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EMC Shielding Tents Z23-1 set & Z23-2 set

For measurements during development

The shielding tents from Langer EMV-Technik GmbH have been specially developed for EMC measurements during development. They provide effective shielding against electromagnetic interference and enable precise measurements directly in the development environment - whether for reducing interference coupling in sensitive test set-ups or for the targeted injection of interference signals.

Z23-1 set

This shielding tent is perfect for EMC measurements on small assemblies. It offers reliable shielding attenuation of 45-50 dB (30 MHz-1 GHz) with compact dimensions of 900 × 500 × 400 mm. Ideal for quick and flexible use in everyday development work.

Z23-2 set

At 900 × 500 × 650 mm, this shielding tent offers more space for more complex set-ups. It provides the same effective shielding attenuation as the Z23-1 set, but is higher and therefore more flexible to use. Ideal for EMC tests on larger devices or multiple components.

Click here for more information:

SALES-PACK download

Application areas for Z23-1 set & Z23-2 set

» Interference emission measurements
» Protection of sensitive measurements against HF interference
» Fast ESD tests and preliminary tests
» Training and demonstration environments

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SMM Langer

Measuring of electromagnetic Shielding according to Langer method

A measuring system is presented with which flexible shielding materials consisting of conductive fiberes can be evaluated with regard to their magnetic shielding capability.

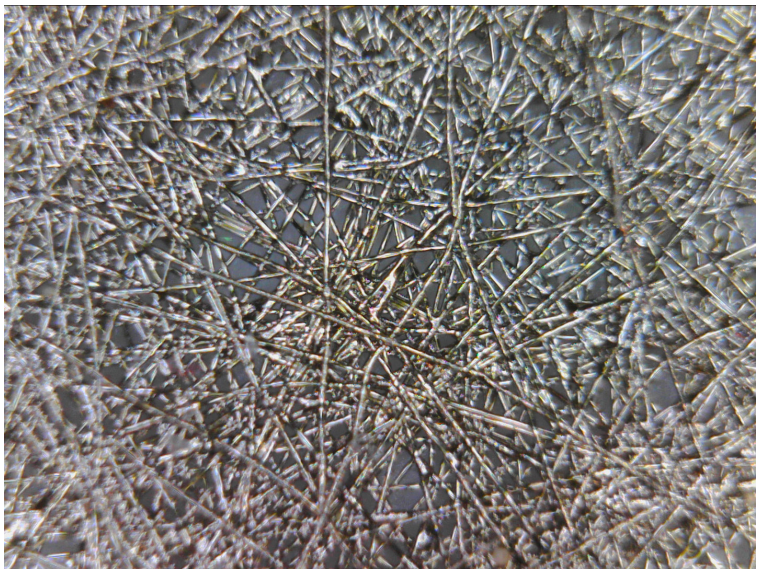

Figure 1: Flexible shielding material consisting of metallized fiberes

The aim of the measuring system is to make different shielding materials comparable in terms of their material parameters and independent of subsequent structural influences.

Measuring principle

The measuring system consists of a special measuring chamber. The shielding material is inserted into the metallically closed housing of the measuring chamber. A **50 Ohm** stripline is placed on the top and bottom of the shielding material. The lower stripline is supplied with a current $\mathbf{i}_1$. The magnetic field generated by the current $\mathbf{i}_1$ penetrates the shielding material in accordance with the shielding effect. The second stripline is located on the upper side of the shielding material. The voltage $\mathbf{u}_2$ is induced in this upper stripline by the magnetic flux $\mathbf{\Phi}_1$.

