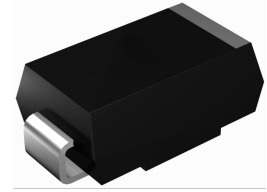


## Features

- Guardring for overvoltage protection
- Low power losses
- Extremely fast switching
- High forward surge capability
- High frequency operation
- Solder dip 260°C max. 10s, per JESD 22-B106



**RoHS**  
COMPLIANT



**DO-214AB (SMC)**

## Applications

For use in low voltage high frequency inverters, freewheeling, DC/DC converters, and polarity protection applications.

## Mechanical Data

- Package: DO-214AB (SMC)  
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

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

Parameter	Symbol	GSS52	GSS54	GSS56	GSS510	GSS515	GSS520	Unit
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	20	40	60	100	150	200	V
Average Rectified Output Current @ 60Hz Sine Wave, Resistance Load, T <sub>L</sub> (FIG.1)	I <sub>O</sub>	5.0						A
Forward Surge Current (Non-Repetitive) @ 60Hz Half-Sine Wave, 1 Cycle, T <sub>A</sub> =25°C	I <sub>FSM</sub>	120						A
Thermal Resistance, Junction to Ambient <sup>1</sup>	R <sub>θJ-A</sub>	62						°C/W
Thermal Resistance, Junction to Lead <sup>1</sup>	R <sub>θJ-L</sub>	13						
Storage Temperature	T <sub>stg</sub>	-55 to +150						°C
Junction Temperature	T <sub>j</sub>	-55 to +150			-55 to +175			°C

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

Parameter	Symbol	Condition	GSS 52	GSS 54	GSS 56	GSS 510	GSS 515	GSS 520	Unit
Maximum Instantaneous Forward Voltage Drop	V <sub>F</sub>	I <sub>FM</sub> =5.0A	0.50		0.65	0.80	0.85		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	T <sub>A</sub> =25°C	0.20			0.10			mA
		T <sub>A</sub> =100°C	20			5			
Typical Junction Capacitance	C <sub>J</sub>	Measured at 1MHz and Applied Reverse Voltage of 4.0V D.C.	280		220	180	100		pF

Note:

1. Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.6" x 0.6" (16mm x 16mm) copper pad areas

