

GSES2AA thru GSES2KA

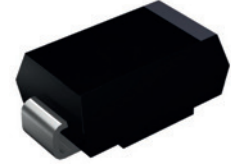
Superfast Recovery Rectifiers
 Reverse Voltage 50V to 800V Forward Current 2A

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



RoHS
COMPLIANT



DO-214AC (SMA)

Mechanical Data

- Package: DO-214AC (SMA)
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

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)

Parameter	Symbol	GSES 2AA	GSES 2BA	GSES 2CA	GSES 2DA	GSES 2FA	GSES 2GA	GSES 2HA	GSES 2JA	GSES 2KA	Unit
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	2.0									A
Forward Surge Current (Non-Repetitive) @ 60Hz Half-Sine Wave, 1 Cycle, T _J =25°C	I _{FSM}	50									A
Forward Surge Current (Non-Repetitive) @ 1ms, Square Wave, 1 Cycle, T _J =25°C		100									
Current Squared Time @ 1ms ≤ t ≤ 8.3ms, T _J =25°C	I ² t	10.375									A ² s
Typical Thermal Resistance, Junction to Ambient ¹	R _{θJA}	65									°C/W
Typical Thermal Resistance, Junction to Lead ¹	R _{θJL}	20									
Typical Thermal Resistance, Junction to Case ¹	R _{θJC}	18									
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 0.2" x 0.2" (5.0mm x 5.0mm) copper pad areas.

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

Parameter	Symbol	Test Conditions	GSES 2AA	GSES 2BA	GSES 2CA	GSES 2DA	GSES 2FA	GSES 2GA	GSES 2HA	GSES 2JA	GSES 2KA	Unit	
Maximum Instantaneous Forward Voltage	V _F	I _{FM} =2.0A	0.95			1.3		1.7		2.2		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	31			17		12			pF		

