

Prof. Dipl.-Ing. Peter Pauli
University of the Federal Armed Forces
Institute for Microwaves and Radar technology

Werner-Heisenberg-Weg 39
85577 Neubiberg
Tel .: (089) 6004 3690

Expert opinions

from 23.01.2019

Customer: **BIODOMUS ABSCHIRMTECHNIK**
Shielding Technology e.U .

Bahnstrasse 14
A-2222 Bad Pirawarth / Vienna

Measurement object: "**Sleep-SAFE**" Shielding fabric
with 52% cotton, 48% polysilver

Assignment:

1. Determination of the shielding effectiveness against electromagnetic waves in the frequency range from 30 MHz to 4 GHz, with E-field strengths in all directions
2. Determination of the shielding effectiveness with linear vertical and horizontal polarization from 0.9 to 1.8 GHz

Testing basis: IEEE 299-1997, ASTM D-4953-89

Date of measurements: January 23, 2019

Scope: 4 pages of text and 3 measuring curves in the 3 attachments (7 pages)

Result: (Short version 1 page)

During the measurement made between the coaxial TEM adapters, the fabric was irradiated with E-field strengths in all polarization directions (360° measurement) and provided the values of 14dB-17dB shown in Appendix 1 for the mobile radio frequencies of interest. At 17dB, 98% of the power is shielded, and in this case, only 2% of the power is detectable behind the fabric. The measurement with linear vertical and horizontal polarization gave even better values between 17dB and 23 dB. At 20 dB, 99% of the incident power is shielded and only 1% left. If this fabric is used for the production of home textiles (eg as duvet covers), the measured shielding effectiveness of about 20 dB promises a remarkable protection of the affected persons from mobile phone radiation!

Neubiberg, 23.01.19

Prof. DI P. Pauli eh