## Ratings and Characteristics Curves

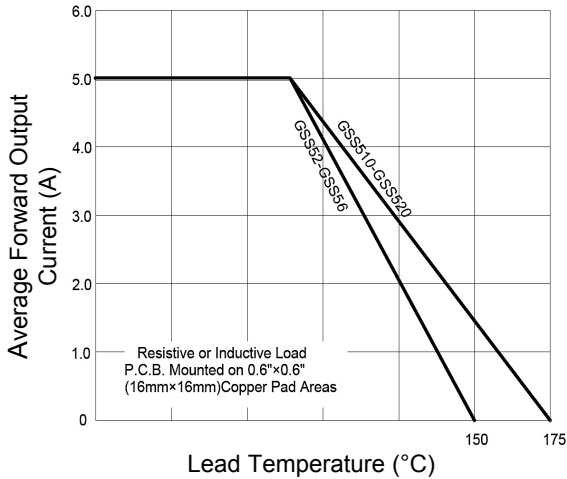


Figure 1.  $I_o$ - $T_L$  Curve

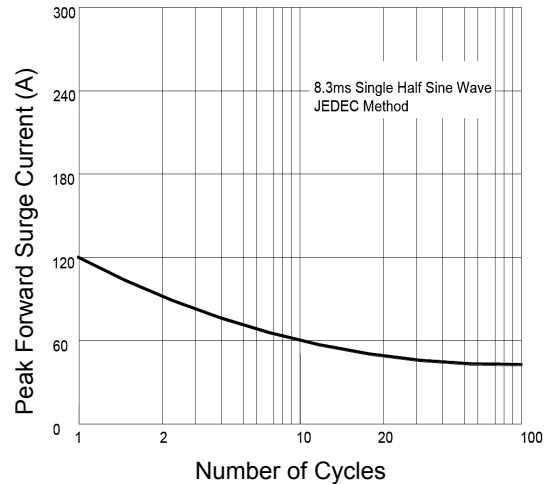


Figure 2. Forward Surge Current Capability

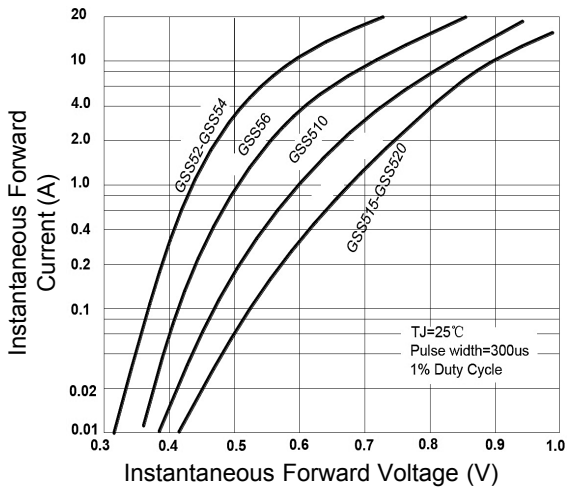


Figure 3. Forward Voltage

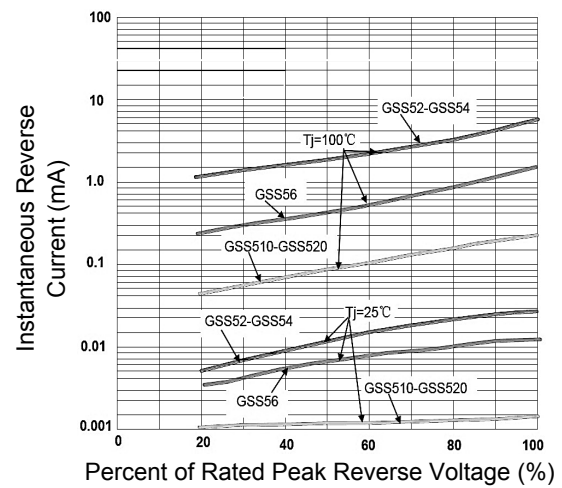
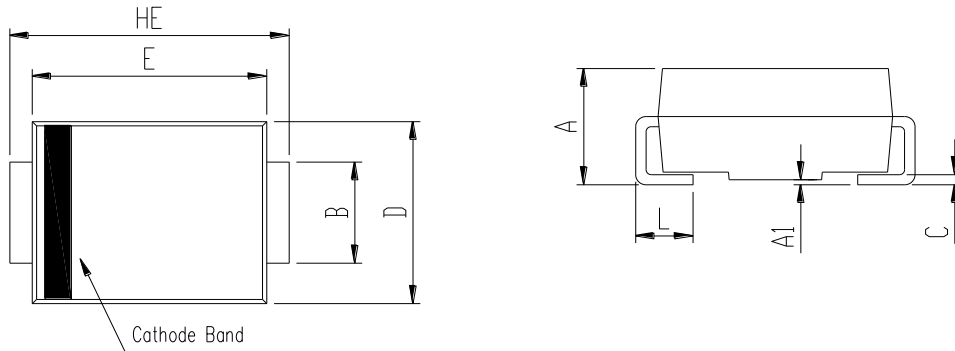


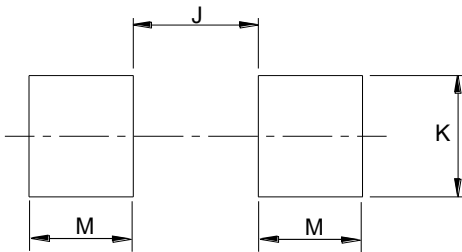
Figure 4. Typical Reverse Characteristics

## Package Outline Dimensions DO-214AB (SMC)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	2.00	2.62	0.079	0.103
A1	0.00	0.20	0.000	0.008
B	2.90	3.20	0.114	0.126
C	0.15	0.31	0.006	0.012
D	5.58	6.22	0.220	0.245
E	6.60	7.15	0.260	0.281
HE	7.75	8.15	0.305	0.321
L	0.76	1.60	0.030	0.063

## Recommended Pad Layout



SMC Recommended Pad Layout (Reference ONLY)				
DIM	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	-	4.60	-	0.181
K	3.20	-	0.126	-
M	2.00	-	0.079	-

## Order Information

Device	Package	Marking	Carrier	Quantity
GSS52	DO-214AB (SMC)	SS52	Tape & Reel	3,000 Pcs / Reel
GSS54	DO-214AB (SMC)	SS54	Tape & Reel	3,000 Pcs / Reel
GSS56	DO-214AB (SMC)	SS56	Tape & Reel	3,000 Pcs / Reel
GSS510	DO-214AB (SMC)	SS510	Tape & Reel	3,000 Pcs / Reel
GSS515	DO-214AB (SMC)	SS515	Tape & Reel	3,000 Pcs / Reel
GSS520	DO-214AB (SMC)	SS520	Tape & Reel	3,000 Pcs / Reel

For more information, please contact us at: [inquiry@goodarksemi.com](mailto:inquiry@goodarksemi.com)