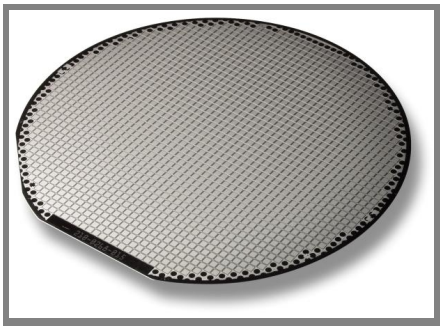
SKCD 121 C 060 I3



SEMICELL CAL-DIODE

SKCD 121 C 060 I3

I_F = 210 A

V_{RRM} = 600 V

Size: 11 mm X 11 mm

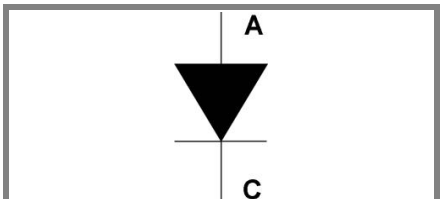
Package: wafer frame

Features

- 600V, 1200V and 1700V
- low forward voltage drop
- easy paralleling due to a small forward voltage spread
- low temperature dependence
- very soft recovery behavior
- small switching losses
- high ruggedness
- compatible to thick wire bonding
- compatible to all standard solder processes

Typical Applications

- freewheeling diode for IGBT
- optimal at frequencies > 8 kHz



SKCD

Absolute Maximum Ratings

Symbol	Conditions	Values	Units
V_{RRM}	T_{vj} = 25 °C, I_R = 0,5 mA	600	V
$I_{F(AV)}$	T_h = 80 °C, T_{vjmax} = 150 °C	160	A
I_{FSM}	T_{vj} = 25 °C, 10 ms, half sine wave		A
	T_{vjmax} = 150 °C, 10 ms, half sine wave	2100	A
T_{vjmax}		+ 150	°C

Electrical Characteristics

Symbol	Conditions	min.	typ.	max.	Units
I^2t	T_{vjmax}, 10 ms, half sine wave			22000	A^2s
I_R	T_{vj} = 25 °C, V_{RRM}			0,5	mA
	T_{vj} = 125 °C, V_{RRM}			10	mA
V_F	T_{vj} = 25 °C, I_F = 245 A		1,35	1,6	V
	T_{vj} = 125 °C, I_F = 245 A		1,35	1,6	V
$V_{(TO)}$	T_{vj} = 125 °C		0,9		V
r_T	T_{vj} = 125 °C		1,8		mΩ

Dynamic Characteristics

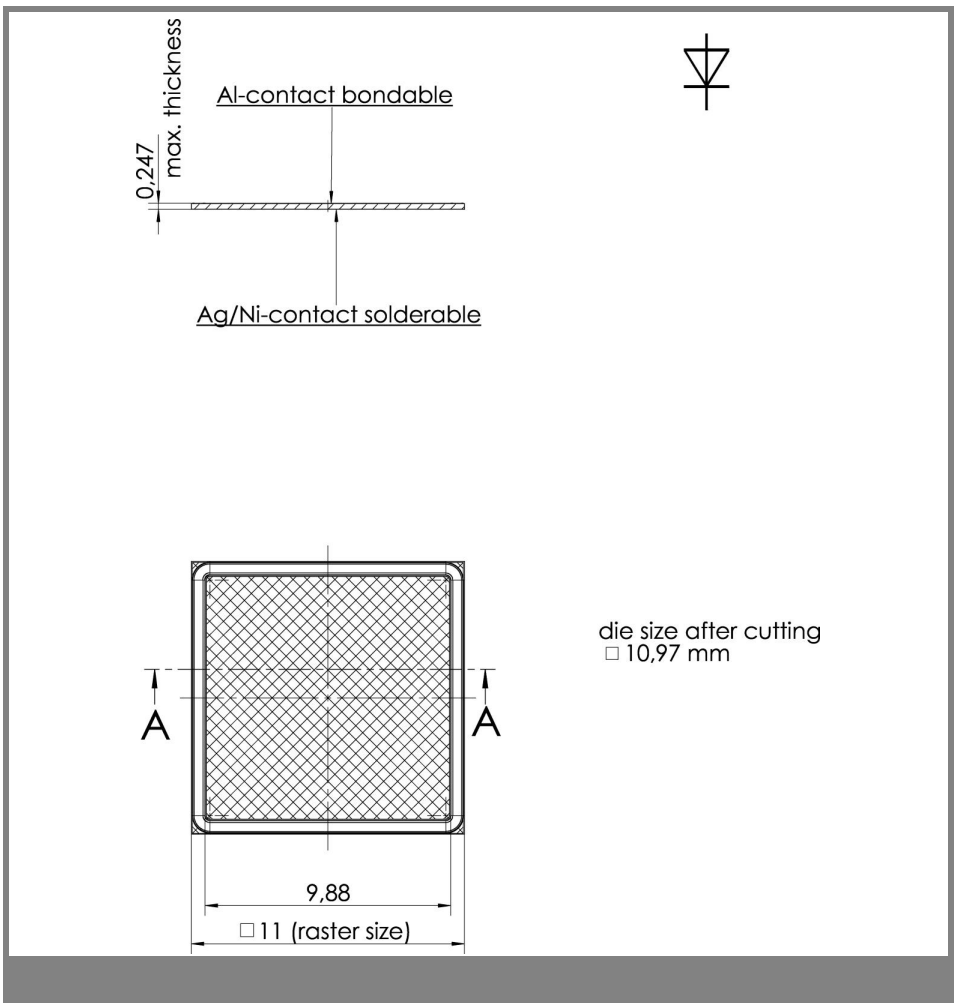
Symbol	Conditions	min.	typ.	max.	Units
t_{rr}	T_{vj} = 25 °C, 200 A ,300 V, 1000 A/µs				ns
	T_{vj} = 125 °C, 200 A ,300 V, 1000 A/µs				ns
Q_{rr}	T_{vj} = 25 °C, 200 A, 300 V, 1000 A/µs		5		µC
	T_{vj} = 125 °C, 200 A, 300 V, 1000 A/µs		10,7		µC
I_{rrm}	T_{vj} = 25 °C, 200 A, 300 V, 1000 A/µs				A
	T_{vj} = 125 °C, 200 A, 300 V, 1000 A/µs		75		A

Thermal Characteristics

Symbol	Conditions	min.	typ.	max.	Units
T_{vj}		- 40		+ 150	°C
T_{stg}		- 40		+ 150	°C
T_{solder}	10 min			+ 250	°C
T_{solder}	5 min			+ 320	°C
$R_{th(j-h)}$	soldered on 0,38 mm DCB, reference point on copper heatsink close to the chip.		0,24		K / W

Mechanical Characteristics

Parameter		Units
raster size	11 x 11	mm
Area total	121	mm^2
Chips / wafer	76	pcs
Anode metallisation	bondable (Al)	
Cathode metallisation	solderable (Ag / Ni)	
wire bond	Al, diameter ≤ 500 µm	



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