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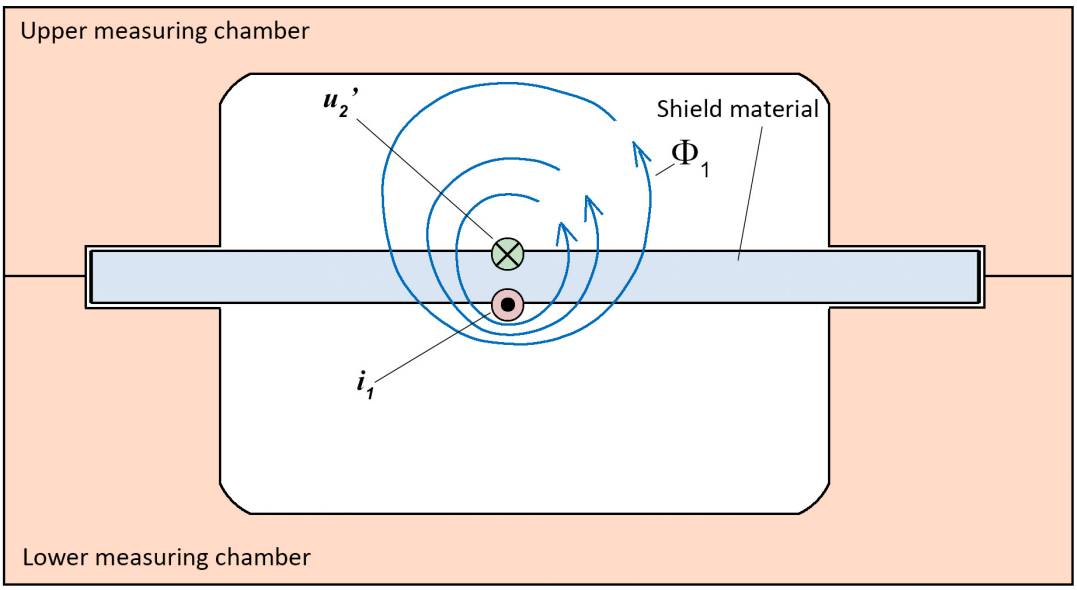

Figure 2: Measuring arrangement with strip lines and measuring chamber

The magnitude of the induced voltage $\mathbf{u_2}$ depends on how much magnetic flux $\mathbf{\Phi_1}$ is passed through the shielding material and is determined by the inductance $\mathbf{L_{12}}$.

