current

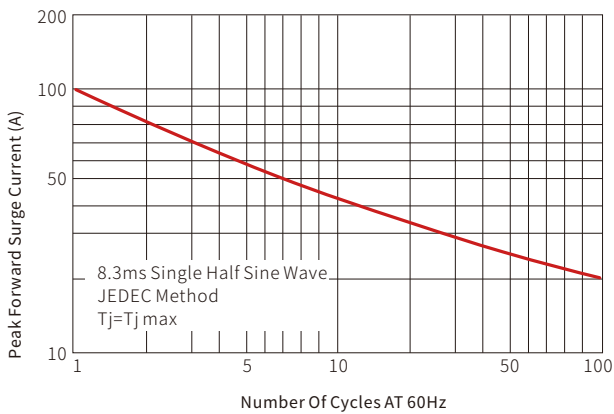


Fig. 4-Typical Junction Capacitance

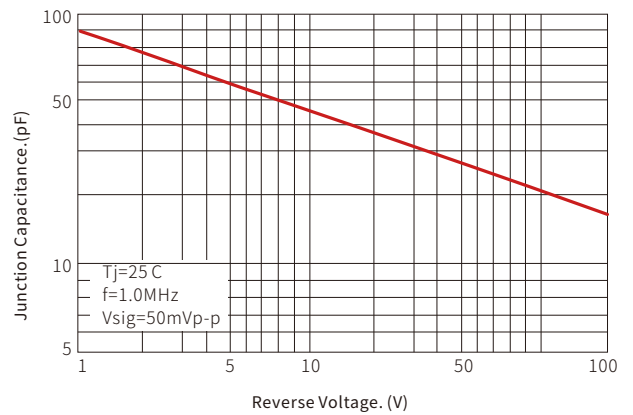
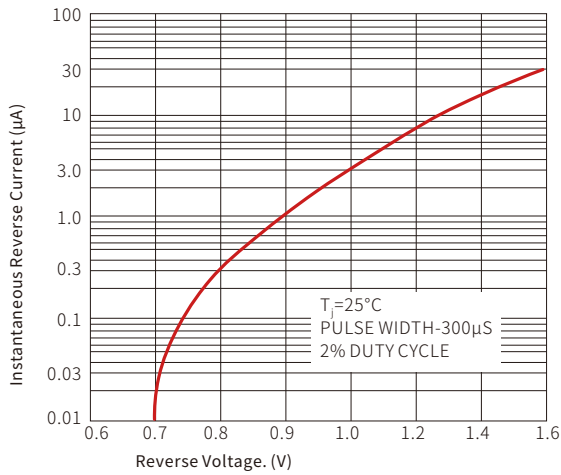
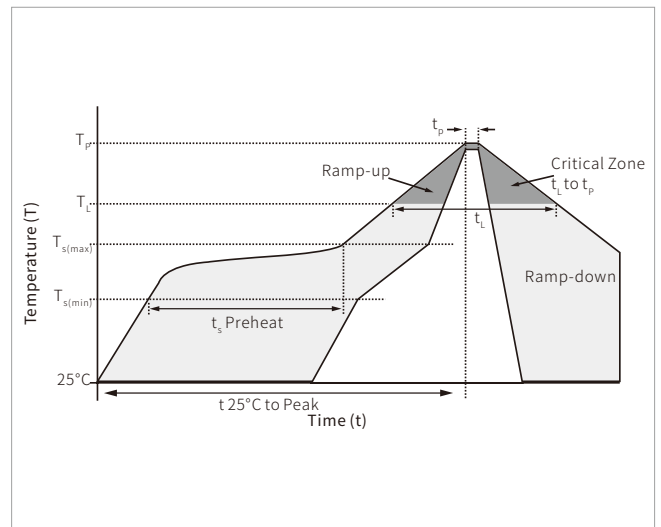


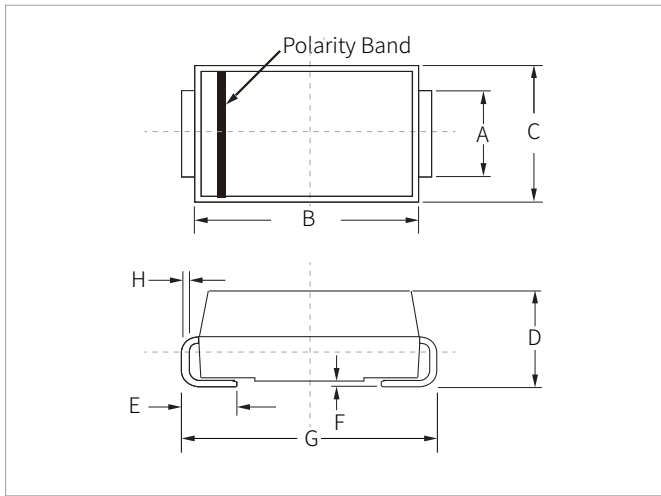
Fig. 5-Typical Reverse Characteristics


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

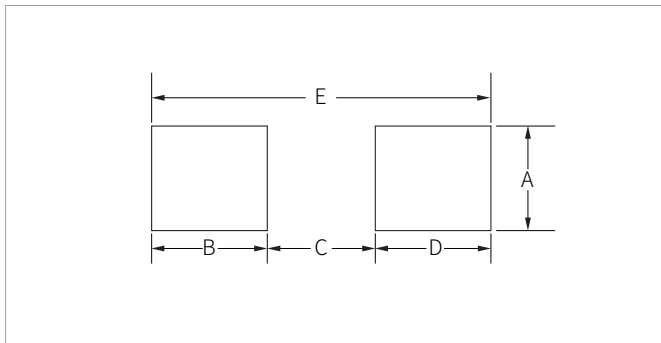


DO-214AB(SMC) PACKAGE INFORMATION



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
S3TC-S3YC	DO-214AB(SMC)	3000PCS	13"

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Wechat

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

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