

SKR 5,6 Qu bond



DIODE

$I_{F(DC)} = 50 \text{ A}$

$V_{RRM} = 1600 \text{ V}$

Size: 5,6 mm x 5,6 mm

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Features

- high current density due to mesa technology
- high surge current
- compatible to thick wire bonding
- compatible to all standard solder processes

Typical Applications

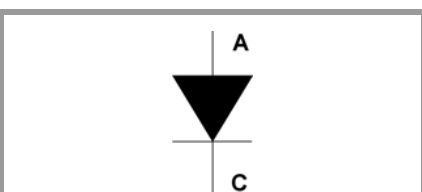
- uncontrolled rectifier bridges

Absolute Maximum Ratings			
Symbol	Conditions	Values	Unit
V_{RRM}	$T_j = 25 \text{ °C}, I_R = 0.05 \text{ mA}$	1600	V
$I_{F(AV)}$	$T_s = 80 \text{ °C}, T_j = 150 \text{ °C}$	40	A
I^2t	$T_j = 150 \text{ °C}, 10 \text{ ms}, \sin 180^\circ$	1201	A ² s
I_{FSM}	10 ms	$T_j = 25 \text{ °C}$	635
	$\sin 180^\circ$	$T_j = 150 \text{ °C}$	490
T_{jmax}		150	°C

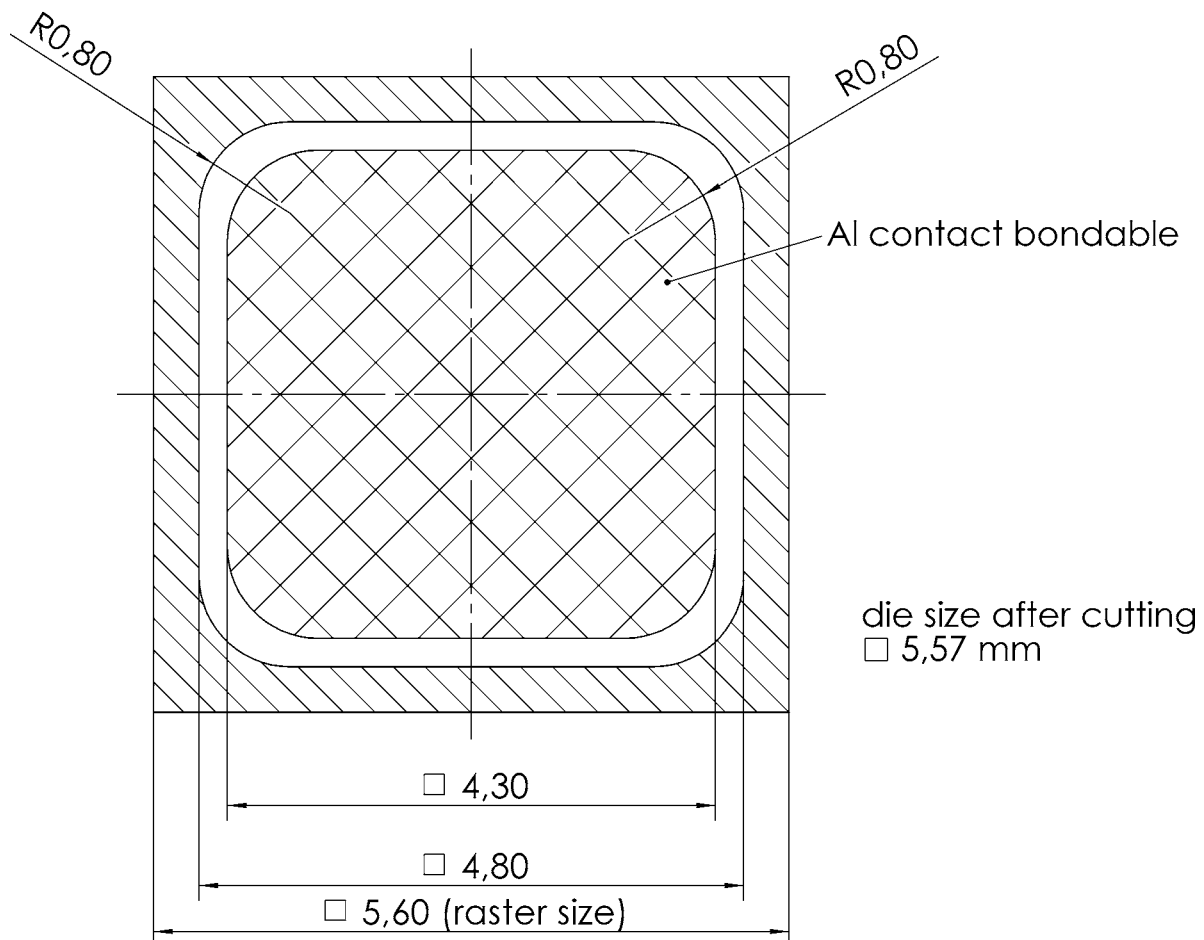
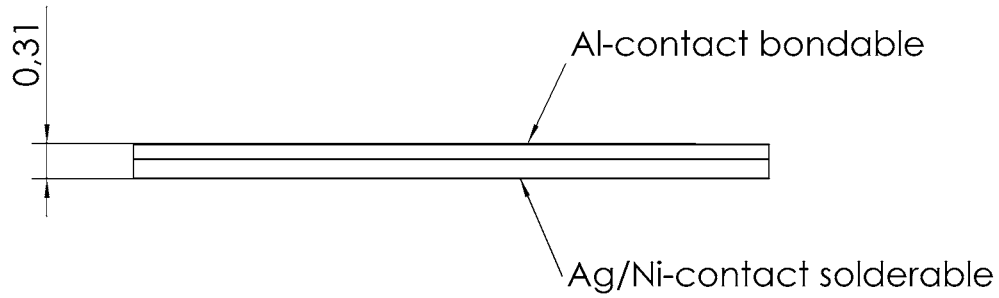
Electrical Characteristics					
Symbol	Conditions	min.	typ.	max.	Unit
I_R	$T_j = 25 \text{ °C}, V_{RRM}$			0.05	mA
	$T_j = 145 \text{ °C}, V_{RRM}$			1.1	mA
V_F	$T_j = 25 \text{ °C}, I_F = 25 \text{ A}$		1	1.21	V
	$T_j = 125 \text{ °C}, I_F = 25 \text{ A}$		0.9	1.1	V
$V_{(TO)}$	$T_j = 125 \text{ °C}$			0.83	V
r_T	$T_j = 125 \text{ °C}$			6.2	mΩ
t_{rr}	$T_j = 25 \text{ °C}, \pm 1 \text{ A}$		22		μs

Thermal Characteristics					
Symbol	Conditions	min.	typ.	max.	Unit
T_j		-40		150	°C
T_{stg}		-40		150	°C
T_{solder}	10 min.			250	°C
T_{solder}	5 min.			320	°C
$R_{th(j-s)}$	soldered on 0,38 mm DCB, reference point on copper heatsink close to the chip		1.2		K/W

Mechanical Characteristics			
Symbol	Conditions	Values	Unit
Raster size		5,6 x 5,6	mm
Area total		31,36	mm ²
Anode		bondable (Al)	
Cathode		solderable (Ag/Ni)	
Wire bond		Al, diameter ≤ 500 μm	
Package		wafer frame	
Chips / Package		470	pcs



SKR



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