

Features

- Glass passivated junction chip
- For surface mount applications
- Low forward voltage drop
- High voltage rating
- Built-in stain relief, ideal for automated placement
- Fast switching for high efficiency
- Molding compound has Underwriters Laboratory Flammability Classification 94V-0



DO-214AA(SMB)

Applications

For use of general purpose rectifications in lighting, cellular phones, portable devices, power supplies and other consumer applications.

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

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1200	V
Maximum RMS Voltage	V_{RMS}	840	V
Maximum DC Blocking Voltage	V_{DC}	1200	V
Maximum Average Output Rectified Current	$I_{F(AV)}$	3.0	A
Peak Forward Surge Current (8.3ms Single Half Sine-Wave Superimposed on Rated Load)	I_{FSM}	80	A
Typical Thermal Resistance ¹	$R_{\theta JA}$	85	°C/W
	$R_{\theta JL}$	18	
	$R_{\theta JC}$	15	
Operating Junction and Storage Temperature Range	T_J, 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 0.3" x 0.3" (8.0mm x 8.0mm) copper pad areas

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

Parameter	Symbol	Test Conditions	GSH3MB12	Unit
Maximum Instantaneous Forward Voltage	V_F	$I_F=3A$	2.0	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	$T_A=25^\circ\text{C}$	5	μA
		$T_A=100^\circ\text{C}$	100	
Maximum Reverse Recovery Time	t_{rr}	$I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$	75	nS
Typical Junction Capacitance	C_J	4.0V, 1MHz	25	pF