$$L_{12} = -u_2 / \omega i_1$$

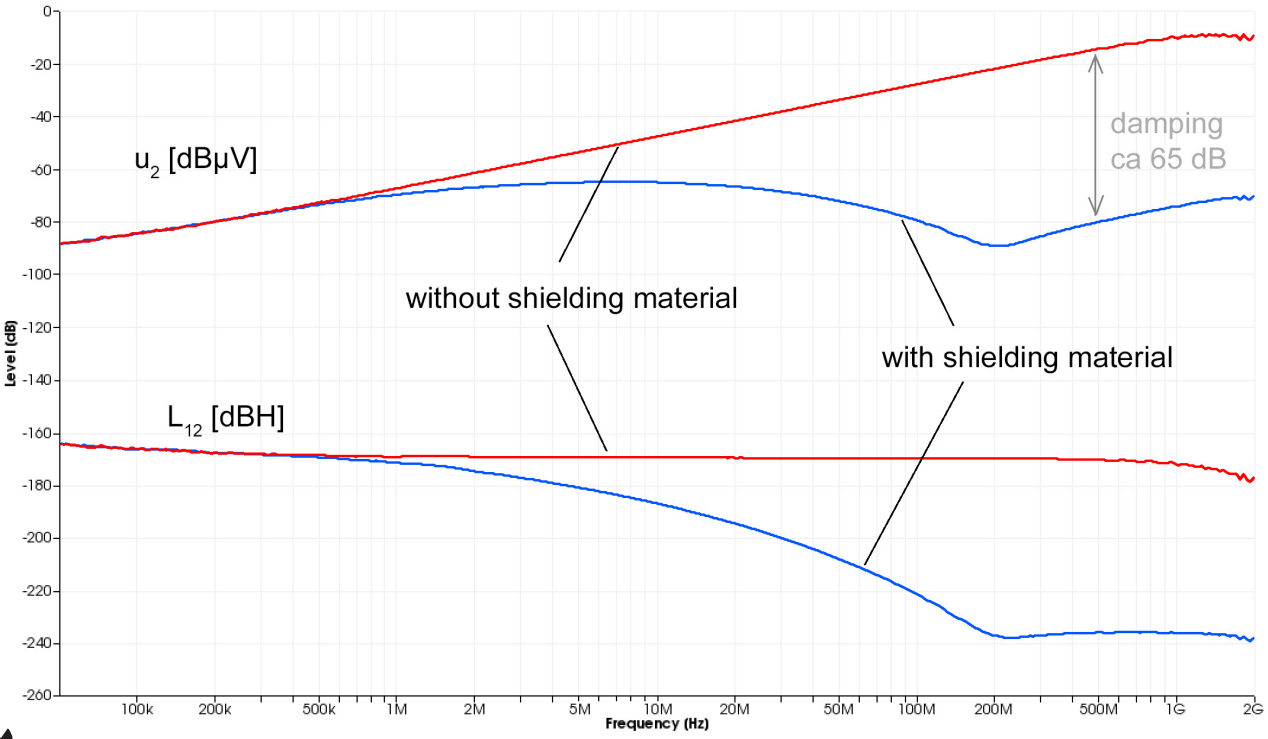

Figure 3: Inductive penetration of the shielding material

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If there is shielding material in the chamber, $\mathbf{u_2}$ and $\mathbf{L_{12}}$ change accordingly.

In the lower frequency range (< 1 MHz) , the shielding material has no attenuating effect. The voltage $\mathbf{u_2}$ induced in the stripline and the inductance $\mathbf{L_{12}}$ correspond to the empty measuring chamber.

A shielding effect is recognisable in the upper frequency range. It is shown by the greater distance (readable as a value in dB) between the curves of the measurement with shielding material and those of the measurement without shielding material.

Comparison of different screen materials

The inductive shielding penetration was measured on 6 different shielding materials.

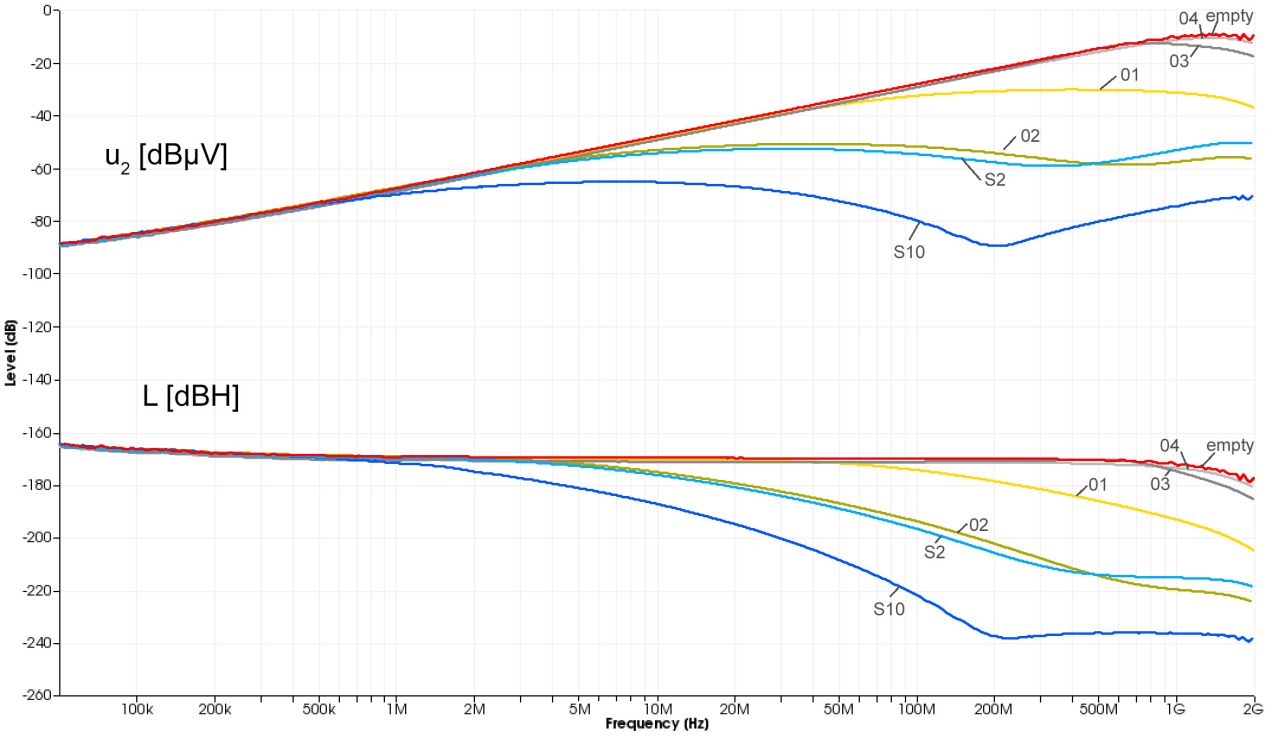

Figure 4: Magnetic shielding properties of 6 shielding materials with inductive coupling

If there is shielding material in the chamber, the shielding effect of the materials varies greatly. It fluctuates between ineffective and effective. The effect of the magnetic field shielding is primarily dependent on the design properties such as the size of the meshes, their cross-section, their conductivity and their staggering.

