



S3A thru S3T



General Purpose Rectifiers Glass Passivation Junction



DO-214AB(SMC)

Primary Characteristics		
I_F	3	A
V_{RRM}	1000	V
I_{FSM}	100	A
V_F	1.15	V
T_J max	175	°C

Features
<ul style="list-style-type: none"> • High current capability • High surge current capability • Low reverse current • Component in accordance to RoHS 2002/95/EC

Mechanical Data
• Case: DO-214AB (SMC)
• Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
• Terminals: Lead Free Plating (Tin Finish). Solderable per MIL-STD-202, Method 208
• Polarity: Cathode Band
• Weight: 0.231 grams (approximate)

Ordering Information			
Part No.	Remark	Package	Packing
S3x	General	SMC	3000 / Tape & Reel
S3x-H	Halogen Free		
S3x-Q	AEC-Q101 qualified		

Maximum Ratings (TA=25°C unless otherwise noted)										
PARAMETER	SYMBOL	S3A	S3B	S3D	S3G	S3J	S3K	S3M	S3T	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	1300	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	910	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	1300	V
Maximum average forward rectified current	I_F	3.0								A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	100.0								A
Maximum Instantaneous Forward Voltage $I_F=3A @ 25°C$	V_F	1.15								V
Maximum DC Reverse Current @ $T_A=25°C$ at Rated DC Blocking Voltage @ $T_A=100°C$	I_R	5 50								uA
Typical Junction Capacitance(NOTE1)	C_j	20								pF
Typical Thermal Resistance	$R_{θJC}$	20								°C/W
Operating Temperature Range	T_J	-55 to +175								°C
Storage Temperature Range	T_{STG}	-55 to +175								°C
Marking Code		S3A	S3B	S3D	S3G	S3J	S3K	S3M	S3T	

NOTES:
1. Measured at 1.0MHZ and applied reverse voltage of 4.0V DC



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Rating and Characteristics Curves

