

RACON 8 ST, SMT, 4.8 ± 0.8 N, 1 NO



Description

Our top-quality RACON 8 tactile switches – in dimensions 8.4 x 8.4 mm – feature an unmistakable click, high switching reliability, and a sealed contact system. That has made RACON the standard in many industries. Whether for automotive applications, systems with keycaps, or membrane keyboards, RACON impresses in the THT or SMT versions – for your application too.

RACON 8 tactile switches can be arranged individually, in rows or as key blocks. When used beneath membrane overlays, the RACON key switches should be combined with plungers. Suitable for the most important soldering techniques.

- > Soldering bath for THT versions
- > Reflow soldering for SMT versions
- > Vapor phase soldering for SMT versions
- > Manual soldering
- > Processing of the SMT designs with SMT automatic assembly machines
- > IMDS entry



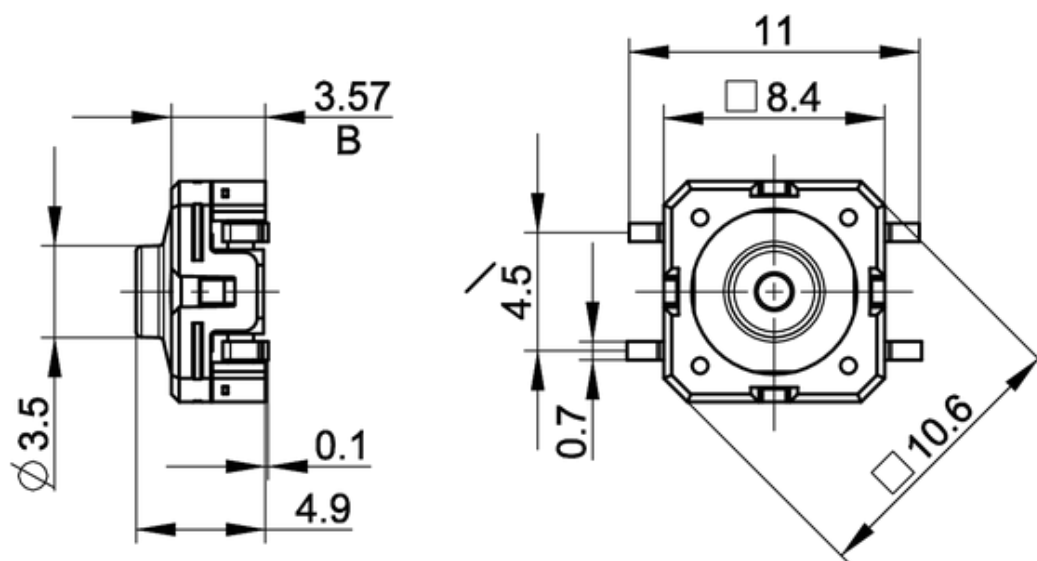
technical data

| > general | | direct links |
|--|-------------------|-----------------|
| Color | blue | > RAFI eCatalog |
| Operating temperature, min. | -40 °C | |
| Operating temperature, max. | 125 °C | |
| Storage temperature, min. | -50 °C | |
| Storage temperature, max. | 85 °C | |
| illuminated | No | |
| Soldering | Reflow | |
| Solder heat resistance according to standard | DIN EN 60068-2-58 | |
| Packaging | Blister | |
| Packaging unit | 1,000 pcs. | |
| Operating life | 1,000,000 cycles | |
| B10 | 1,300,000 cycles | |
| Degree of protection, front side, according to ISO 20653 | IP67 (IP6K7) | |
| Degree of protection on rear side acc. to ISO 20653 | IP67 (IP6K7) | |
| MSL Moisture Sensitivity Level | 1 | |