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

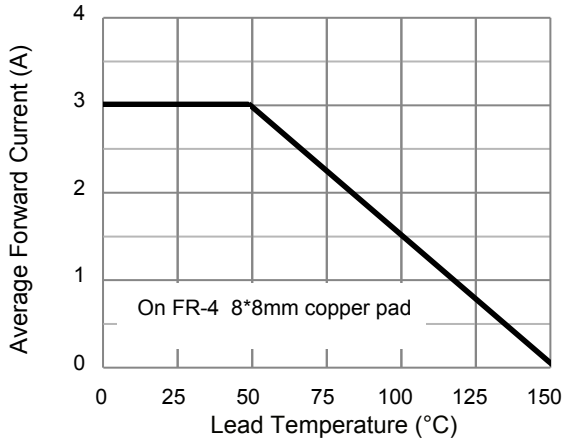


Figure 1. Forward Current Derating Curve

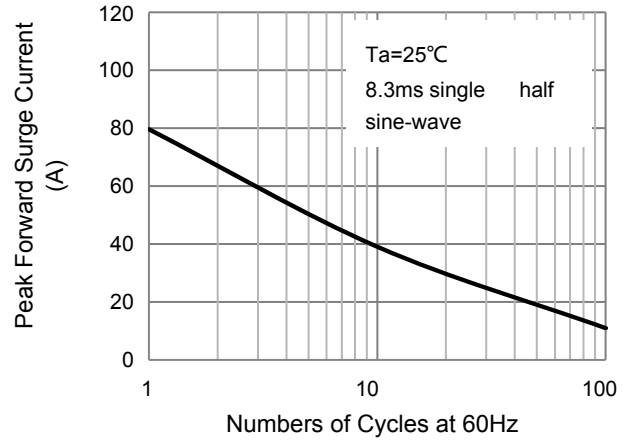


Figure 2. Maximum Non-Repetitive Peak

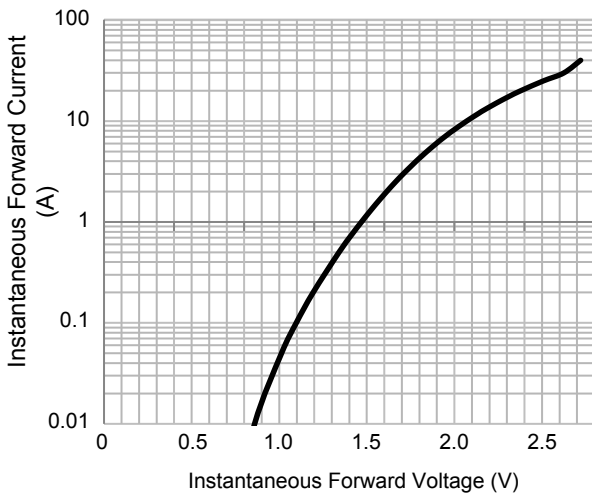


Figure 3. Typical Instantaneous Forward Characteristics

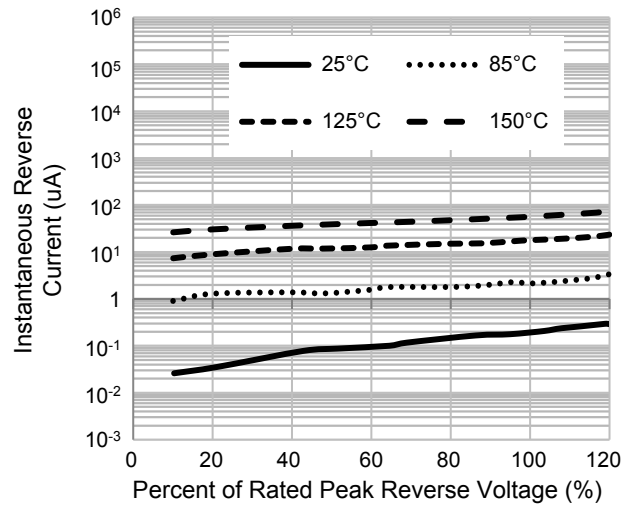


Figure 4. Typical Reverse Characteristics

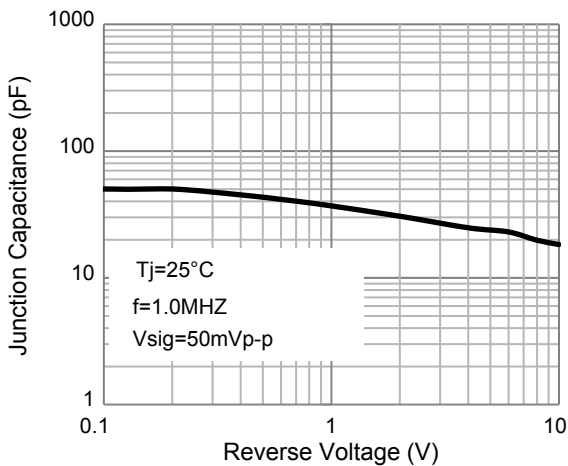
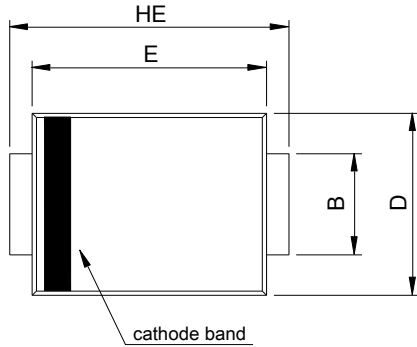
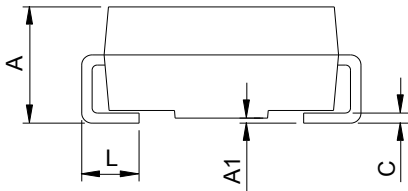


Figure 5. Typical Junction Capacitance

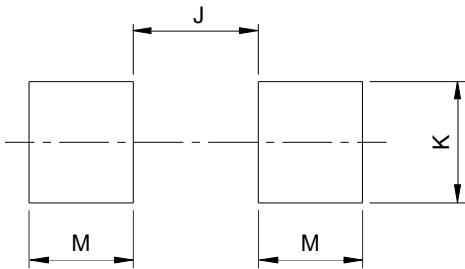
Package Outline Dimensions (SMB)



SMB (DO-214AA)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.95	2.65	0.077	0.104
A1	0.00	0.20	0.000	0.008
B	1.95	2.20	0.077	0.087
C	0.15	0.31	0.006	0.012
D	3.30	3.95	0.130	0.156
E	4.06	4.60	0.160	0.181
HE	5.10	5.60	0.201	0.220
L	0.76	1.60	0.030	0.063



Recommended Pad Layout



Recommended Pad Layout (Reference ONLY)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	-	2.60	-	0.102
K	2.20	-	0.087	-
M	1.80	-	0.071	-