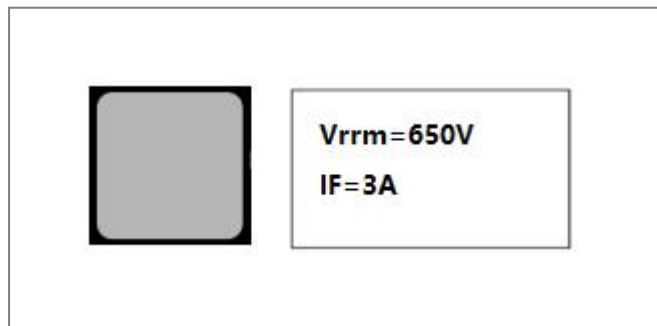


SD3-0650-S003AB

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-S003AB	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	3	A
Repetitive Peak Forward Surge Current	I_{FRM}	23	A
Peak One Cycle Non-Repetitive Surge Current	I_{FSM}	46	A
Operating Junction and Storage Temperature	T_J, T_{stg}	-55 to +175	°C

Technical Data
Data Sheet D0205, REV.-

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

Characteristics	Symbol	Condition	Typ.	Max.	Units
Forward Voltage Drop*	V _{F1}	@ 3A, Pulse, T _J = 25 °C	1.4	1.7	V
	V _{F2}	@ 3A, Pulse, T _J = 175 °C	1.6	2.0	V
Reverse Current*	I _{R1}	@V _R = rated V _R , T _J = 25 °C	0.03	2	µA
	I _{R2}	@V _R = rated V _R , T _J = 175 °C	0.3	20	µA
Junction Capacitance	C _T	V _R =0V, T _J =25°C, f=1MHz	230	-	pF
Reverse Recovery Charge	Q _c	I _F = 3A, di/dt = 200A/µs V _R = 400 V, T _J = 25°C	14.35	-	nC
Capacitance Stored Energy	E _c	V _R = 400 V, T _J = 25°C	3.51	-	µJ

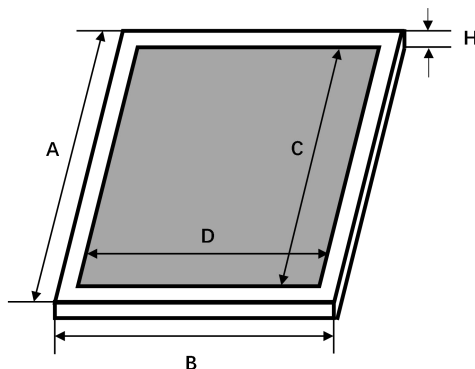
* Pulse width < 300 µs, duty cycle < 2%

Mechanical Parameters:

Parameter	Typ.	Unit
Die Size	1.20*1.20	mm
Anode Pad opening	0.75*0.75	mm
Thickness	350 ± 25	µm
Anode Metalization (Al)	4	µm
Cathode Metalization (Ag)	0.4	µm
Frontside Passivation	Polyimide	

Technical Data
Data Sheet D0205, REV.-

Chip Dimension



symbol	Dimension +/- 10%
A	1.20mm
B	1.20mm
C	0.75mm
D	0.75mm
H	350um

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