

# GES3AB thru GES3MB

Super Fast Recovery Rectifiers  
 Reverse Voltage 50V-1000V Forward Current 3.0 A

## 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



DO-214AA (SMB)

## Typical Applications

For use in secondary rectification and freewheeling for ultrafast switching speeds of converters.

## Absolute Maximum Ratings (T<sub>A</sub>=25°C unless otherwise specified)

Parameter	Symbol	GES 3AB	GES 3BB	GES 3CB	GES 3DB	GES 3FB	GES 3GB	GES 3JB	GES 3KB	GES 3MB	Unit
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	150	200	300	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	105	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	150	200	300	400	600	800	1000	V
Maximum Average Forward Rectified Current (T <sub>L</sub> =100°C)	I <sub>F(AV)</sub>	3.0									A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load	I <sub>FSM</sub>	100									A
Operating Junction Temperature Range	T <sub>J</sub>	-55 to +150									°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150									°C

## Electrical Characteristics (T<sub>A</sub>=25°C unless otherwise noted)

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

Note:

1. Reverse recovery test conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A
2. Measured at 1MHz and Applied V<sub>R</sub>=4.0Volts
3. Thermal resistance junction to lead.
4. Thermal resistance junction to ambient.

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

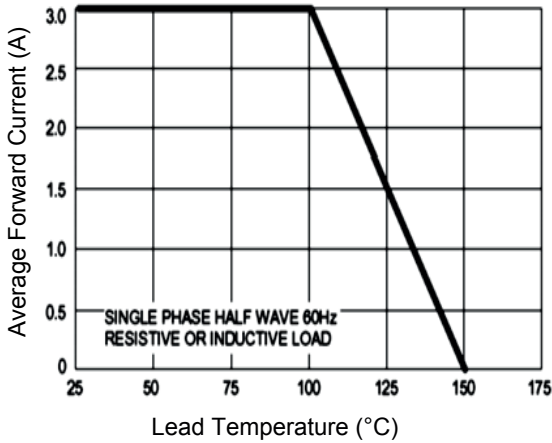


Figure 1. Forward Current Derating Curve

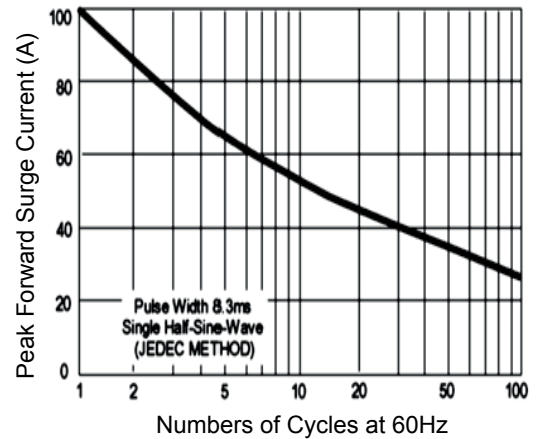


Figure 2. Maximum Non-Repetitive Peak Surge Current

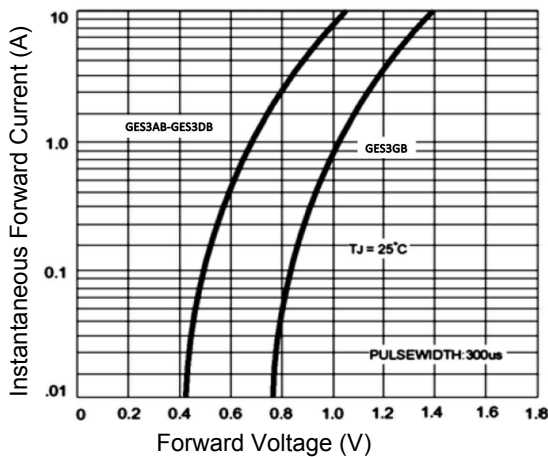


Figure 3. Typical Forward Characteristics

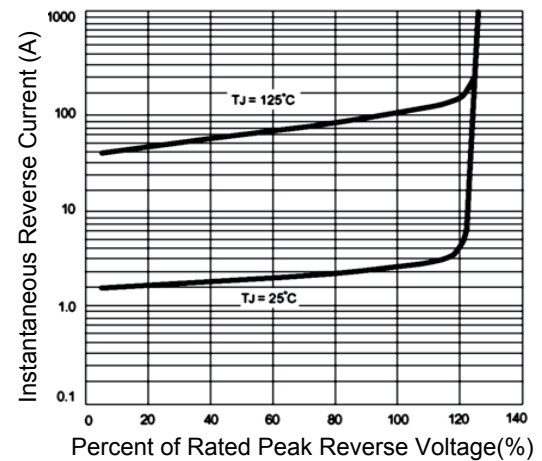
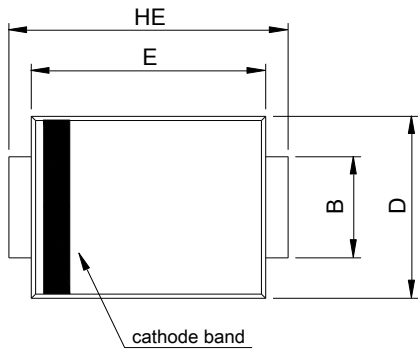


Figure 4. Typical Reverse Characteristics

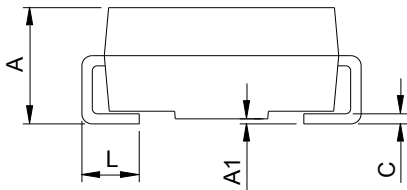
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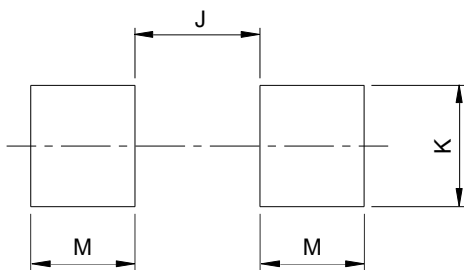
## Package Outline Dimensions (SMB)



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	-

## Order Information

Device	Package	Reel size	Carrier	Quantity
GES3xB	SMB	13'	Tape & Reel	3,000 pcs / Reel