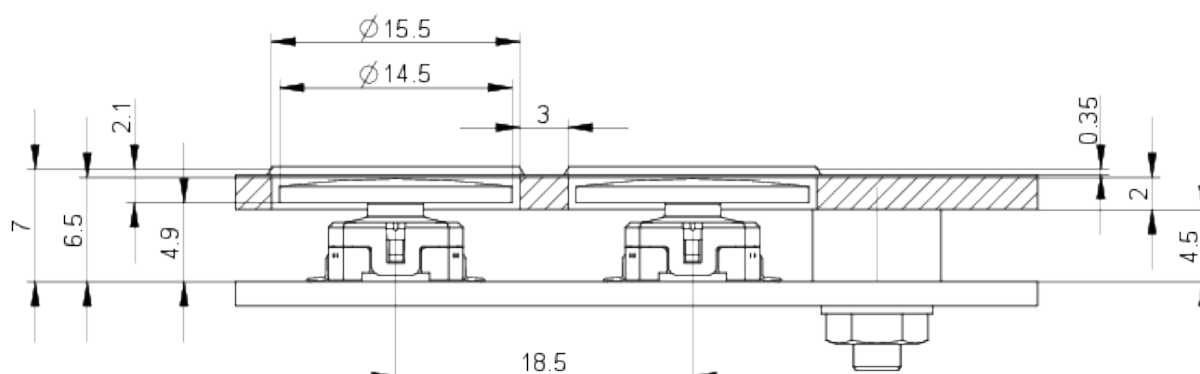
| | |
|---|--|
| Corrosive gas testing according to standard | Yes |
| Minimum order quantity (MOQ) | 1,000 pcs. |
| RoHS compliant | Yes |
| REACH compliant | Yes |
| Product code | TF |
| > mounting diameters | |
| Outside dimension, length | 8.4 mm |
| Outside dimension, width | 8.4 mm |
| Installation height | 4.95 ± 0.1 mm |
| Grid, min. | 8.9 x 12.7 mm |
| > mechanical data | |
| Actuation function | momentary contact function |
| Operating force, max. | 8 N |
| Operating force, min. | 4.8 ± 0.8 N |
| Switching travel | 0.42 ± 0.15 mm |
| Bounce time at 10 mm/s | <5 ms |
| Contact function | 1 NO |
| Contact system | Snap-action contact SPST - Single Pole Single Throw |
| Contact material | Gold |
| Solderability | Yes |
| Terminal on the rear | SMT |
| > electrical data | |
| Rated voltage, min. | 0.02 V |
| Rated voltage, max. | 35 V |
| Rated current, min. | 0.00001 A |
| Rated current, max. | 0.1 A |
| Rated power, max. | 1 W |

