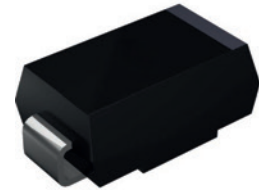


Features

- Guarding for overvoltage protection
- Low power losses
- Extremely fast switching
- High forward surge capability
- High frequency operation
- Solder dip 260°C max. 10s, per JESD22-B106



DO-214AB (SMC)

Mechanical Data

- Package: DO-214AB (SMC)
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Polarity: Color band denotes the cathode end

Applications

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

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

Parameters	Symbols	GSS 82	GSS 84	GSS 85	GSS 86	GSS 810	GSS 815	GSS 820	Units
Repetitive Peak Reverse Voltage	V _{RRM}	20	40	50	60	100	150	200	V
Average Rectified Output Current @ 60Hz Sine Wave, Resistance Load, T _L (FIG.1)	I _O	8.0							A
Forward Surge Current (Non-Repetitive) @ 60Hz Half-Sine Wave, 1 cycle, T _A =25°C	I _{FSM}	180							A
Typical Thermal Resistance, Junction to Ambient ¹	R _{θJA}	45							°C/W
Typical Thermal Resistance, Junction to Lead ¹	R _{θJL}	12							°C/W
Storage Temperature	T _{STG}	-55 to +150							°C
Junction Temperature	T _J	-55 to +150				-55 to +175			°C

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

Parameters	Symbols	Test Conditions	GSS 82	GSS 84	GSS 85	GSS 86	GSS 810	GSS 815	GSS 820	Units
Maximum Instantaneous Forward Voltage Drop	V _F	I _{FM} =8.0A	0.55		0.70		0.85	0.95		V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	T _A =25°C	0.2				0.1			mA
		T _A =100°C	20				5.0			
Typical Junction Capacitance	C _J	Measured at 1MHz and Applied Reverse Voltage of 4.0V D.C.	450		350		270	180		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" (16 mm x 16 mm) copper pad areas.

