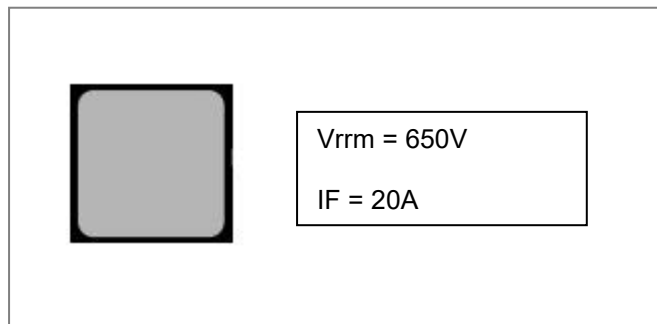


SD3-0650-S020AB

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-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}	650	V
Surge Peak Reverse Voltage	V_{RSM}	650	V
DC Peak Blocking Voltage	V_R	650	V
Maximum DC Current	I_F	20	A
Repetitive Peak Forward Surge Current	I_{FRM}	105	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	170	A
Operating Junction and Storage Temperature	T_J, T_{stg}	-55 to +175	°C

Technical Data
Data Sheet D0209, REV.-

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

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V _{F1}	@ 20A, Pulse, T _J = 25 °C	1.45	1.7	V
	V _{F2}	@ 20A, Pulse, T _J = 175 °C	1.65	2.0	V
Reverse Current*	I _{R1}	@V _R = rated V _R , T _J = 25 °C	1.5	50	uA
	I _{R2}	@V _R = rated V _R , T _J = 175 °C	15	200	uA
Junction Capacitance	C _T	V _R =0V, T _J =25°C, f=1MHz	1550	-	pF
Reverse Recovery Charge	Q _c	I _F = 20A, di/dt = 200A/μs V _R = 400 V, T _J =25°C	96.7	-	nC
Capacitance Stored Energy	E _c	V _R = 400 V, T _J =25°C	23.69	-	μJ

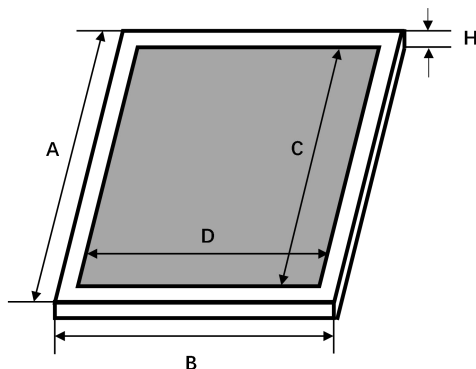
* Pulse width < 300 μs, duty cycle < 2%

Mechanical Parameters:

Parameter	Typ.	Unit
Die Size	2.75*2.75	mm
Anode Pad opening	1.90*1.90	mm
Thickness	350 ± 25	μm
Anode Metalization (Al)	4	μm
Cathode Metalization (Ag)	0.4	μm
Frontside Passivation	Polyimide	

Technical Data
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Chip Dimension



symbol	Dimension +/- 10%
A	2.75mm
B	2.75mm
C	1.90mm
D	1.90mm
H	350um

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