

**TECHNICAL DATA**  
**DATA SHEET D0108 REV. –**

## SILICON SCHOTTKY RECTIFIER DIE

**Applications:**

- Switching Power Supply • Converters • Free-Wheeling Diodes • Polarity Protection Diode

**Features:**

- Ultra low Reverse Leakage Current
- Soft Reverse Recovery at Low and High Temperature
- Very Low Forward Voltage Drop
- Low Power Loss, High Efficiency
- High Surge Capacity
- Guard Ring for Enhanced Durability and Long Term Reliability
- Guaranteed Reverse Avalanche Characteristics
- Electrically / Mechanically Stable during and after Packaging

**Maximum Ratings:**

Characteristics	Symbol	Condition	Max.	Units
Peak Inverse Voltage	$V_{RWM}$	-	45	V
Average Forward Current	$I_{F(AV)}$	50% duty cycle, rectangular wave form	7.5	A
Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	8.3 ms, Sine pulse <sup>(1)</sup>	140	A
Junction Temperature	$T_J$	-	-55 to +175	°C
Storage Temperature	$T_{stg}$	-	-55 to +175	°C

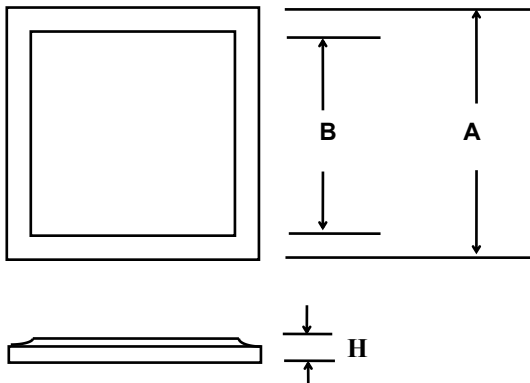
**Electrical Characteristics:**

Characteristics	Symbol	Condition	Max.	Units
Forward Voltage Drop	$V_{F1}$	@ 7.5A, Pulse, $T_J = 25\text{ °C}$	0.64	V
	$V_{F2}$	@ 7.5A, Pulse, $T_J = 125\text{ °C}$	0.57	V
Reverse Current	$I_{R1}$	@ $V_R = 45V$ , Pulse, $T_J = 25\text{ °C}$	0.2	mA
	$I_{R2}$	@ $V_R = 45V$ , Pulse, $T_J = 125\text{ °C}$	7.5	mA
Junction Capacitance	$C_T$	@ $V_R = 5V$ , $T_C = 25\text{ °C}$ $f_{SIG} = 1MHz$ , $V_{SIG} = 50mV$ (p-p)	400	pF

(1) in SHD package

**TECHNICAL DATA**  
**DATA SHEET D0108 REV. –**

**Mechanical Dimensions: In Inches ( mm )**



Bottom side metalization Ag-5kA minimum  
 Top side metalization Ag -25kA minimum  
 Bottom side is cathode, top side is anode  
 Dimension H =0.0105±0.001(0.27±0.026) (It can be customized according to customer requirements)

A	B
0.090 ± 0.003(2.29 ± 0.08)	0.081 ± 0.003(2.06 ± 0.08)

**DISCLAIMER:**

1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the SMC - Sangdest Microelectronics (Nanjing) Co., Ltd sales department for the latest version of the datasheet(s).

2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.

3- In no event shall SMC - Sangdest Microelectronics (Nanjing) Co., Ltd be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). SMC - Sangdest Microelectronics (Nanjing) Co., Ltd assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.

4- In no event shall SMC - Sangdest Microelectronics (Nanjing) Co., Ltd be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.

5- No license is granted by the datasheet(s) under any patents or other rights of any third party or SMC - Sangdest Microelectronics (Nanjing) Co., Ltd.

6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC - Sangdest Microelectronics (Nanjing) Co., Ltd.

7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations..