

Features

- Glass passivated chip
- Super fast switching for high efficiency
- For surface mounted applications
- Low forward voltage drop and high current capability
- Low reverse leakage current
- Plastic material has UL flammability classification 94V-0
- AEC-Q101 qualified



DO-214AA (SMB)

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

Parameter	Symbol	AES3 AB	AES3 BB	AES3 CB	AES3 DB	AES3 FB	AES3 GB	AES3 JB	AES3 KB	AES3 MB	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	600	800	1000	V
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	600	800	1000	V
Maximum Average Forward Rectified Current (T _L =100°C)	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
Operating Junction Temperature Range	T _J	-55 to +150									°C
Storage Temperature Range	T _{STG}	-55 to +150									°C

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

Parameter	Symbol	AES3 AB	AES3 BB	AES3 CB	AES3 DB	AES3 FB	AES3 GB	AES3 JB	AES3 KB	AES3 MB	Unit	
Maximum Instantaneous Forward Voltage @3.0A DC	V _F	0.92				1.25		1.7			V	
Typical Junction Capacitance ²	C _J	45									pF	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R (T _J =25°C)	10					500					uA
	I _R (T _J =125°C)	500					500					uA
Typical Reverse Recovery Time ¹	t _{rr}	35					35					nS
Typical Thermal Resistance Junction to Ambient ⁴	R _{θJA}	50					50					°C/W
Typical Thermal Resistance Junction to Lead ³	R _{θJL}	10					10					°C/W

- Notes:**
1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
 2. Measured at 1 MHz and Applied V_R=4.0 Volts
 3. Thermal Resistance junction to Lead.
 4. Thermal Resistance junction to Ambient.

