GOOD-ARK
SEMICONDUCTOR

GSS52C thru GSS520C

Surface Mount Schottky Rectifiers
Reverse Voltage 20V-200V Forward Current 5.0A

Features

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

Pb
RoHS
COMPLIANT

DO-214AB (SMC)

Mechanical Data

- Package: DO-214AB (SMC)
  Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- 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 52C	GSS 54C	GSS 56C	GSS 510C	GSS 515C	GSS 520C	Units
Repetitive Peak Reverse Voltage	V_{RRM}	20	40	60	100	150	200	V
Average Rectified Output Current @ 60Hz Sine Wave, Resistance Load (FIG.1)	I_O	5.0						A
Forward Surge Current (Non-Repetitive) @ 60Hz Half-Sine Wave, 1 cycle, T_A=25°C	I_{FSM}	150						A
Typical Thermal Resistance, Junction to Ambient[1]	$R_{\theta JA}$	47						°C/W
Typical Thermal Resistance, Junction to Lead[1]	$R_{\theta JL}$	13						°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 52C	GSS 54C	GSS 56C	GSS 510C	GSS 515C	GSS 520C	Units
Maximum Instantaneous Forward Voltage Drop	V_F	I_{FM}=5.0A	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			
Typical Junction Capacitance	C_J	Measured at 1MHZ and Applied Reverse Voltage of 4.0 V.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" (16 mm x 16 mm) copper pad areas.