The user is able to select a suitable shielding material for his application.

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Embedded World 2025

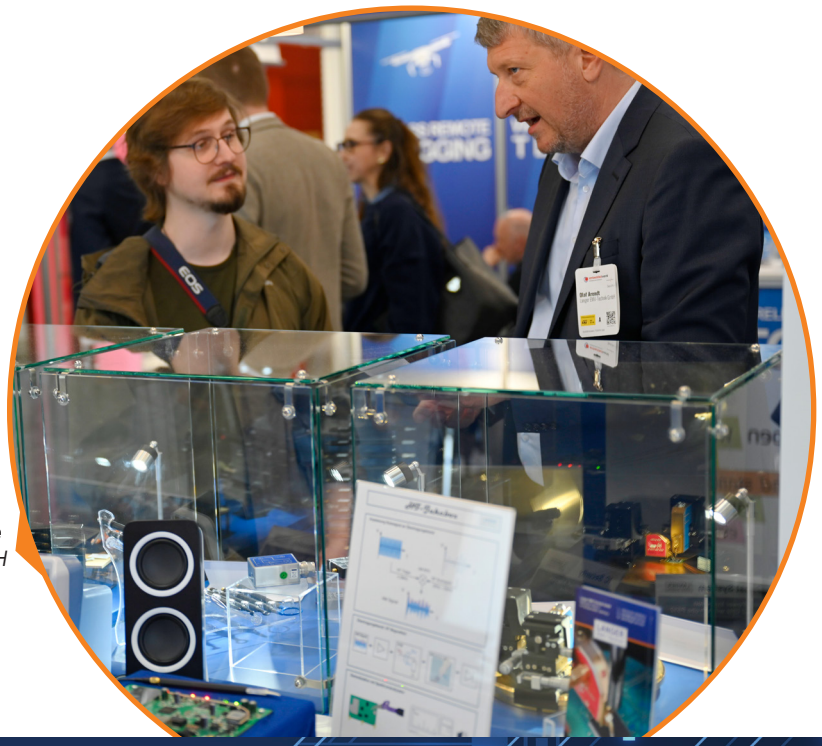
A Great Success for Langer EMV-Technik GmbH

The Langer EMV-Technik GmbH booth in Hall 4

The **Embedded World 2025** took place in Nuremberg from March **11 to 13** and once again brought together experts from around the world in embedded systems, software development, and electronic design. **Langer EMV-Technik GmbH** was present with its own booth and had the chance to engage in many exciting conversations with developers, system architects, and engineers from various countries.

Our trade fair appearance was a full success, marked by **strong contacts, meaningful talks, and great interest** in our development-focused **EMC solutions**. Many visitors came to us with specific EMC problems they wanted to solve early in their design process.

You can find our trade fair video and some impressions of our booth here: [Exhibition stand Langer EMV-Technik] (please scroll to "ew2025").



The jukebox is a great demonstration tool for the near-field probes from Langer EMV-Technik GmbH

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Focus on Our Motto: “First time right”

Our trade fair presence was centered around our guiding principle **„First time right“**, embodied in our three core product pillars.

1. EMC Training Seminars

In our hands-on seminars, we offer in-depth EMC knowledge and strengthen our customers' practical emc skills.

- Topics: Emission and immunity
- Languages: German and English
- Goal: Develop effective EMC solutions independently

2. EMC Consulting and Measurement Services

We offer fast and practical help for complex EMC challenges, often within 1 to 2 days.

- Identify and solve EMC issues quickly
- Cost-efficient improvement measures
- Evaluate connectors, PCBs, ICs, and shielding materials with targeted EMC tests

3. Development Tools for EMC Testing

Our tools make it possible to analyze EMC performance during development, which is a key step for ensuring compliance from the very beginning.

