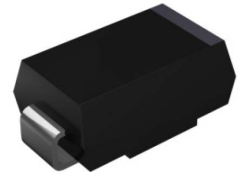


Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Meets MSL level 1, per J-STD-020
- Molding compound meets UL 94 V-0 flammability rating
- RoHS compliant, halogen-free



DO-214AB(SMC)

Applications

For use in general purpose rectification of power supplies, inverters, converters, and freewheeling diodes.

Absolute Maximum Ratings (T_A=25 °C unless otherwise noted)

Parameter	Symbol	GS3A	GS3B	GS3D	GS3G	GS3J	GS3K	GS3M	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at T _L (See Fig.3)	I _{F(AV)}	3.0							A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	100							A
Peak Forward Surge Current (Non-repetitive) @1ms, Square Wave, 1 Cycle, T _J =25°C		200							A
Rating for Fusing (t≤8.3ms, T _J =25°C)	I ² t	41.5							A ² S
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55 to + 150							°C

Electrical Characteristics (T_A=25 °C unless otherwise noted)

Parameter	Test Conditions	Symbol	GS3A	GS3B	GS3D	GS3G	GS3J	GS3K	GS3M	Unit
Maximum Instantaneous Forward Voltage	I _F =3A	V _F	1.1							V
Maximum DC Reverse Current at Rated DC Blocking Voltage	T _A =25°C	I _R	5							μA
	T _A =125°C		100							
Typical Junction Capacitance	4.0 V, 1 MHz	C _J	25							pF
Typical Reverse Recovery Time	I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	t _{rr}	1.8							uS
Typical Thermal Resistance ¹	Junction to Ambient	R _{θJA}	48							°C/W
	Junction to Case	R _{θJC}	12							
	Junction to Lead	R _{θJL}	15							

Note:

The thermal resistance from junction to ambient, case or lead, mounted on P.C.B with 16×16mm copper pads,.

