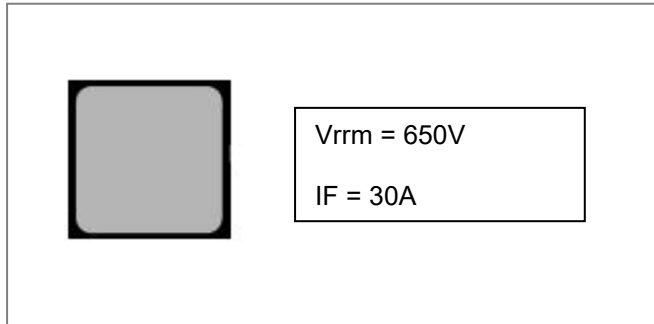


# SD3-0650-S030AB

## SiC Schottky Power Rectifier Chip



### Description

- 650-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
SD3-0650-S030AB	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	$V_{RRM}$	650	V
Surge Peak Reverse Voltage	$V_{RSM}$	650	V
DC Peak Blocking Voltage	$V_R$	650	V
Maximum DC Current*	$I_F$	30	A
Repetitive Peak Forward Surge Current	$I_{FRM}$	125	A
Peak One Cycle Non-Repetitive Surge Current	$I_{FSM}$	255	A
Operating Junction and Storage Temperature	$T_J, T_{stg}$	-55 to +175	°C

**Technical Data**  
**Data Sheet D0302, REV.-**

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

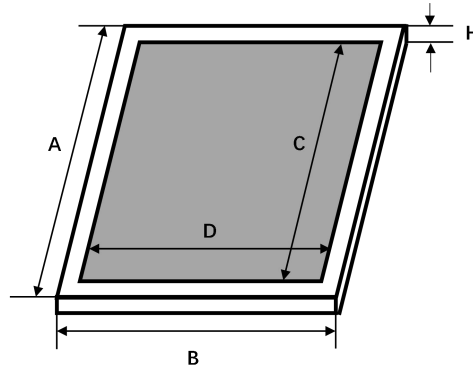
Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V <sub>F1</sub>	@ 30A, Pulse, T <sub>J</sub> = 25 °C	1.4	1.7	V
	V <sub>F2</sub>	@ 30A, Pulse, T <sub>J</sub> = 175 °C	1.6	2.0	V
Reverse Current*	I <sub>R1</sub>	@V <sub>R</sub> = rated V <sub>R</sub> , T <sub>J</sub> = 25 °C	4	140	uA
	I <sub>R2</sub>	@V <sub>R</sub> = rated V <sub>R</sub> , T <sub>J</sub> = 175 °C	40	400	uA
Junction Capacitance	C <sub>T</sub>	V <sub>R</sub> =0V, T <sub>J</sub> =25°C, f=1MHz	2307	-	pF
Reverse Recovery Charge	Q <sub>c</sub>	I <sub>F</sub> = 30A, di/dt = 200A/μs V <sub>R</sub> = 400 V, T <sub>J</sub> =25°C	143.9	-	nC
Capacitance Stored Energy	E <sub>c</sub>	V <sub>R</sub> = 400 V, T <sub>J</sub> =25°C	35.3	-	μJ

\* 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 ± 25	μm
Anode Metalization (Al)	4	μm
Cathode Metalization (Ag)	0.4	μm
Frontside Passivation	Polyimide	

**Chip Dimension**



symbol	Dimension +/- 10%
A	3.40mm
B	3.40mm
C	1.90mm
D	1.90mm
H	350um

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