

3.2 Shielded microstrip transmission lines

Quiz

Answer these questions to get feedback on how well you understand the course. Only one of the answers is correct. You don't have to answer every question. If you don't know the answer you can just leave it blank (default option: "I won't answer this question") and this won't affect your score. Answering **correctly** will **add 2 points** to your score but on the other hand you'll **lose 1 point** if your answer is **wrong**. The questions are divided in groups of five questions.

Press **See result** after you have finished answering.

Displaying questions 1..5 of 5:

Question 1

In the shielded microstrip transmission line, hybrid modes can propagate. Those modes ...

Possible answers for question 1:

- ... are created by the mutual coupling of transversal electric and magnetic modes.
- ... are a special form of the transversally electromagnetic wave (the structure looks like a coaxial transmission line).
- ... are created by the mutual coupling of longitudinal section electric and magnetic modes.
- I won't answer this question

Question 2

When analyzing microstrip transmission lines ...

Possible answers for question 2:

- ... non-simplified Maxwell equations have to be considered.
- Maxwell equations are not needed – computing current on the microstrip is satisfactory.
- Maxwell equations can be simplified – longitudinal components have to be considered only.
- I won't answer this question

Question 3

Analyzing microstrip transmission lines by finite elements ...

Possible answers for question 3:

- ... there is no difference compared to the analysis of the hollow waveguide.
- ... transversal field components have to be approximated by edge elements to preserve field continuity at boundaries of dielectrics.
- ... longitudinal field components have to be approximated by edge elements to preserve field continuity at boundaries of dielectrics.
- I won't answer this question

Question 4

Speaking about finite elements spatial distribution of field components can be approximated by the linear combination of ...

Possible answers for question 4:

- ... known basis functions and unknown coefficients.
- ... known basis functions and unknown time expansions.
- ... eigenvalues and eigenvectors.
- I won't answer this question

Question 5

The critical frequency of the dominant mode of a shielded planar transmission line ...

Possible answers for question 5:

- ... is zero, the mode IS EXACTLY the transversally electromagnetic wave.
- ... is higher compared to the hollow waveguide of the same dimension.
- ... is zero, the mode LOOKS LIKE the transversally electromagnetic wave.
- I won't answer this question

see result