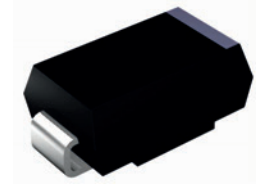


GES3AB thru GES3KB

Super Fast Recovery Rectifiers
 Reverse Voltage 50V to 800V Forward Current 3.0A

Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Super fast reverse recovery time
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C



DO-214AA (SMB)

Mechanical Data

- Package: DO-214AA (SMB)
 Molding compound meets UL 94V-0 flammability rating,
 RoHS-compliant, halogen-free
- Terminals: Tin plated leads, solderable per J-STD-002 and
 JESD22-B102
- Polarity: Cathode line denotes the cathode end

Typical Applications

For use in high frequency rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, and telecommunication.

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

Parameters	Symbols	GES 3AB	GES 3BB	GES 3CB	GES 3DB	GES 3FB	GES 3GB	GES 3HB	GES 3JB	GES 3KB	Units
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	50	100	150	200	300	400	500	600	800	V
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	350	420	560	V
Maximum DC Blocking Voltage	V _{DC}	50	100	150	200	300	400	500	600	800	V
Average Rectified Output Current @ 60Hz Sine Wave, Resistance Load, T _L (Fig.1)	I _o	3.0									A
Forward Surge Current (Non-Repetitive) @ 60Hz Half-Sine Wave, 1 Cycle, T _J =25°C	I _{FSM}	100									A
Forward Surge Current (Non-Repetitive) @ 1ms, Square Wave, 1 Cycle, T _J =25°C		200									
Current Squared Time @ 1ms ≤ t ≤ 8.3ms, T _J =25°C	I ² t	41.5									A ² s
Typical Thermal Resistance, Junction to Ambient ¹	R _{θJA}	65.0									°C/W
Typical Thermal Resistance, Junction to Case ¹	R _{θJC}	18.0									
Typical Thermal Resistance, Junction to Lead ¹	R _{θJL}	20.0									
Storage Temperature	T _{STG}	-55 to +150									°C
Junction Temperature	T _J	-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" (8.0 mm x 8.0 mm) copper pad areas.

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

Parameters	Symbol	Test Conditions	GES 3AB	GES 3BB	GES 3CB	GES 3DB	GES 3FB	GES 3GB	GES 3HB	GES 3JB	GES 3KB	Unit	
Maximum Instantaneous Forward Voltage	V _F	I _{FM} =3.0A	0.95		1.3		1.7		1.85			V	
Maximum Reverse Recovery Time	t _{rr}	I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	35										nS
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	T _J =25°C	5										μA
		T _J =125°C	100										
Typical Junction Capacitance	C _J	Measured at 1MHz and Applied Reverse Voltage of 4.0V.D.C	60		35		29		21			pF	