Ratings and Characteristics Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

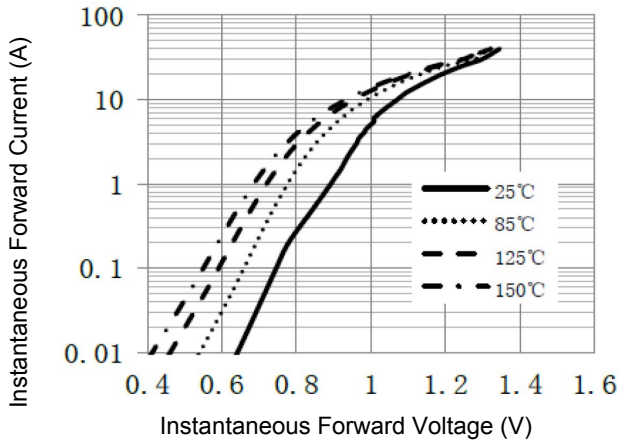


Figure 1. Typical Instantaneous Forward Characteristics

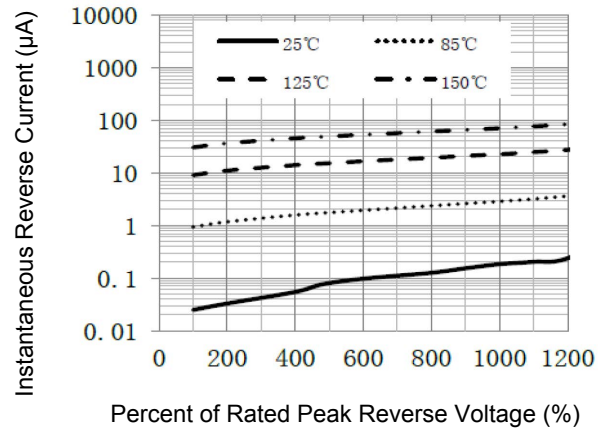


Figure 2. Typical Reverse Characteristics

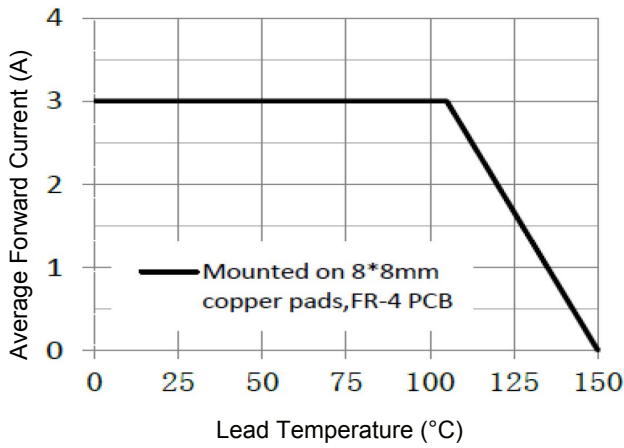


Figure 3. Forward Current Derating Curve

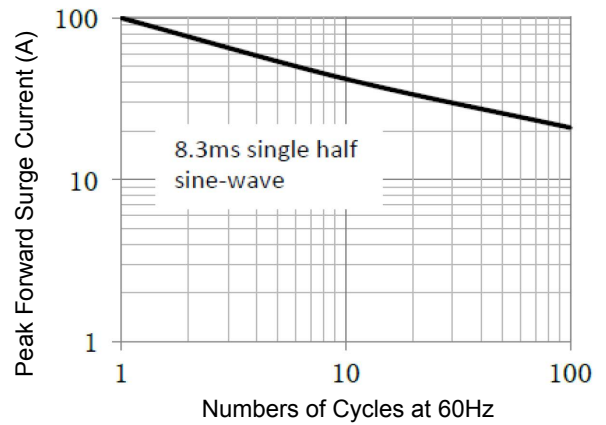
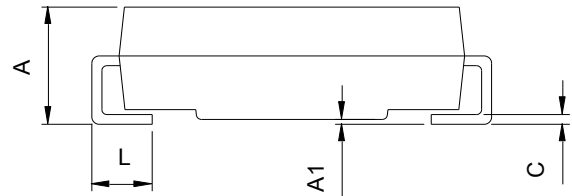
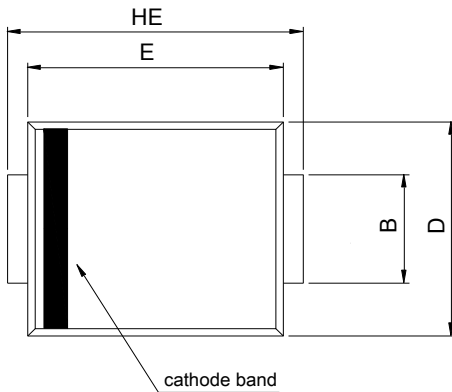


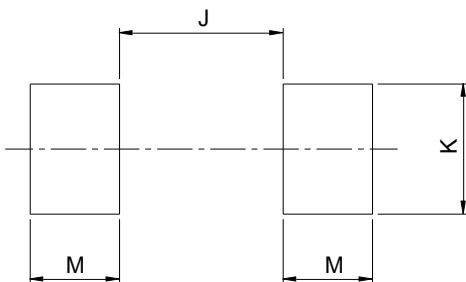
Figure 4. Maximum Non-Repetitive Forward Surge Current

Package Outline Dimensions DO-214AB(SMC)



Symbol	Dimensions in Millimeters		Dimensions in Inches	
	Min	Max	Min	Max
A	2.00	2.62	0.079	0.103
A1	0.00	0.20	0.000	0.008
B	2.90	3.20	0.114	0.126
C	0.15	0.31	0.006	0.012
D	5.58	6.22	0.220	0.245
E	6.60	7.15	0.260	0.281
HE	7.75	8.15	0.305	0.321
L	0.76	1.60	0.030	0.063

Recommended Pad Layout



SMC Recommended Pad Layout (Reference ONLY)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	-	4.60	-	0.181
K	3.20	-	0.126	-
M	2.00	-	0.079	-

Ordering information

Device	Package	Marking	Carrier	Quantity
GS3A	SMC	GS3A	Tape & Reel	3,000pcs / Reel
GS3B	SMC	GS3B	Tape & Reel	3,000pcs / Reel
GS3D	SMC	GS3D	Tape & Reel	3,000pcs / Reel
GS3G	SMC	GS3G	Tape & Reel	3,000pcs / Reel
GS3J	SMC	GS3J	Tape & Reel	3,000pcs / Reel
GS3K	SMC	GS3K	Tape & Reel	3,000pcs / Reel
GS3M	SMC	GS3M	Tape & Reel	3,000pcs / Reel