drawings

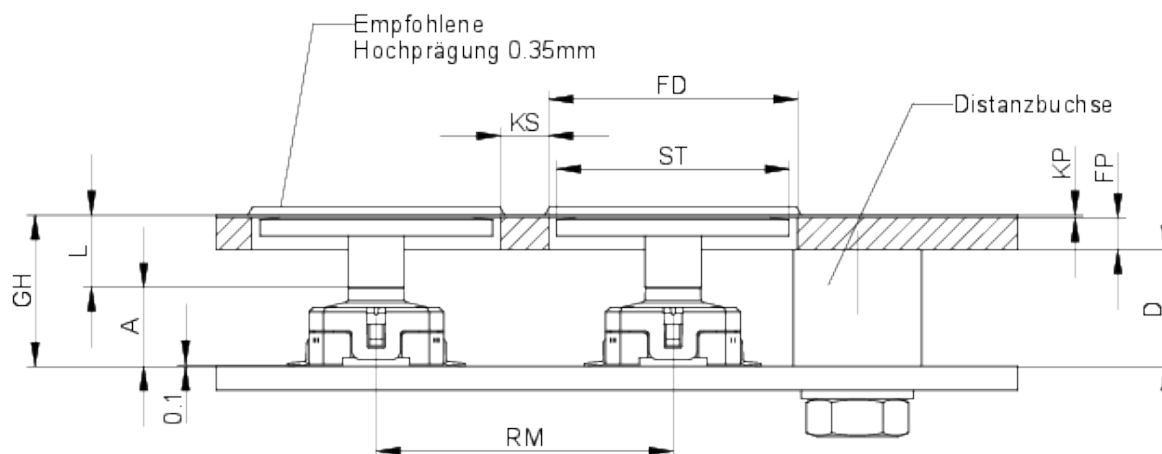
Dimensioned drawing



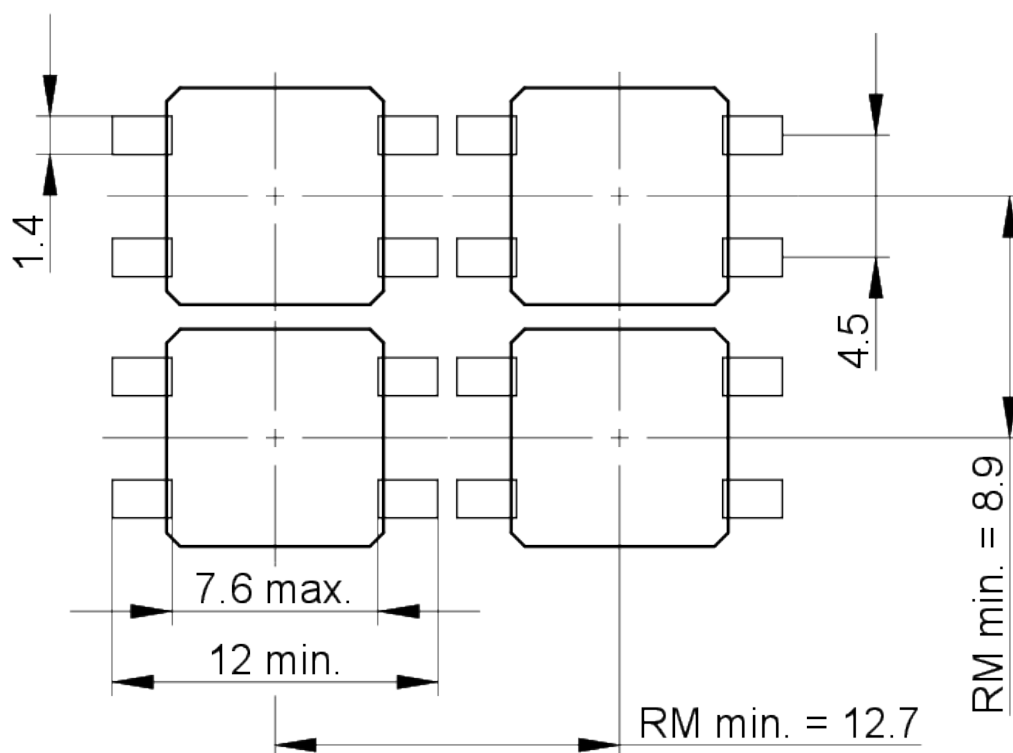
System drawing



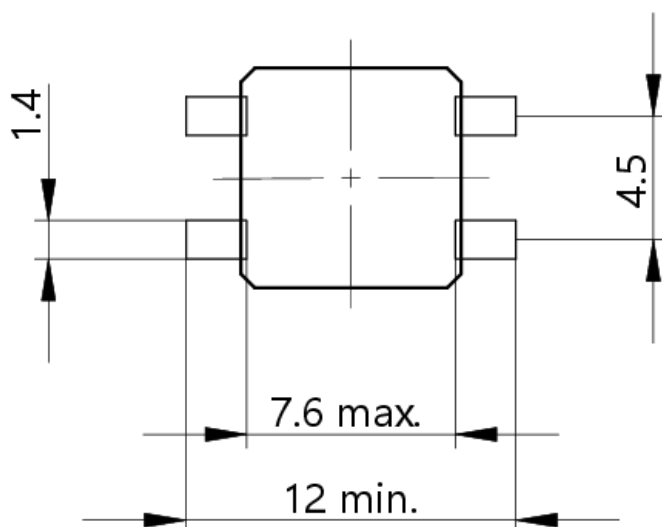
System drawing



PCB drawing

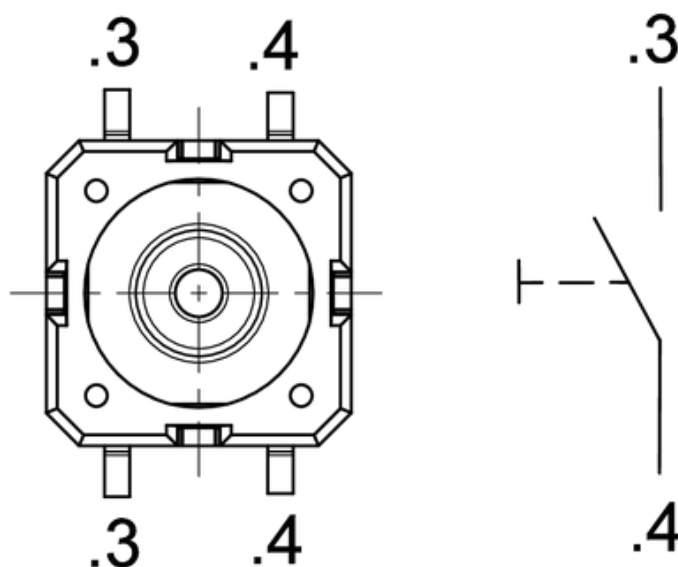


PCB drawing

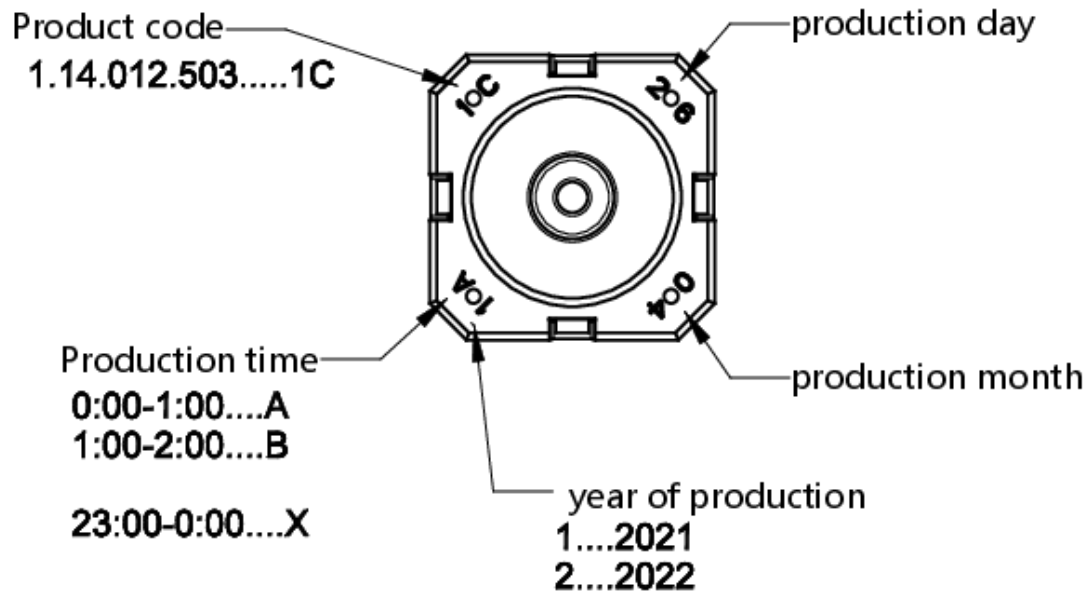


PCB-Pad
component side

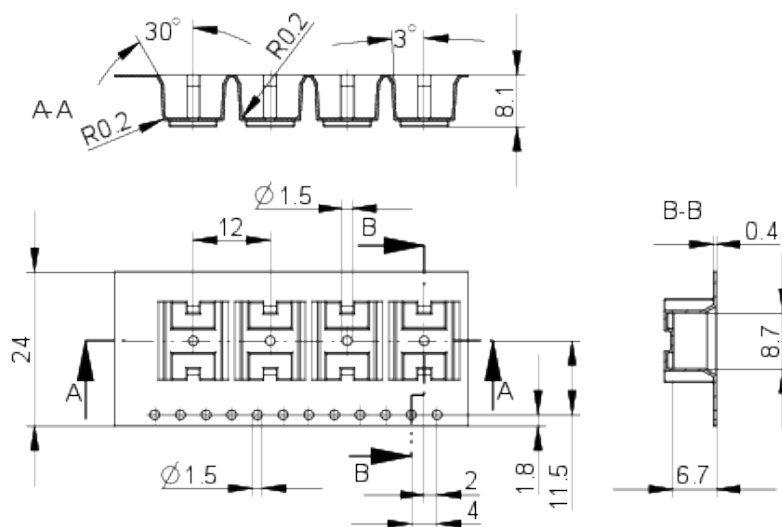
Schematic diagram



Product labeling drawing



Packaging drawing

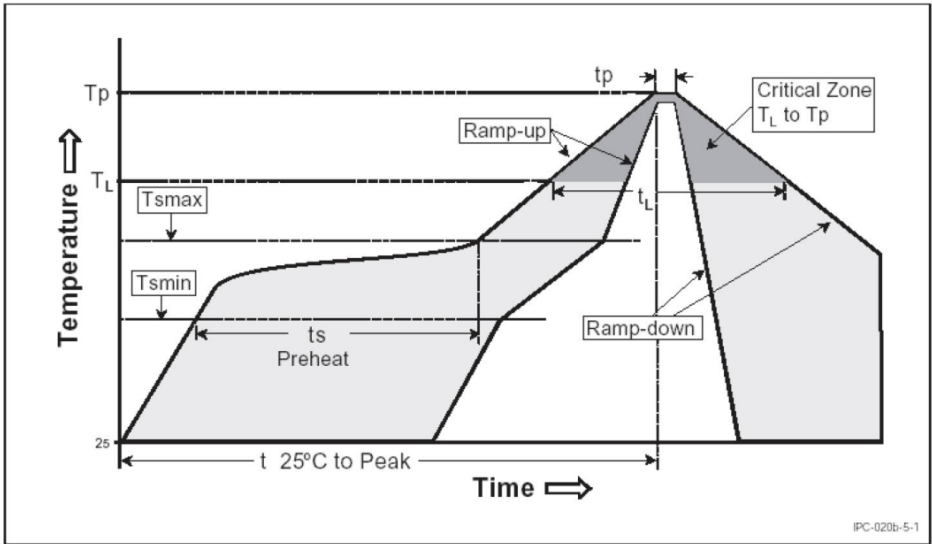


mounting

RAFI soldering profile for ROHS compliant
reflow components



Publication date: October 7, 2021



| Parameter | RAFI values |
|---|---------------------|
| Gradient (T _L to T _P) | max. 3°C / s |
| Preheating zone | |
| Minimum temperature (T _{smin}) | 150°C |
| Maximum temperature (T _{smax}) | 200°C |
| Time (from min. to max.) (ts) | 60 - 120 s |
| Gradient (T _{smax} to T _L) | max. 3°C / s |
| Time over melting temperature (T _L) time (tl) | 217°C 60 – 150 s |
| Peak temperature (T _P) | max. 260°C (+0°C) |
| Time within peak temperature – 5°C (tp) | 20-40 s |
| Gradient ramp down | max. 6°C / s |
| Time difference from 25°C to peak temperature | max. 8 minutes |

The reflow soldering profile is based on the definition of Jedec J-STD-020D.

