

# SKR 18,2 Qu bond



**DIODE**

$$I_{F(DC)} = 380 \text{ A}$$

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

Size: 18,2 mm x 18,2 mm

## SKR 18,2 Qu bond

### Features

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

### Typical Applications\*

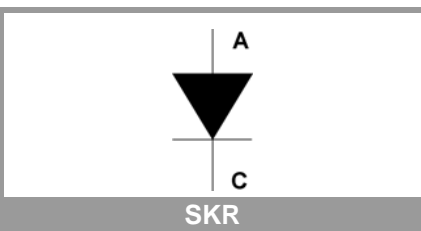
- uncontrolled rectifier bridges

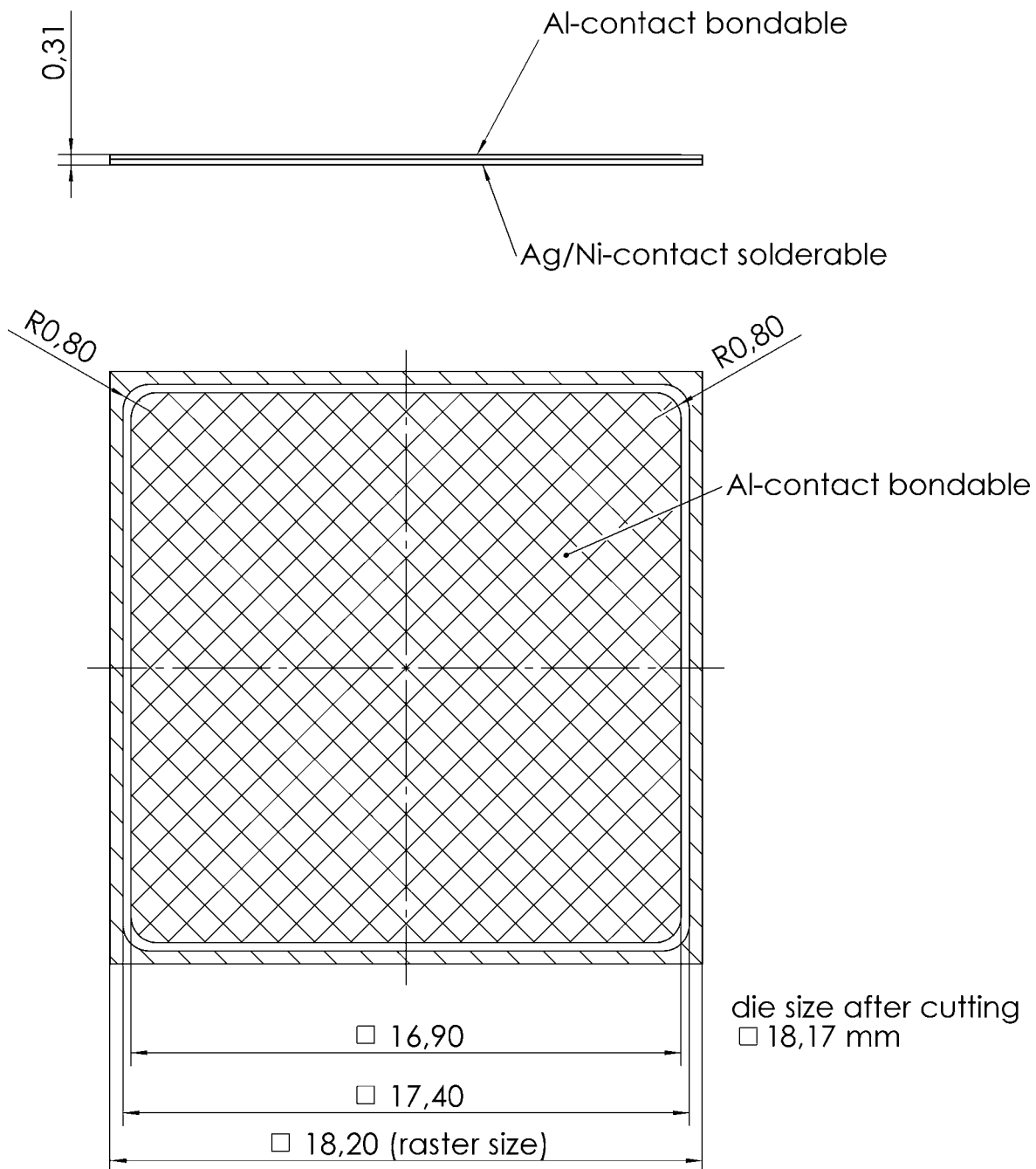
Absolute Maximum Ratings			
Symbol	Conditions	Values	Unit
$V_{RRM}$	$T_j = 25 \text{ }^\circ\text{C}$ , $I_R = 2 \text{ mA}$	1600	V
$I_{F(AV)}$	$T_c = 80 \text{ }^\circ\text{C}$ , $T_j = 150 \text{ }^\circ\text{C}$	320	A
$i^2t$	$T_j = 150 \text{ }^\circ\text{C}$ , 10 ms, sin 180°	151300	A <sup>2</sup> s
$I_{FSM}$	10 ms	$T_j = 25 \text{ }^\circ\text{C}$	7000
	sin 180°	$T_j = 150 \text{ }^\circ\text{C}$	5500
$T_{jmax}$		150	°C

Electrical Characteristics					
Symbol	Conditions	min.	typ.	max.	Unit
$I_R$	$T_j = 25 \text{ }^\circ\text{C}$ , $V_{RRM}$			2	mA
	$T_j = 120 \text{ }^\circ\text{C}$ , $V_{RRM}$			3.3	mA
$V_F$	$T_j = 25 \text{ }^\circ\text{C}$ , $I_F = 360 \text{ A}$		1	1.21	V
	$T_j = 125 \text{ }^\circ\text{C}$ , $I_F = 360 \text{ A}$		0.9	1.1	V
$V_{(TO)}$	$T_j = 125 \text{ }^\circ\text{C}$			0.83	V
$r_T$	$T_j = 125 \text{ }^\circ\text{C}$			0.5	mΩ
$t_{rr}$	$T_j = 25 \text{ }^\circ\text{C}$ , ± 1 A		53		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
$R_{th(j-c)}$	Semipack 2 assembly		0.18		K/W

Mechanical Characteristics			
Symbol	Conditions	Values	Unit
Raster size		18.2 x 18.2	mm <sup>2</sup>
Area total		331.24	mm <sup>2</sup>
Anode		bondable (Al)	
Cathode		solderable (Ag/Ni)	
Wire bond		Al, diameter ≤ 500 μm	
Package		tray	
Chips / Package		16	pcs





This is an electrostatic discharge sensitive device (ESDS), international standard IEC 60747-1, Chapter IX

\* The specifications of our components may not be considered as an assurance of component characteristics. Components have to be tested for the respective application. Adjustments may be necessary. The use of SEMIKRON products in life support appliances and systems is subject to prior specification and written approval by SEMIKRON. We therefore strongly recommend prior consultation of our personal.