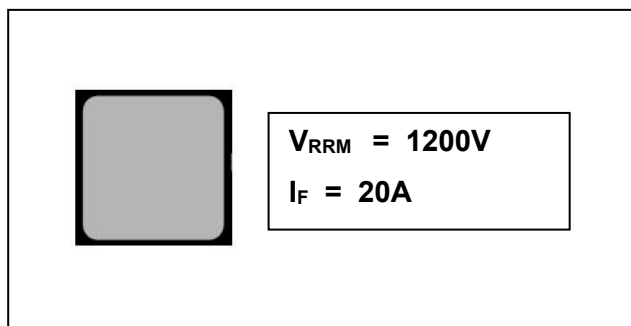


SD4-1200-S020AB

SiC Schottky Power Rectifier Chip



Description

- 1200-Volt Schottky Rectifier
- Zero Reverse Recovery
- Zero Forward Recovery
- High-Frequency Operation
- Temperature-Independent Switching Behavior
- Extremely Fast Switching
- Positive Temperature Coefficient on VF

Part Number	Die Size	Anode	Cathode
SD4-1200-S020AB	Please contact your sales representative to get the detailed information about die layout and dimensions.	Al	Ag

Maximum Ratings:

Parameter	Symbol	Value	Units
Repetitive Peak Reverse Voltage	V_{RRM}	1200	V
Surge Peak Reverse Voltage	V_{RSM}	1200	V
DC Peak Blocking Voltage	V_R	1200	V
Maximum DC Current	I_F	20	A
Non-Repetitive Forward Surge Current	I_{FSM}	162	A
Operating Junction and Storage Temperature	T_J, T_{stg}	-55 to +175	°C
Maximum Processing Temperature	T_{Proc}	325	°C

Technical Data
Data Sheet D0251, REV.-

Electrical Characteristics(T=25°C unless otherwise specified):

Parameter	Symbol	Condition	Typ.	Max.	Units
DC Forward Voltage	V _F	I _F = 20 A, T _J =25°C	1.5	1.8	V
		I _F = 20 A, T _J =175°C	2.2	3.0	V
Reverse Current	I _R	V _R = 1200 V, T _J =25°C	1	25	uA
		V _R = 1200 V, T _J =175°C	10	150	uA
Junction Capacitance	C _T	V _R =0V, T _J =25°C, f=1MHz	1620	-	C _T
Reverse Recovery Charge	Q _c	I _F = 20A, di/dt = 200A/μs V _R = 800 V, T _J =25°C	124.89	-	Q _c
Capacitance Stored Energy	E _c	V _R = 800 V, T _J =25°C	64.20	-	E _c

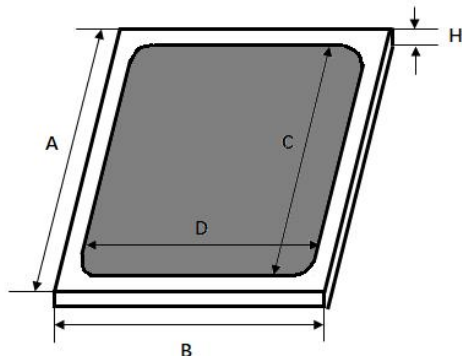
* Pulse width < 300 μs, duty cycle < 2%

Mechanical Parameters:

Parameter	Typ.	Unit
Die Size	3.40×3.40	mm
Anode Pad opening	2.60×2.60	mm
Thickness	350±10%	μm
Wafer Size	152.4	mm
Anode Metalization (Al)	4	μm
Cathode Metalization (Ag)	0.4	μm
Frontside Passivation	Polyimide	

Technical Data
Data Sheet D0251, REV.-

Chip Dimension



symbol	Dimension +/- 10%
A	3.40 mm
B	3.40 mm
C	2.60 mm
D	2.60 mm
H	350 um

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 Diode Solutions 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 Diode Solutions 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 Diode Solution 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 Diode Solutions 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 Diode Solutions.
- 6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of SMC Diode Solutions.
- 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..