

1) General validity

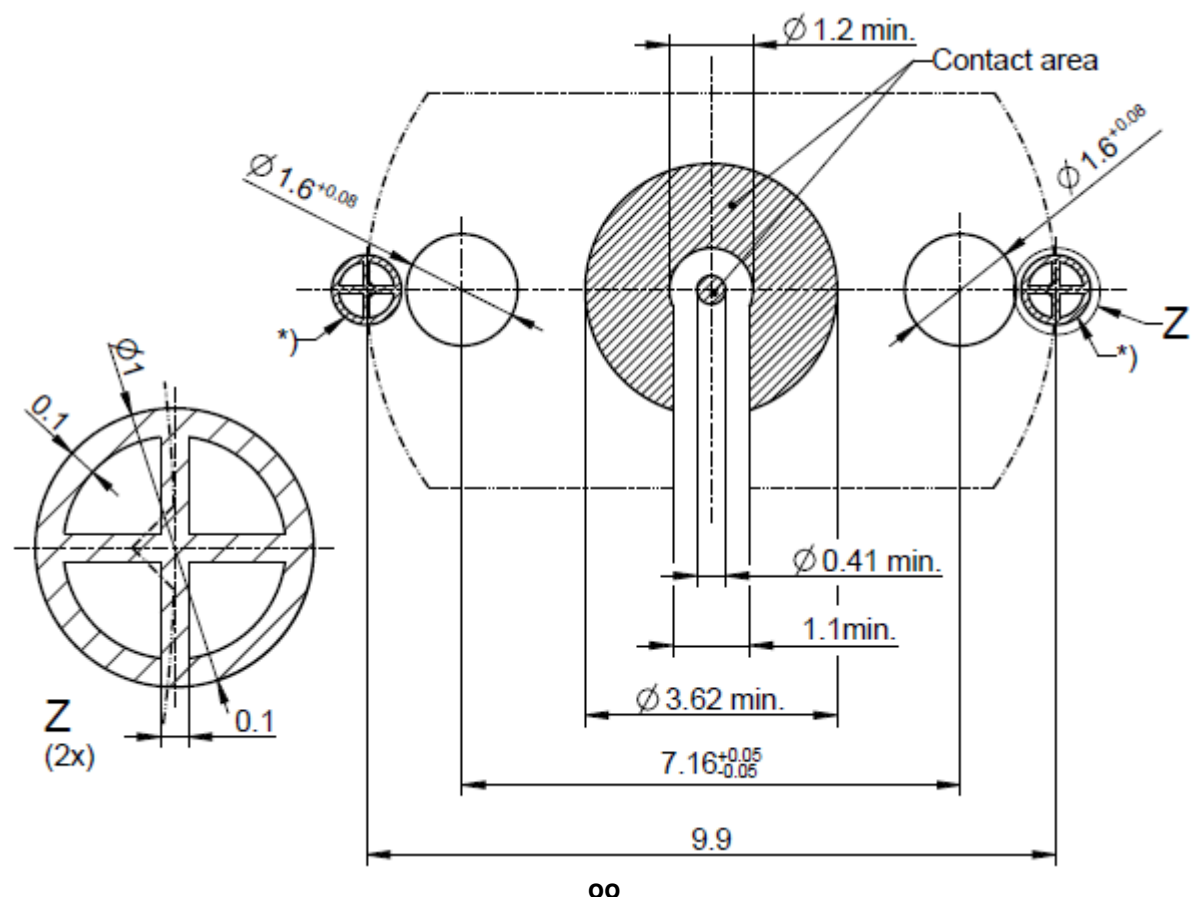
This handling instruction is valid for all Rosenberger economic solderless PCB mount connectors.

2) Standard Footprint and Alignment

Please note the recommended footprint in the technical datasheet of the used solderless PCB mount connector. **Figure 1:** shows for example the recommended footprint MB_594D for explanation. Please note the form and position tolerances of the 1.6 mm diameter holes.

In optimal cases the positioning of the center contact on the contact area should be ok due to the prepositioning, but for higher frequencies the footprint is getting smaller and therefore a check with the microscope is recommended and there are markings on the housing, and we recommend using these also on the footprint to guarantee a better positioning on the PCB. Please use a copper fiducial for better position tolerance. Please align the footprint fiducials with the notch marking on the connector to get a better performance. (See **Figure 2**)

If that is not possible due to the connector design or no possible access to a microscope you have to check the Time Domain on a Vector Network Analyzer and adjust the positioning manually by loosening the screws and adjust until the inductive and capacitive elements on the time domain are sufficient good enough **Figure 3**. The more you get transition to 50 Ohm the better the result will be.