Typical Characteristics Curves

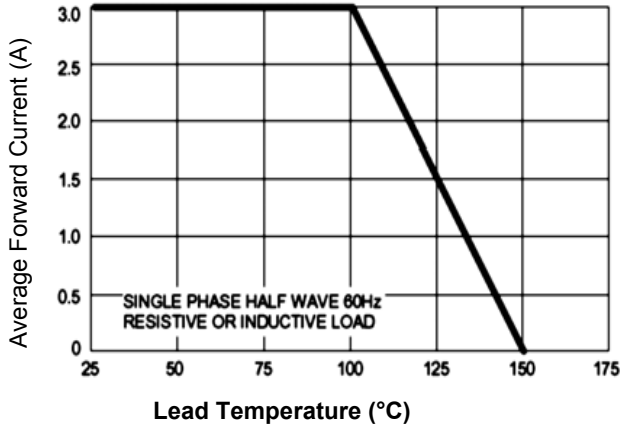


Figure 1. Forward Current Derating Curve

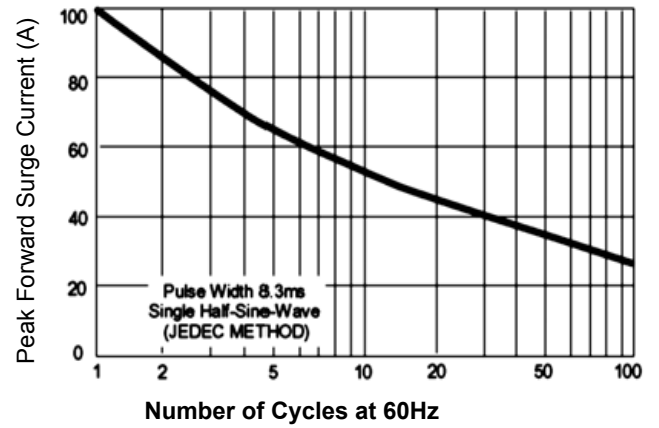


Figure 2. Maximum Non-Repetitive Surge Current

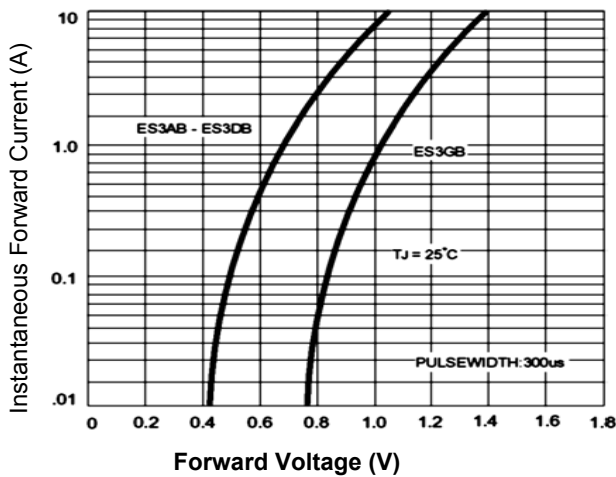


Figure 3. Typical Forward Characteristics

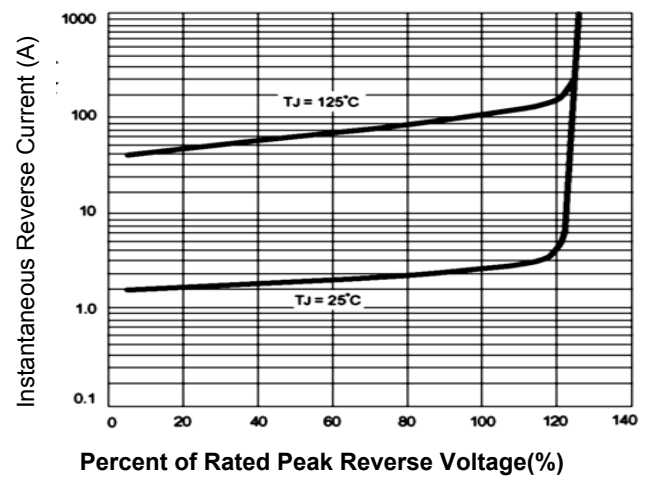
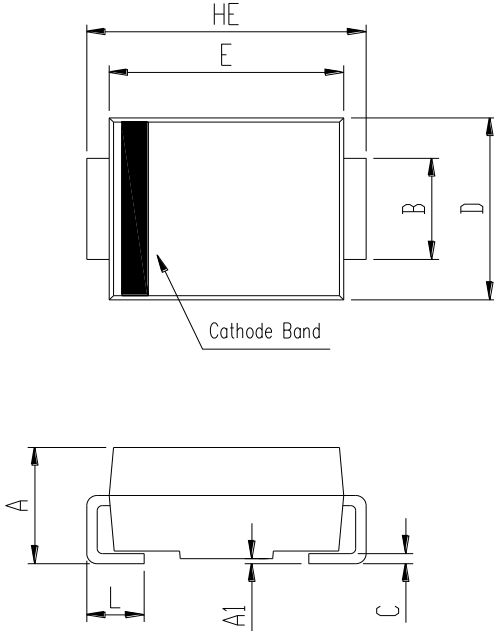


Figure 4. Typical Reverse Characteristics

AES3AB thru AES3MB

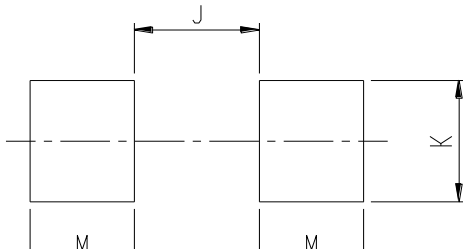
Super Fast Recovery Rectifiers
 Reverse Voltage 50V-1000V Forward Current 3A

Package Outline Dimensions DO-214AA (SMB)



SMB (DO-214AA)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.99	2.61	0.078	0.103
A1	0.00	0.20	0.000	0.008
B	1.93	2.08	0.076	0.082
C	0.15	0.31	0.006	0.012
D	3.48	3.73	0.137	0.147
E	4.25	4.75	0.167	0.187
HE	5.26	5.46	0.207	0.215
L	0.90	1.41	0.035	0.056

Recommended Pad Layout



SMB 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	-