Typical Characteristics Curves

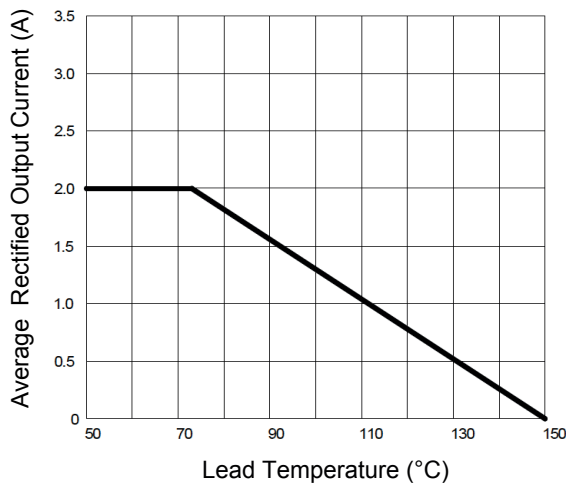


Figure 1. I_O-T_L Curve

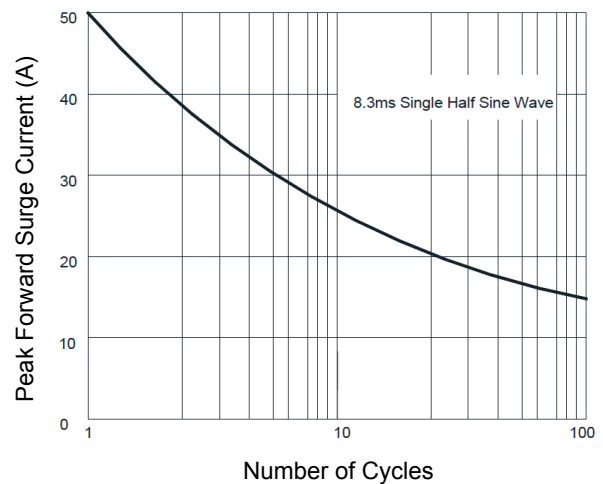


Figure 2. Surge Forward Current Capability

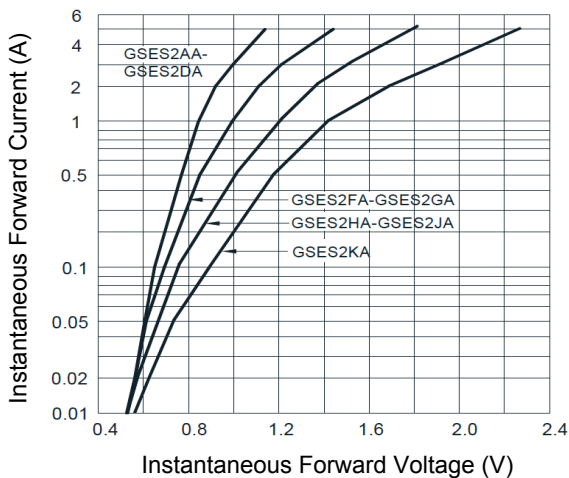


Figure 3. Typical Forward Voltage

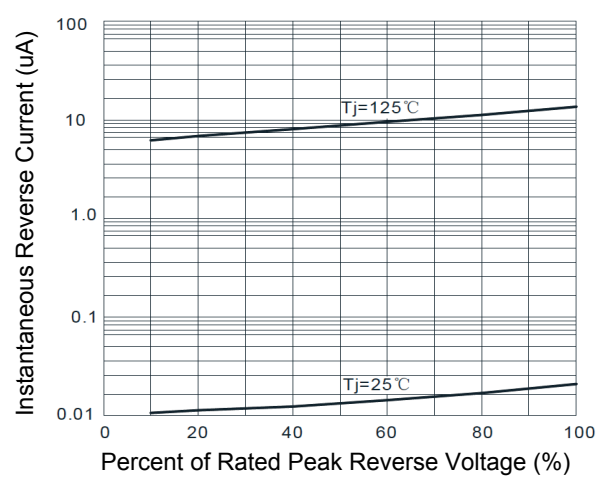
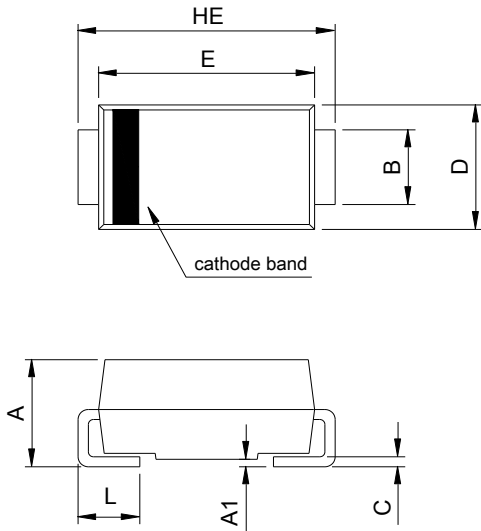


Figure 4. Typical Reverse Characteristics

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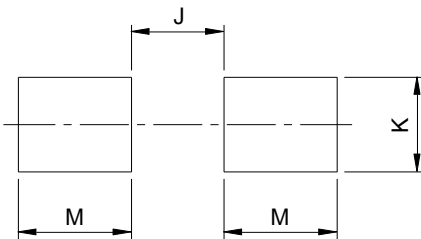
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Package Outline Dimensions DO-214AC (SMA)



SMA (DO-214AC)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.90	2.30	0.075	0.091
A1	0.00	0.20	0.000	0.008
B	1.25	1.65	0.049	0.065
C	0.15	0.31	0.006	0.012
D	2.35	2.90	0.093	0.114
E	3.99	4.60	0.157	0.181
HE	4.80	5.30	0.189	0.209
L	0.76	1.52	0.030	0.060

Recommended Pad Layout



Recommended Pad Layout (Reference ONLY)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	-	2.20	-	0.087
K	1.72	-	0.068	-
M	2.00	-	0.079	-

Order Information

Device	Package	Marking	Carrier	Quantity
GSES2AA	DO-214AC (SMA)	ES2AA	Tape & Reel	7,500pcs / Reel
GSES2BA	DO-214AC (SMA)	ES2BA	Tape & Reel	7,500pcs / Reel
GSES2CA	DO-214AC (SMA)	ES2CA	Tape & Reel	7,500pcs / Reel
GSES2DA	DO-214AC (SMA)	ES2DA	Tape & Reel	7,500pcs / Reel
GSES2FA	DO-214AC (SMA)	ES2FA	Tape & Reel	7,500pcs / Reel
GSES2GA	DO-214AC (SMA)	ES2GA	Tape & Reel	7,500pcs / Reel
GSES2HA	DO-214AC (SMA)	ES2HA	Tape & Reel	7,500pcs / Reel
GSES2JA	DO-214AC (SMA)	ES2JA	Tape & Reel	7,500pcs / Reel
GSES2KA	DO-214AC (SMA)	ES2KA	Tape & Reel	7,500pcs / Reel

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