FIG. 1-Typical Forward Current Derating Curve

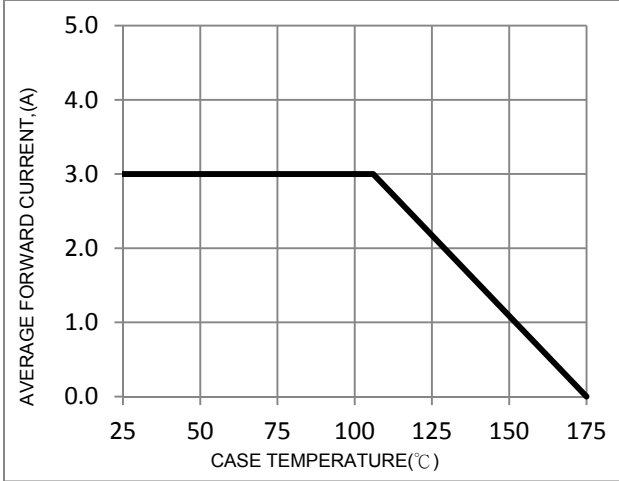


FIG. 2-Typical Forward Characteristics

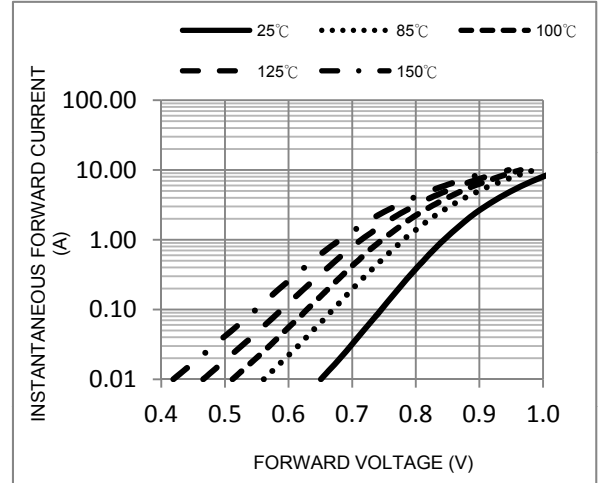


FIG. 3-Maximum Non-Repetitive Forward Surge Current

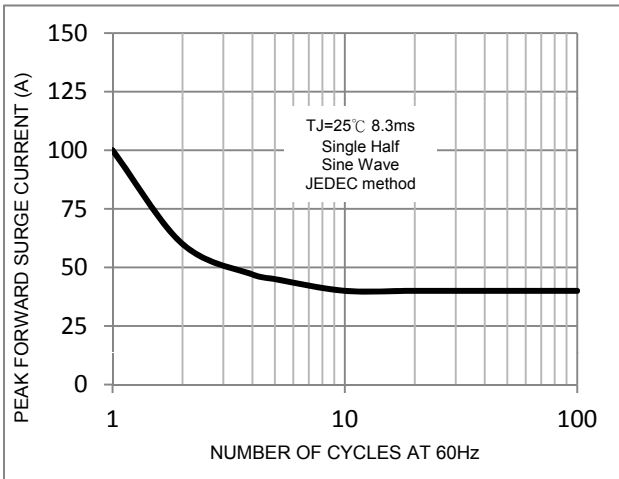


FIG. 4-Typical Reverse Characteristics

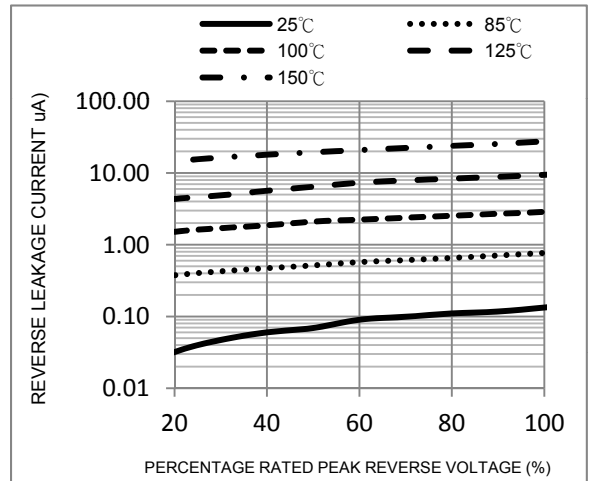
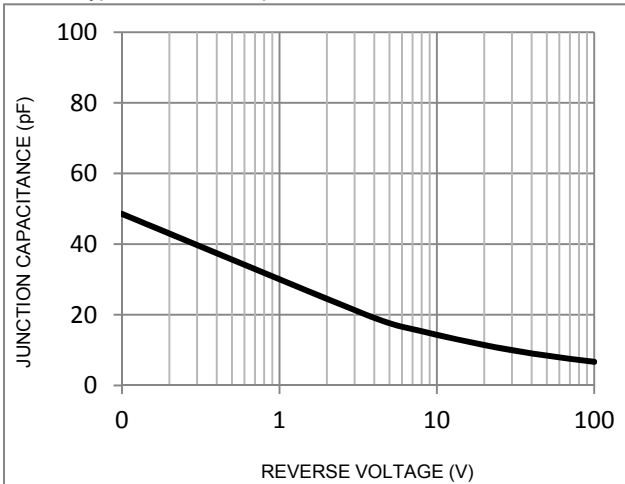


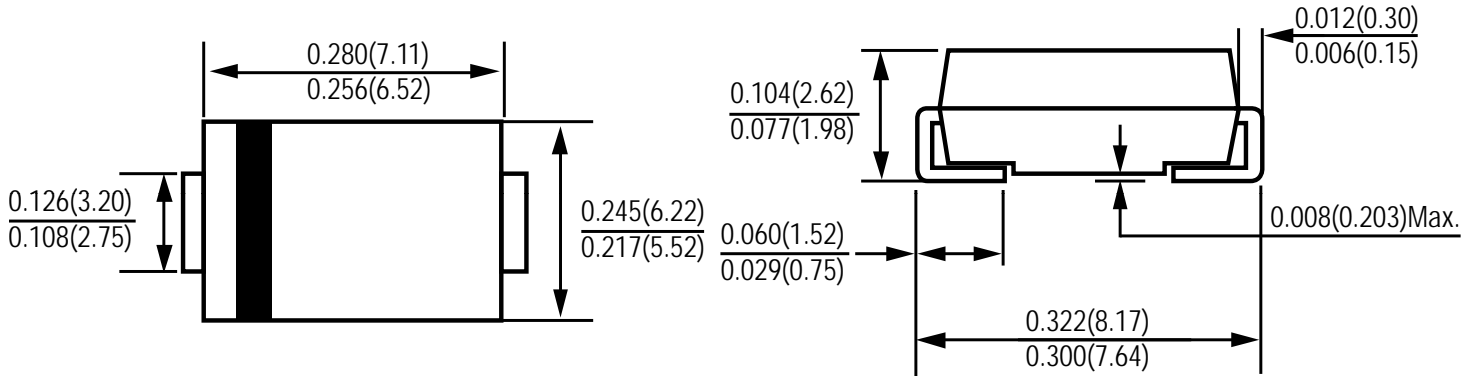
FIG. 5-Typical Junction Capacitance





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Glass Passivation Junction

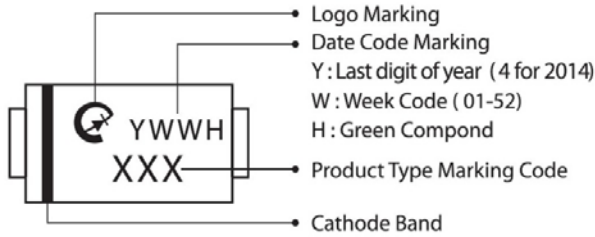
Package Outline Dimensions



DO-214AB(SMC)

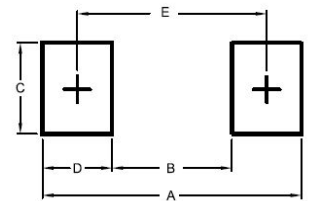
Dimensions in inches and (millimeters)

Marking Information



Suggested Pad Layout

Dimension	Outline	SMC (DO-214AB)
A		9.40
B		4.40
C		3.30
D		2.50
E		6.80



Tap & Reel Specification

ITEM	SYMBOL	SMC (mm)
		DO-214AB
Carrier width	A	6.3(max)
Carrier length	B	8.6(max)
Carrier depth	C	2.9(max)
Sprocket hole	d	1.50±0.1
Reel outside diameter	D	330±2.0
Feed hole diameter	D0	13.5±1
Reel inner diameter	D1	50 (min.)
Sprocket hole position	E	1.75±0.1
Punch hole position	F	7.5±0.05
Sprocket hole pitch	P	8.0±0.1
Sprocket hole pitch	Po	4.0±0.1
Embossment center	P1	2.0±0.05
Overall tape thickness	T	0.6 (max)
Tape width	W	16.0±0.3
Reel width	W2	22.4 (max)
Reel width	W1	18.4 (max)