The information in this sheet only contains general descriptions and / or performance features, which may not apply precisely as described to the respective application, and which may change due to further product enhancements. The technical data, illustrations and other information about our products are the mere results of individual technical testing. These descriptions and other product features are only binding if they expressly agreed upon at the time of the conclusion of a binding contract. In all other cases, we reserve the right to make technical changes as well as changes of availability. Pictures and other graphic illustrations are approximations only. All product names may be trademarks or brand names of the RAFI Group or any other sub-supplier of RAFI. The use of such by any third parties for their own purposes may infringe the rights of the respective entity holding those rights. Subject to change and errors excepted. Details about delivery times and availability are noncommittal and have no legal force.

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Media Robust Electronics



Publication date: February 13, 2025

RACON 8 ST

Valid for all variants RACON 8 ST, 1.14.108.5XX-9XX

Recommended potting compounds

WEVO-CHEMIE GmbH

WEVOPUR 7210 FL/WEVONAT 507

WEVOPUR PD4431 FL/WEVONAT 300

STOCKMAIER URETHANES GmbH & Co.KG

Stobicast® L768.16 Polyol/Isocyanat

Important note

Maximum potting height B must not be exceeded.

Recommended circuit board protection

Lackwerke Peters GmbH & Co.KG

combination of high-viscosity (HT-T)
and low-viscosity coating from the
ELPEGUARD® SL 1307 family

Lackwerke Peters GmbH & Co.KG

ELPEGUARD® SL 1800

Important note

The conformal coating of our tactile switches must be tested in the final application. Coating that enters the tactile switch does not harden directly, so that any resulting malfunction can only be detected later.

If the tactile switch is completely coated, the coating may peel off the elastomer of the tactile switch during the first few actuations. Press the tactile switch only after the coating has hardened.

We recommend leaving out the elastomer area when coating to prevent detachment.

General remark

The suitability and use of the recommended media for potting, conformal coating and nano-coating must be qualified and approved in the final application.

The potting, conformal coating and nano-coating must be used in accordance with the manufacturer's technical data sheet.

Actuation of the tactile switch only after the potting compound, conformal coating and nano coating has complete hardened.

Other potting compounds and processes for printed circuit board protection on request.

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