Technical Talk and Practical Tools

A real highlight was our talk at the Exhibitor Forum:

“Tools for development-related precompliance troubleshooting”

We demonstrated how modern EMC tools like the **E1 set** (immunity testing) and **ESA1 set** (emission optimization) help solve common EMC challenges. These are supported by practical improvements to **housings, interfaces, and layouts**.

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Interactive Booth and University Collaboration

Our booth setup was very interactive. Key highlights included:

- **Jukebox demo** Visitors could directly compare our high-quality near-field probes
- **Scholarship program** Exchange with universities about using our systems in education and research

Spotlight on IC Security and IC EMC

A big focus was on our **new product lines for IC Security and IC EMC**. We had many valuable talks with international visitors and gathered great input for further development in this area.

Media Coverage and Upcoming Workshop

We were also pleased to meet with editors from **Elektronikpraxis (Vogel Verlag), Elektor,** and **WEKA Fachverlag**.

A special highlight is our participation in the upcoming **Power of Electronics** workshop from **October 29 to 30, 2025,** in Würzburg.

Workshop on October 30, 2025 – Langer EMV-Technik GmbH

Topic: Coupling mechanisms at PCB level, detecting weaknesses with near-field probes, and layout optimization.

More information and registration:
power-of-electronics.de

Conclusion

Embedded World 2025 was a great success for us. The high number of international visitors – from **Germany, the UK, the US, the Netherlands, Italy, Spain, France, and Switzerland** – shows the strong global interest in our solutions.

Thank you to everyone who visited us.

We are looking forward to continuing our collaboration.

Whether in experimental seminars or in consulting - EMC communication is our central focus

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EMV2025 Stuttgart

Trade Fair for Electromagnetic Compatibility

This year, Langer EMV-Technik GmbH once again had its own booth at the EMV in Stuttgart – the leading trade fair for electromagnetic compatibility. The event is a meeting point for EMC experts, test engineers, developers, and measurement technology managers. For us, the fair was a great success – marked by numerous technical discussions, new contacts, and concrete project inquiries.

We had **over 200 qualified conversations**, especially about our development-supporting **EMC tools** and **EMC experimental seminars**, confirming the high demand for information in the industry.

Our EMC experimental seminars, which help transfer knowledge for cost-optimized development in the EMC field and are useful during the development phase, were particularly popular. Our practical tools for measuring and optimizing interference emission and immunity also attracted great interest. Additionally, individual EMC consulting was highly sought after.

Langer EMV-Technik GmbH - 25 Years of LEMV at Mesago EMV Fair

Product Highlight: Measurement Method for Shielding Material Evaluation

At the service forum, we presented our new method for determining the material parameters R, L, and C for shielding materials – a technically sound basis for evaluating shield penetration. This method allows users to physically compare shielding effects and select suitable materials for their application.

Here you can find our trade fair video and some impressions:

- Video Review on YouTube
- EMV 2025 Booth – Impressions (Please scroll to EMV 2025)

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New Sales Approach: Scanner Demonstrations Directly at the Customer's Site

Lively discussions and many contacts at the Langer EMV-Technik GmbH booth

Right after the fair, we optimized the use of our scanner portfolio (FLS/ICS), this saves time and increases the decision-making basis.

Sales & Partnerships – Internationally Connected

EMV 2025 provided the opportunity to exchange ideas with numerous international partners. Among others, we met our distributors from France (EMC Partner), Poland (Dacpol), Romania (RomTek), India (TEKiKNOW), China (CDIL), Japan (Techno Science), Spain (Datatec), and the United Kingdom (Mach One Design / Dr. Min Zhang). Together, we discussed planned trade fair participations and strategies for technical customer support.

Cooperation with Universities & Education

Another highlight was the strong interest from universities in our tools and seminars. The interactive booth with the probe demo module and the jukebox for near-field probes was very popular with educators and students. Particularly in demand: our scholarship program for EMC experimental seminars to train the next generation of EMC specialists.

Thank you to all visitors, conversation partners, and partners for the great interest.

We look forward to continuing the discussions – preferably in person at an upcoming event.

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