GOOD-ARK
SEMICONDUCTOR

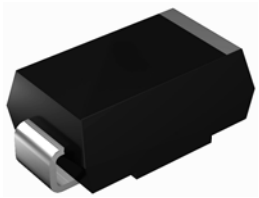
GSHS1OC

Ultrafast Recovery Rectifier
Reverse Voltage 1200V Forward Current 1.0A

Features

- Glass passivated junction chip
- For surface mounted application
- Solder dip 260°C, 10s
- Built-in strain relief, ideal for automated placement
- Fast switching for high efficiency
- Halogen-free according to IEC 61249-2-21 definition
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0

RoHS
COMPLIANT



DO-214AB (SMC)

Typical Applications

For use of general purpose rectification in lighting, cellular phone, portable device, power suppliers and other consumer applications.

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

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1200	V
Maximum RMS Voltage	V_{RMS}	840	V
Maximum DC Blocking Voltage	V_{DC}	1200	V
Maximum Average Output Rectified Current	$I_{F(AV)}$	1	A
Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	30	A
Rating for Fusing (t < 8.3ms)	I^2t	3.7	A^2sec
Typical Thermal Resistance, Junction to Ambient[1]	$R_{\theta JA}$	90	°C/W
Typical Thermal Resistance, Junction to Case[1]	$R_{\theta JC}$	20	°C/W
Typical Thermal Resistance, Junction to Lead[1]	$R_{\theta JL}$	25	°C/W
Operating Junction Temperature Range	T_J	-55 to +150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

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

Parameter	Symbol	Conditions	Value	Unit
Maximum Instantaneous Forward Voltage	V_F	I_F=1.0A, T_A=25°C	1.9	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	T_A=25°C	5	μA
		T_A=125°C	100	
Maximum Reverse Recovery Time	t_{rr}	I_F=0.5A, I_R=1.0A, I_{RR}=0.25A	75	nS
Typical Junction Capacitance	C_J	4.0V, 1MHz	6.5	pF

Note:
1. The thermal resistance from junction to ambient, case and lead, mounted on FR-4 P.C.B with 5 x 5mm copper pads, 2OZ.

Ratings and Characteristics Curves (T_A=25°C unless otherwise noted)