Typical Characteristics Curves

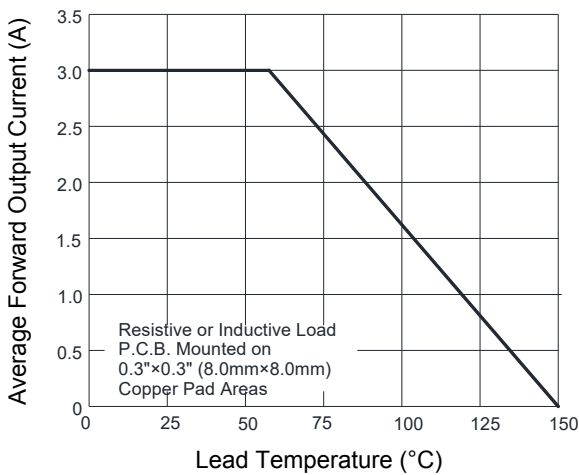


Figure 1. I_o-T_L Curve

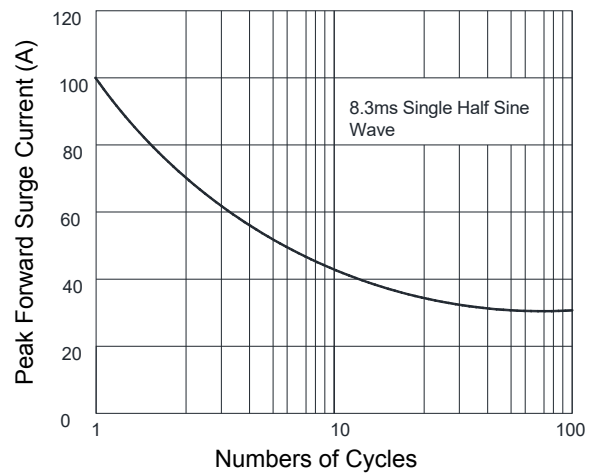


Figure 2. Surge Forward Current Capability

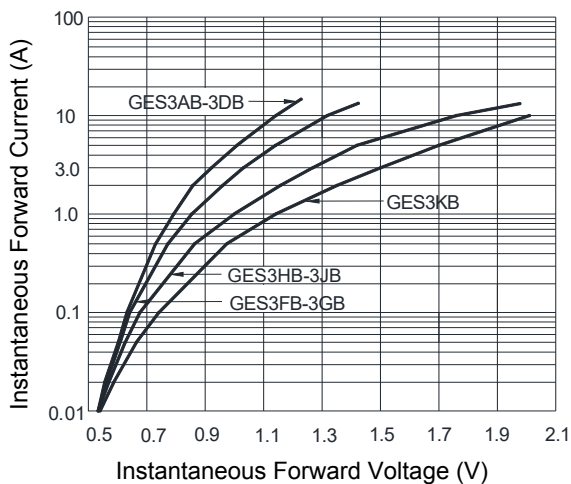


Figure 3. Typical Forward Voltage

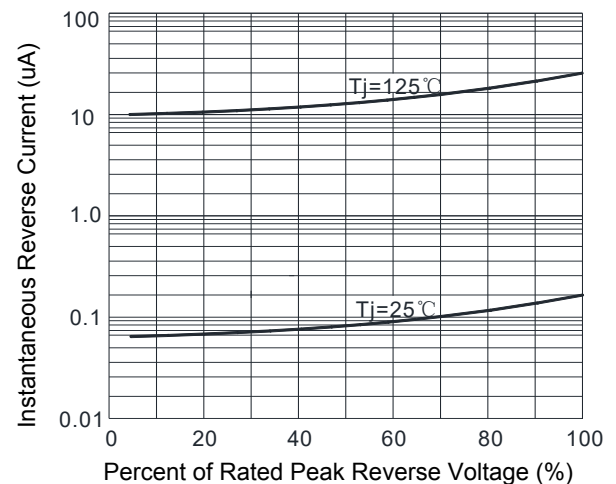
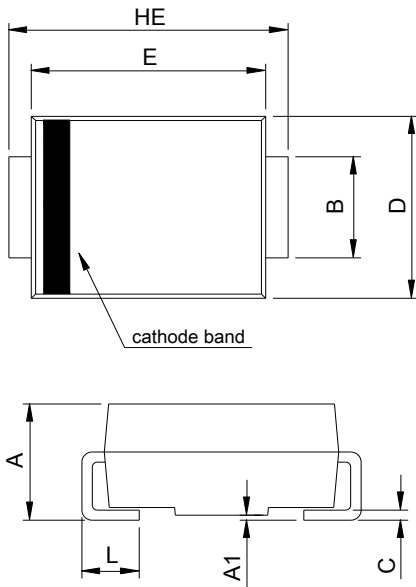


Figure 4. Typical Reverse Characteristics

GES3AB thru GES3KB

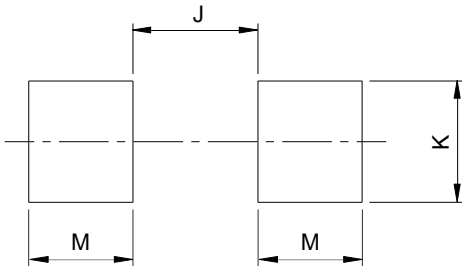
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Package Outline Dimensions DO-214AA (SMB)



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



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	-

Order Information

Device	Package	Marking	Carrier	Quantity
GES3AB	DO-214AA (SMB)	ES3AB	Tape & Reel	3,000 Pcs / Reel
GES3BB	DO-214AA (SMB)	ES3BB	Tape & Reel	3,000 Pcs / Reel
GES3CB	DO-214AA (SMB)	ES3CB	Tape & Reel	3,000 Pcs / Reel
GES3DB	DO-214AA (SMB)	ES3DB	Tape & Reel	3,000 Pcs / Reel
GES3FB	DO-214AA (SMB)	ES3FB	Tape & Reel	3,000 Pcs / Reel
GES3GB	DO-214AA (SMB)	ES3GB	Tape & Reel	3,000 Pcs / Reel
GES3HB	DO-214AA (SMB)	ES3HB	Tape & Reel	3,000 Pcs / Reel
GES3JB	DO-214AA (SMB)	ES3JB	Tape & Reel	3,000 Pcs / Reel
GES3KB	DO-214AA (SMB)	ES3KB	Tape & Reel	3,000 Pcs / Reel

For more information, please contact us at: inquiry@goodarksemi.com