

D921 RF shielded fixture



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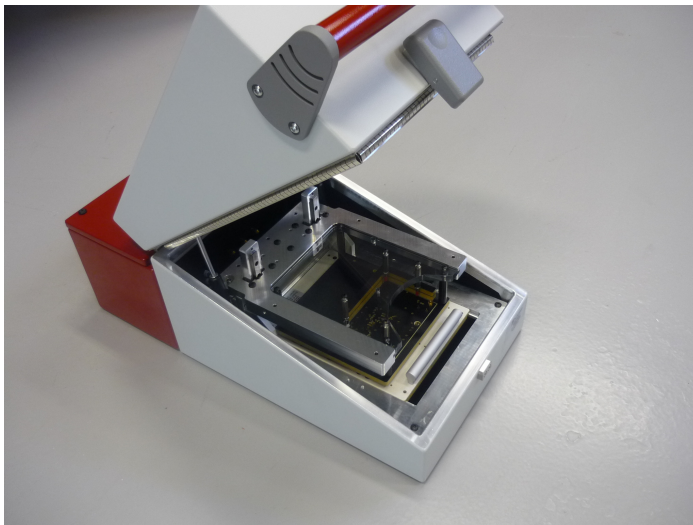
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1 What's the fastest way to get a comprehensive picture?

The D921 RF Shield meets the needs of production and repair centers in terms of isolation of the device under test from surrounding units and other RF equipment such as radio base stations. It surpasses the stringent shielding requirements for 3G mobile phone testing of 80 dB attenuation between the phone under test and other phones and base stations.

The RF absorption inside the fixture leads to low reflection within the box and therefore supports high-precision, stable RF measurement results with instruments connected to the RF Shield. For service centers and manufacturing lines, the D921 RF Shield is the optimum solution not only in terms of shielding and measurement precision but also in terms of life time, giving the fixture a unique price-performance ratio.

The D921 RF Shield is easy to use thanks to the solid rocker arm lever and gas springs that allow the operator to smoothly open and close the box, without using much force. When closed, the lid is firmly locked.



2 Highlights

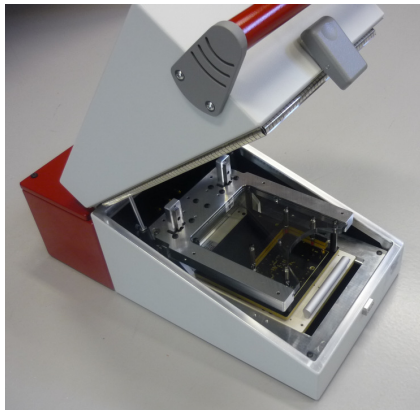
- More than 80 dB shielding
- Highly reliable and robust design, guaranteed number of open-close cycles
- Portable thanks to low size and weight
- Complementing with custom antenna coupler
- Exchange system for production purpose

3 High shielding for reliable testing

The unit under test should be isolated from its environment to prevent radiation from different sources and from affecting each other. This would result in unreliable or even wrong test results, incorrectly adjusted transmitters or failed tests although the equipment performs within specifications.

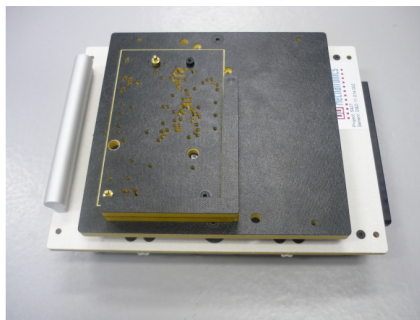
4 Exchange system

Normally every product needs its own expensive test fixture for production testing, with the exchange system in the D921 this problem is solved. Every product has its own bed of nails which is placed in the fixture. The product is pushed down on the nails with a pneumatic upper part.



5 Exchange part

On the exchange part a product can be contacted with a maximum of 20 probes. Through a zif connector, 15 signals and three coax signals can be connected with the fixture. Additional options on the exchange part are pcb detection and a pcb marker.



6 Breakout box

With the customer specific box (breakout box), on the back of the fixture, some electronic interfacing could be added. Also the pneumatic control is placed in the breakout box. Multiple different connections can be added on the box to connect the supply and measurement equipment. A connection for compressed air should always be placed on the breakout box to supply the cylinders of compressed air.

7 Signal filtering

The 15 signals which can be placed in the fixture are connected from the RF fixture to the break-out box with a 15 pins SUB-D. The SUB-D is filtered and has a capacitance of 1000pF. When order requirements are necessary it's possible to make the signal filtering customer specific.

8 Maintenance

After 50000 open-close cycles the gas springs and the finger stocks has to be replaced to preserve the optimum specifications, therefore the Shielding Service Kit has to be ordered: "*D&D service kit-1*". The mechanical guides and cylinders have to be lubricated every 6 month or after 50000 open-close cycles to preserve the durability of the mechanical parts.

9 Specification

Specifications valid within a period of one year after delivery and a maximum of 50,000 open-close cycles; initial isolation significantly exceeds the values specified.

9.1 RF Shielding

The fixture is measured according to German military standard VG 95737, "Electromagnetic Compatibility of Equipment - Part 15 Test methods for Coupling and Shielding", using a shielded RF cable with at least 100 dB isolation. Values indicated below are typical values tested with only one N-plug connection; isolation exceeds 80 dB in all the specified frequency bands:

700 to 1000 MHz Typ. 90 dB

1700 to 2000 MHz Typ. 90 dB

2000 to 2500 MHz Typ. 85 dB

5000 to 6000 MHz Typ. 80 dB

Depending on the customer specific additions the values can be decrease.

9.2 Mechanical specifications

Open-Close Cycles: >50,000 times

Dimensions (L x W x H): Inside 350 x 250 (190¹) x 160 mm

Dimensions with breakout box (L x W x H): Outside: 530 x 280 x 230 mm

Dimension breakout box inside (L x W x H): 275 x 153 x 142 mm

Dimensions usable area exchange part (L x W x H): 120 x 120 x 50mm

¹Between the gas springs and without exchange system