

SKR 10,3 Qu bond



DIODE

$$I_{F(DC)} = 170 \text{ A}$$

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

Size: 10,3 mm x 10,3 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

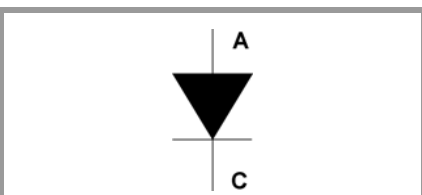
- uncontrolled rectifier bridges

| Absolute Maximum Ratings | | | |
|--------------------------|--|------------------------------------|------------------|
| Symbol | Conditions | Values | Unit |
| V_{RRM} | $T_j = 25 \text{ }^\circ\text{C}$, $I_R = 0.1 \text{ mA}$ | 1600 | V |
| $I_{F(AV)}$ | $T_s = 80 \text{ }^\circ\text{C}$, $T_j = 150 \text{ }^\circ\text{C}$ | 135 | A |
| I^2t | $T_j = 150 \text{ }^\circ\text{C}$, 10 ms, sin 180° | 13613 | A ² s |
| I_{FSM} | 10 ms | $T_j = 25 \text{ }^\circ\text{C}$ | 2000 |
| | sin 180° | $T_j = 150 \text{ }^\circ\text{C}$ | 1650 |
| T_{jmax} | | 150 | °C |

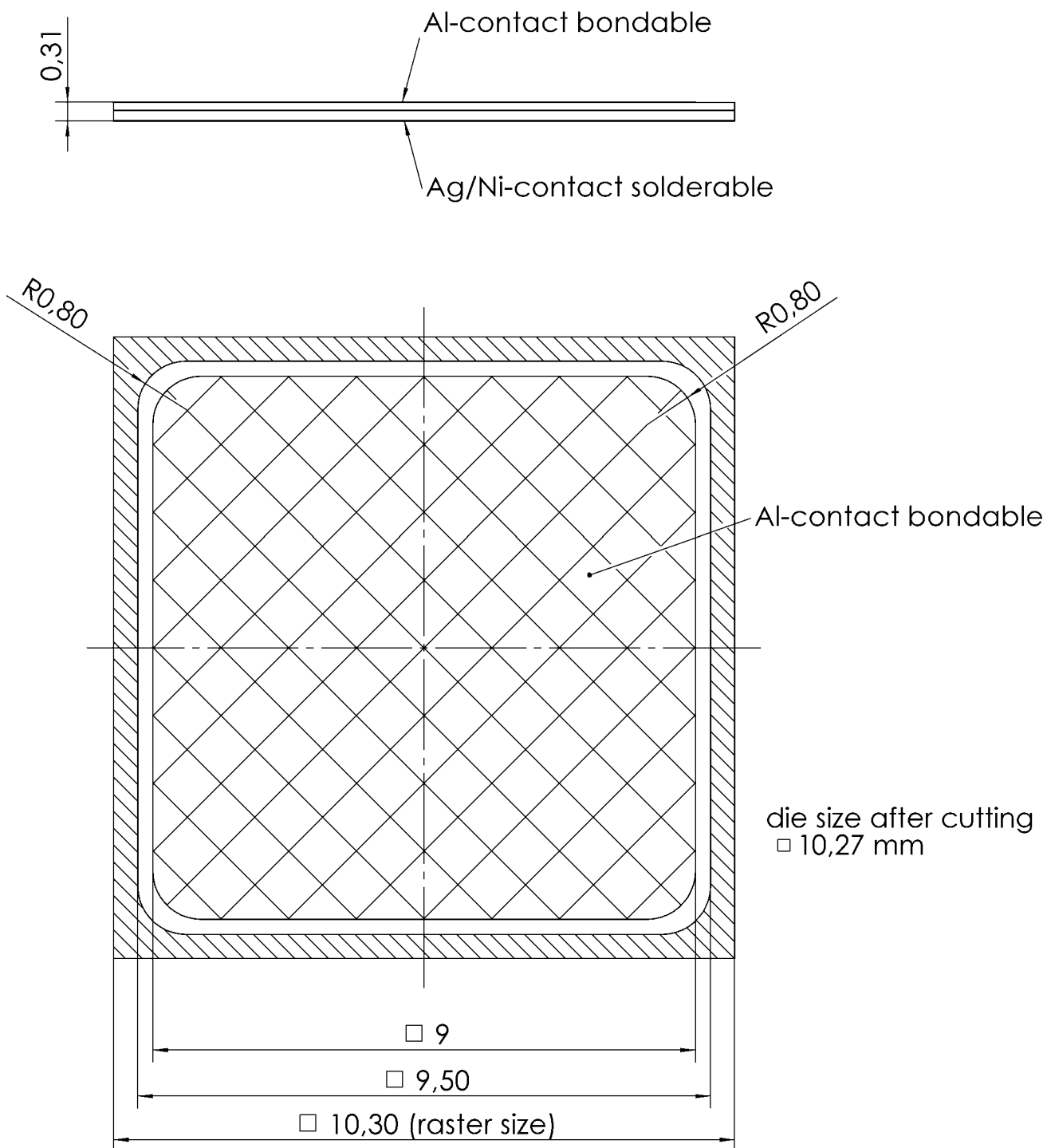
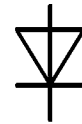
| Electrical Characteristics | | | | | |
|----------------------------|--|------|------|------|------|
| Symbol | Conditions | min. | typ. | max. | Unit |
| I_R | $T_j = 25 \text{ }^\circ\text{C}$, V_{RRM} | | | 0.1 | mA |
| | $T_j = 145 \text{ }^\circ\text{C}$, V_{RRM} | | | 1.1 | mA |
| V_F | $T_j = 25 \text{ }^\circ\text{C}$, $I_F = 106 \text{ A}$ | | 1 | 1.21 | V |
| | $T_j = 125 \text{ }^\circ\text{C}$, $I_F = 106 \text{ A}$ | | 0.9 | 1.1 | V |
| $V_{(TO)}$ | $T_j = 125 \text{ }^\circ\text{C}$ | | | 0.83 | V |
| r_T | $T_j = 125 \text{ }^\circ\text{C}$ | | | 1.6 | mΩ |
| t_{rr} | $T_j = 25 \text{ }^\circ\text{C}$, ± 1 A | | 29 | | 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 | | 0.38 | | K/W |

| Mechanical Characteristics | | | |
|----------------------------|------------|-----------------------|-----------------|
| Symbol | Conditions | Values | Unit |
| Raster size | | 10,3 x 10,3 | mm |
| Area total | | 106,09 | mm ² |
| Anode | | bondable (Al) | |
| Cathode | | solderable (Ag/Ni) | |
| Wire bond | | Al, diameter ≤ 500 μm | |
| Package | | wafer frame | |
| Chips / Package | | 128 | pcs |



SKR



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