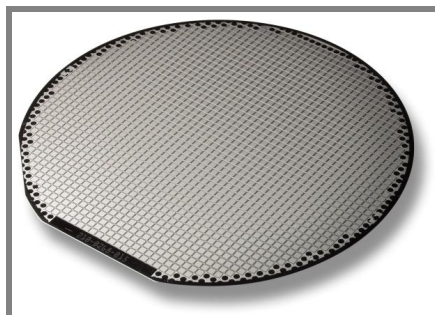


SKCD 04 C 060 I HD



SEMICELL CAL-DIODE

SKCD 04 C 060 I HD

$I_F = 10\text{ A}$

$V_{RRM} = 600\text{ V}$

Size: 2 mm X 2 mm

Package: wafer frame

Features

- high current density
- easy paralleling due to a small forward voltage spread and a positive temperature coefficient
- very soft recovery behavior
- small switching losses
- high ruggedness
- compatible to thick wire bonding
- compatible to standard solder processes

Typical Applications

- freewheeling diode for 600V IGBT

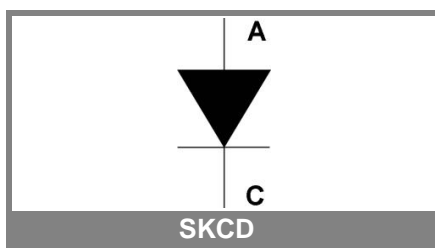
Absolute Maximum Ratings			
Symbol	Conditions	Values	Units
V_{RRM}	$T_{vj} = 25\text{ °C}$, $I_R = 0,1\text{ mA}$	600	V
$I_{F(AV)}$	80 °C , $T_{vjmax} = 175\text{ °C}$	11	A
I_{FSM}	$T_{vj} = 25\text{ °C}$, 10 ms, half sine wave	75	A
	$T_{vj} = 150\text{ °C}$, 10 ms, half sine wave	65	A
T_{vjmax}		+ 175	°C

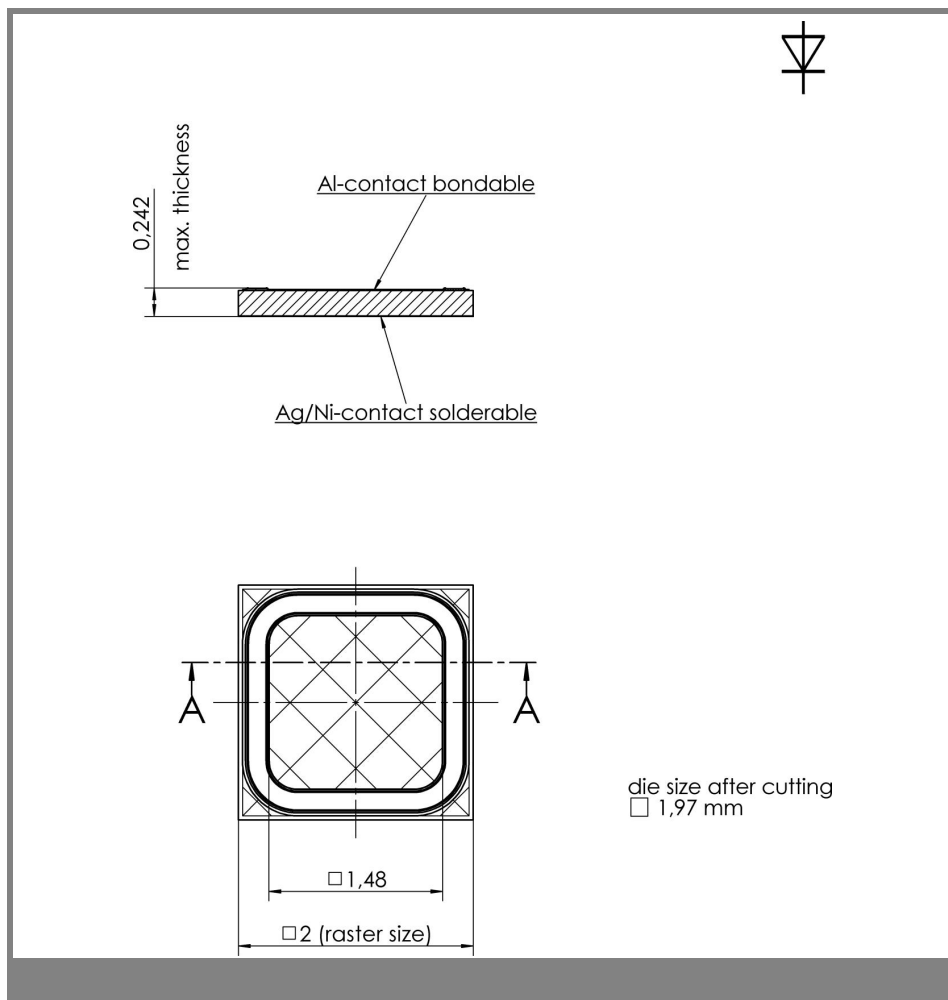
Electrical Characteristics					
Symbol	Conditions	min.	typ.	max.	Units
I^2t	$T_{vj} = 150\text{ °C}$, 10 ms, half sine wave				A ² s
I_R	$T_{vj} = 25\text{ °C}$, V_{RRM}			0,1	mA
	$T_{vj} = 150\text{ °C}$, V_{RRM}				mA
V_F	$T_{vj} = 25\text{ °C}$, $I_F = 7\text{ A}$		1,35		V
	$T_{vj} = 150\text{ °C}$, $I_F = 7\text{ A}$		1,31		V
$V_{(TO)}$	$T_{vj} = 150\text{ °C}$		0,85		V
r_T	$T_{vj} = 150\text{ °C}$		66,7		mΩ

Dynamic Characteristics					
Symbol	Conditions	min.	typ.	max.	Units
t_{rr}	$T_{vj} = 25\text{ °C}$, 6 A, 300 V, 520 A/μs				ns
	$T_{vj} = 150\text{ °C}$, 6 A, 300 V, 520 A/μs				ns
Q_{rr}	$T_{vj} = 25\text{ °C}$, 6 A, 300 V, 520 A/μs				μC
	$T_{vj} = 150\text{ °C}$, 6 A, 300 V, 520 A/μs		0,89		μC
I_{rrm}	$T_{vj} = 25\text{ °C}$, 6 A, 300 V, 520 A/μs				A
	$T_{vj} = 150\text{ °C}$, 6 A, 300 V, 520 A/μs		11,2		A

Thermal Characteristics					
Symbol	Conditions	min.	typ.	max.	Units
T_{vj}		- 40		+ 175	°C
T_{stg}		- 40		+ 175	°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.		3		K / W

Mechanical Characteristics		
Parameter		Units
raster size	2 x 2	mm
Area total	4	mm ²
Chips / wafer	2661	pcs
Anode metallisation	bondable (Al)	
Cathode metallisation	solderable (Ag / Ni)	
wire bond	Al, diameter ≤ 500 μm	





This technical information specifies semiconductor devices. No warranty or guarantee expressed or implied is made regarding delivery, performance or suitability.