Typical Characteristics Curves

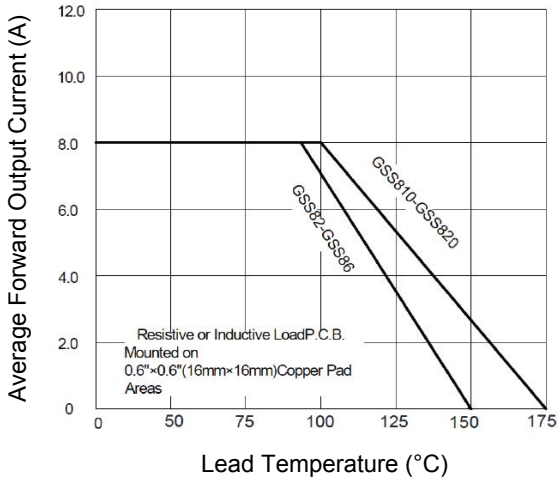


Figure 1. I_o - T_L Curve

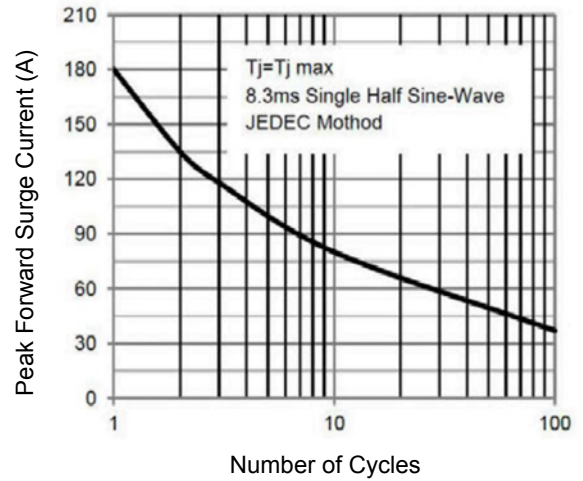


Figure 2. Forward Surge Current Capability

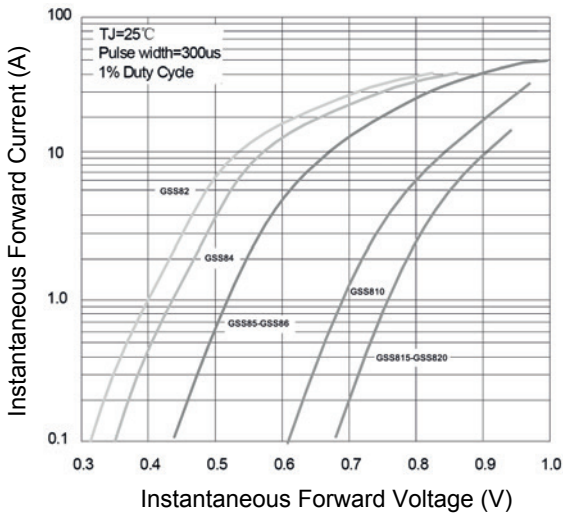


Figure 3. Forward Voltage

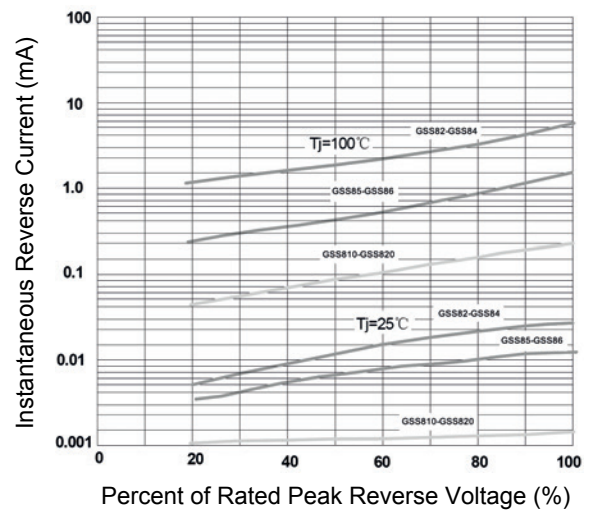
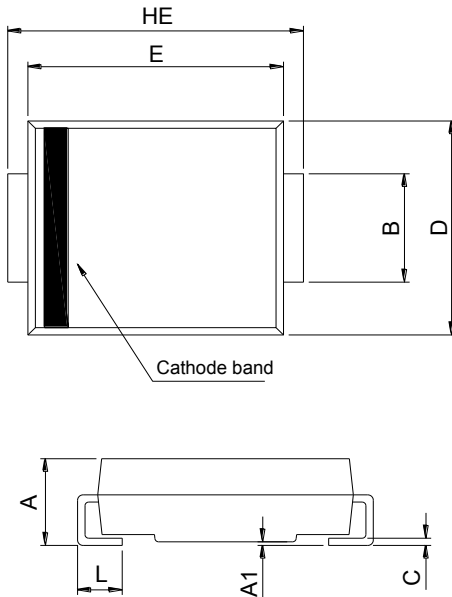


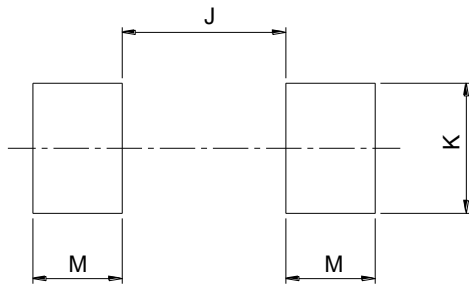
Figure 4. Typical Reverse Characteristics

Package Outline Dimensions DO-214AB (SMC)



SMC (DO-214AB)				
DIM	Millimeters		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
GSS82	DO-214AB (SMC)	SS82	Tape & Reel	3,000 pcs / Reel
GSS84	DO-214AB (SMC)	SS84	Tape & Reel	3,000 pcs / Reel
GSS85	DO-214AB (SMC)	SS85	Tape & Reel	3,000 pcs / Reel
GSS86	DO-214AB (SMC)	SS86	Tape & Reel	3,000 pcs / Reel
GSS810	DO-214AB (SMC)	SS810	Tape & Reel	3,000 pcs / Reel
GSS815	DO-214AB (SMC)	SS815	Tape & Reel	3,000 pcs / Reel
GSS820	DO-214AB (SMC)	SS820	Tape & Reel	3,000 pcs / Reel