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Figure 1: PCB Layout MB_594D

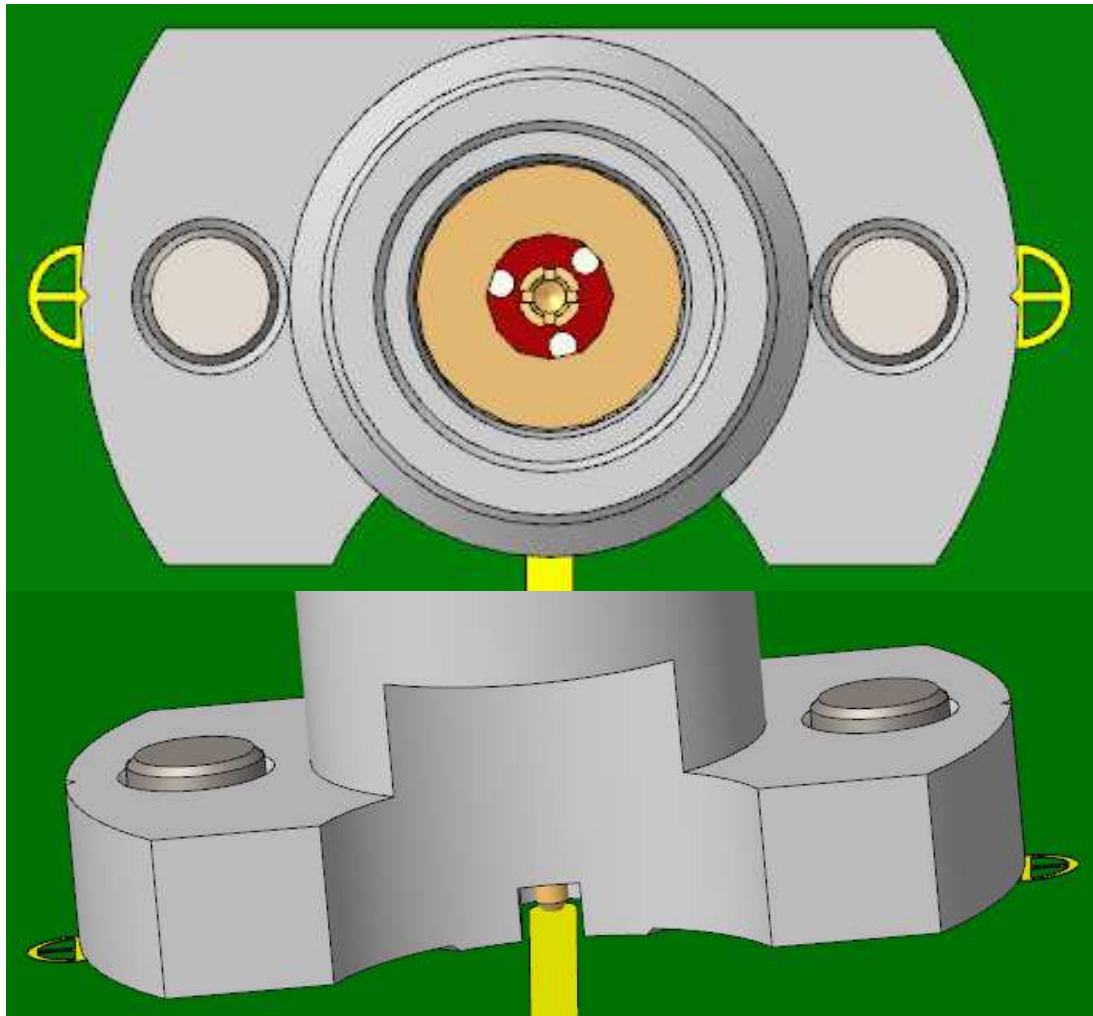


Figure 2: Positioning with markings on the footprint and the connector

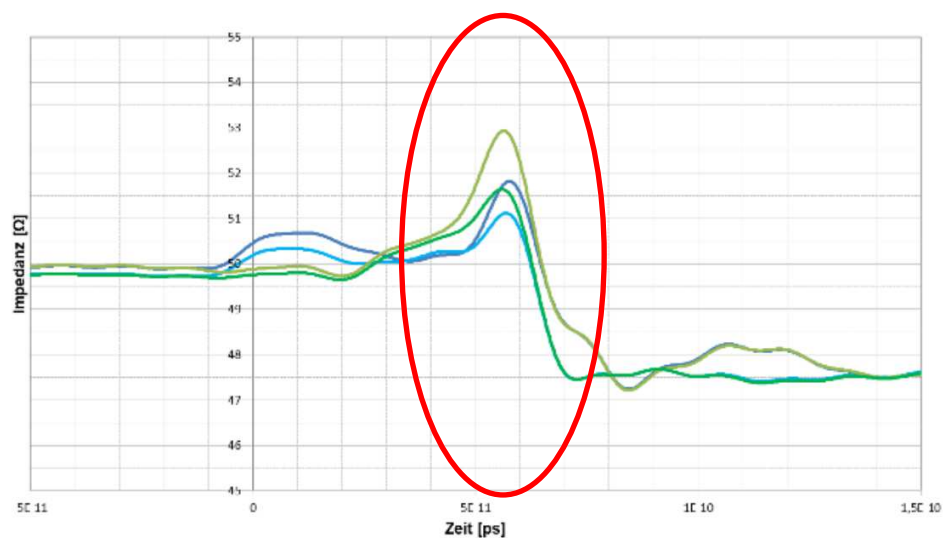


Figure 3: Time Domain Adjustment in X and Y Direction

4) Important hints for the usage

4.1) Screwing

Please use the recommended torque for the screws in the datasheet. The torque can vary depending on the PCB material you are using, so an individual adjustment to your own PCB maybe necessary if your PCB is softer than standard PCBs. Also please try to screw the screws synchronized. When you first screw on side fully on the board you might damage the pin due to a lever effect.

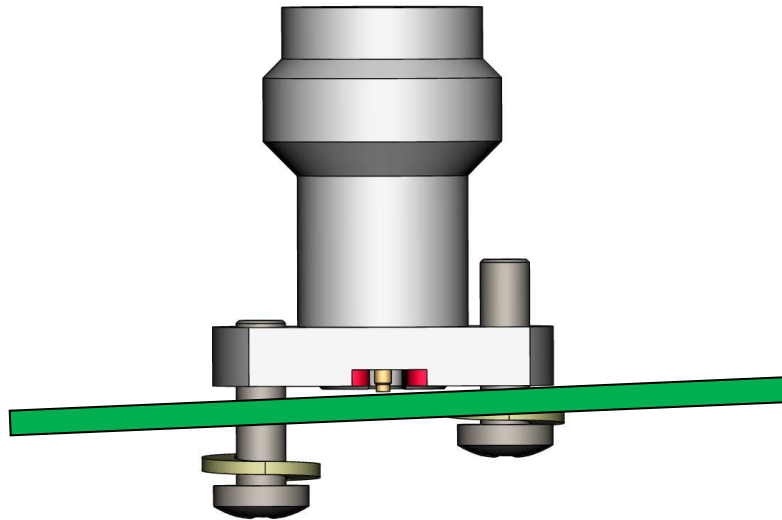


Figure 4: Screwing

4.2) Soft PCB Material

Some customers use a soft PCB Material for the connector. When the solderless pin presses on the PCB, the force of the PCB can bend the PCB or can push a via or the contact area. This can cause an electrical failure. Please use a mechanical stable stack up. For thinner PCBs please use an optional Flatwasher (see 08K723-40M/60L in the Rosenberger online catalogue)



Use the Flatwasher for better stability!



Figure 5: Soft PCB (on the left) and optional Flatwasher (on the right)

4.3) Temperature Usage

If you are using the economic solderless connector for temperature cycles, it is not recommended to use the standard articles 0XK721-40MS3 or 0XK722-40MS3 (X can be any series from RPC-3.50 to RPC-1.85). There are more temperature stable alternatives available with 0XK724-40MS3. These were tested for thermal shock up to 125°C. Please contact Rosenberger for more information.

For further questions please contact us: info@rosenberger.com

While the information has been carefully compiled to the best of our knowledge, nothing is intended as representation or warranty on our part and no statement herein shall be construed as recommendation to infringe existing patents. In the effort to improve our products, we reserve the right to make changes judged to be necessary.

For the installation of the electrotechnical equipment, particular electrotechnical expertise is required.



Draft	Date	Approved	Date	Rev.	Engineering change number	Name	Date
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