Typical Characteristics Curves

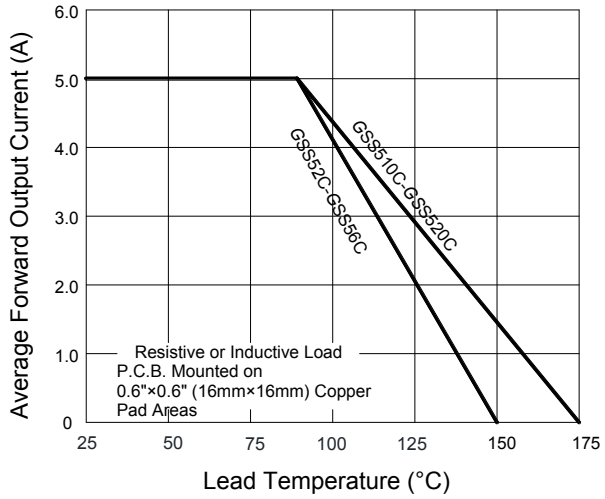

Figure 1. I_O-T_L Curve

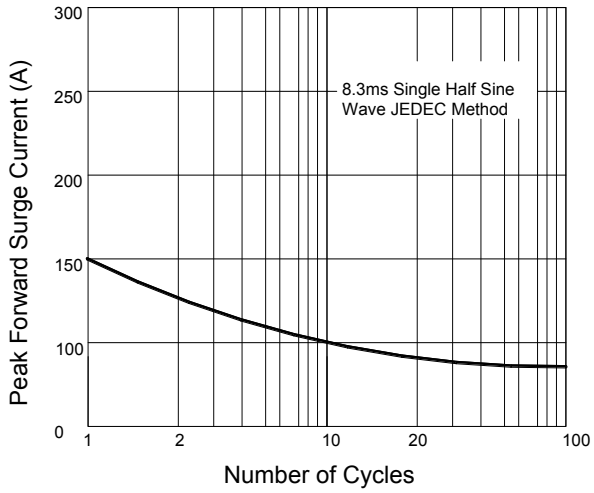

Figure 2. Forward Surge Current Capability

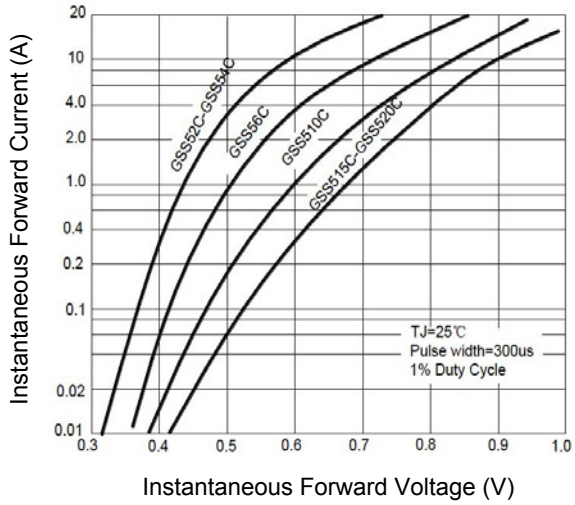

Figure 3. Forward Voltage

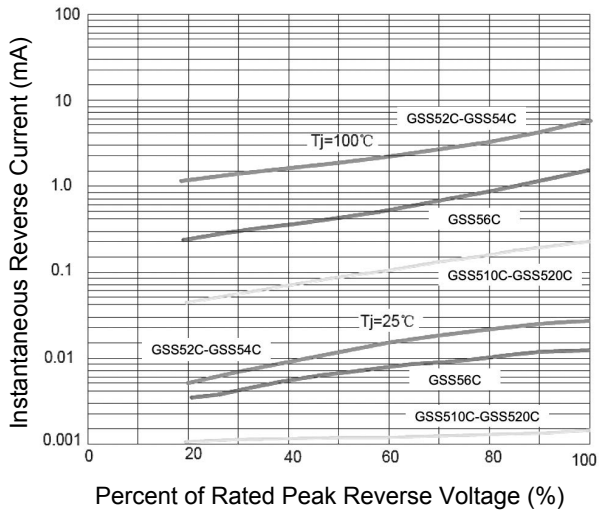

Figure 4. Typical Reverse Characteristics

GSS52C thru GSS520C

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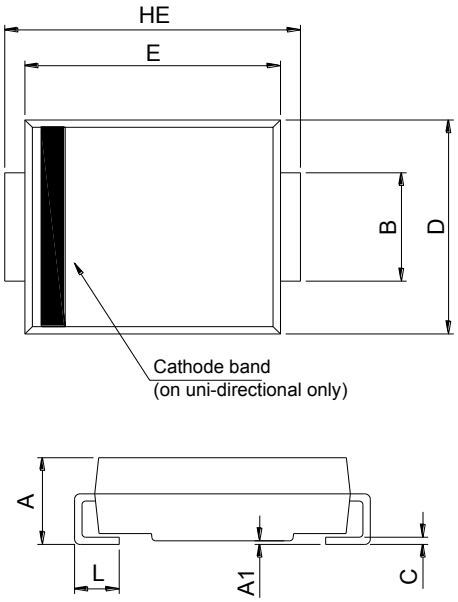
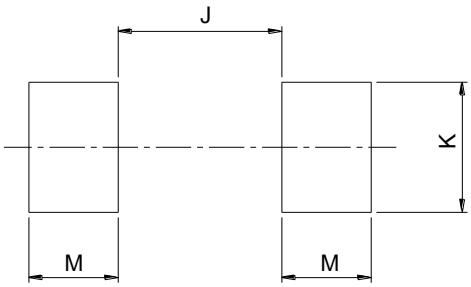
Reverse Voltage 20V-200V Forward Current 5.0A

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
GSS52C	DO-214AB (SMC)	SS52C	Tape & Reel	3,000 pcs / Reel
GSS54C	DO-214AB (SMC)	SS54C	Tape & Reel	3,000 pcs / Reel
GSS56C	DO-214AB (SMC)	SS56C	Tape & Reel	3,000 pcs / Reel
GSS510C	DO-214AB (SMC)	SS510C	Tape & Reel	3,000 pcs / Reel
GSS515C	DO-214AB (SMC)	SS515C	Tape & Reel	3,000 pcs / Reel
GSS520C	DO-214AB (SMC)	SS520C	Tape & Reel	3,000 pcs / Reel