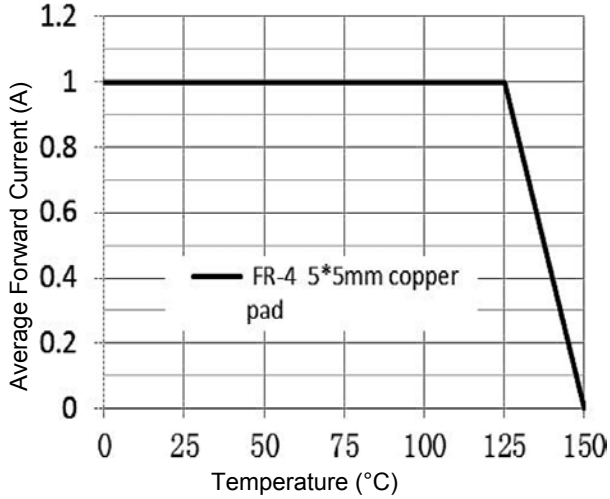


Figure 1. Forward Current Derating Curve

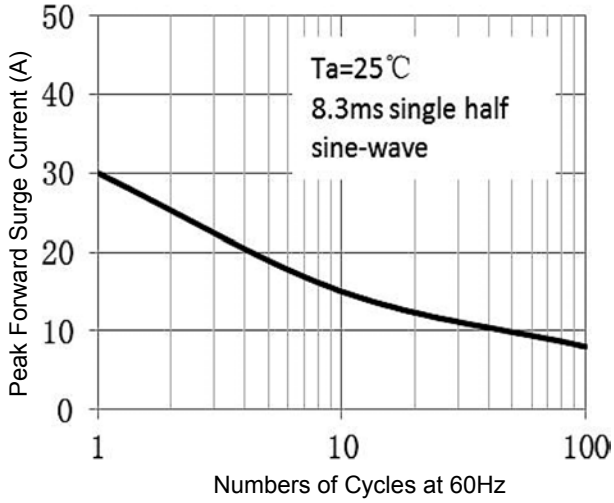


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

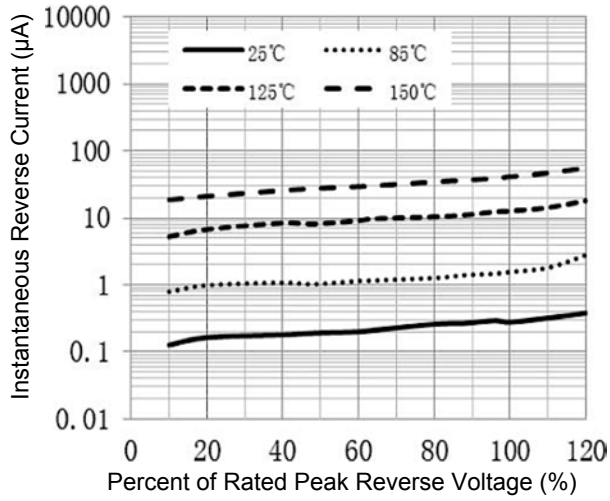


Figure 3. Typical Reverse Characteristics

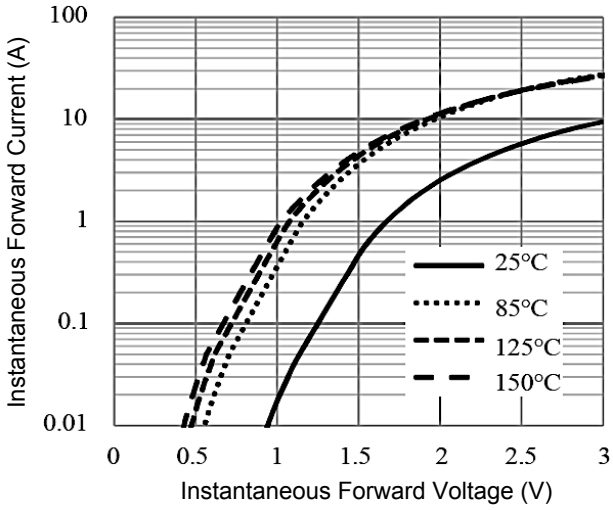


Figure 4. Typical Instantaneous Forward Characteristics

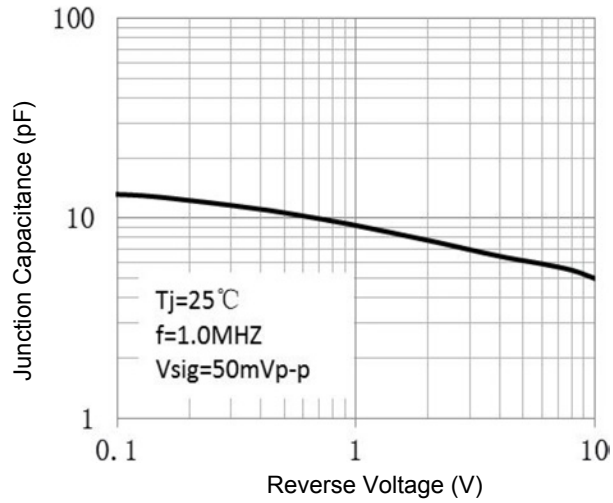


Figure 5. Typical Junction Capacitance

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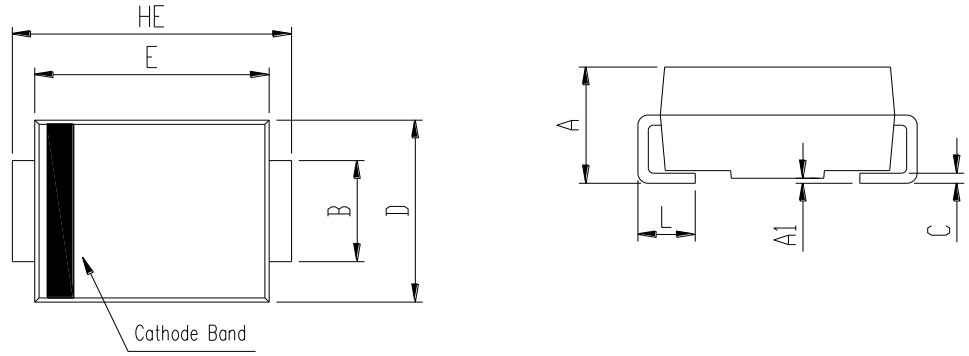
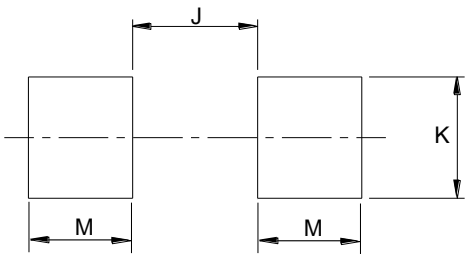
Package Outline Dimensions DO-214AB (SMC)



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
GSHS1OC	DO-214AB (SMC)	HS1OC	Tape & Reel	3,000 Pcs / Reel