EDIS⭘N

Electromagnetic Design of
flexIble SensOrs

FNP **Team-Tech**

Report 2. Parametrized Macromodels.

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1   Introduction

- Analysed structure: waveguide filter with 4 dielectric pucks with parametrized electric permittivity (ϵ) (fig.1).

- Variability of the permittivity: $\epsilon \in \{28, 29, 30, 31, 32\}$. Reference characteristics (obtained by means of the Finite Element Method) are shown in Fig.2.

- 6 Macromodels (projection basis $V_{1\ldots6}$) generated **only** for $\epsilon = 30$.

- **The same** projection basis ($V_{1\ldots6}$) used to analyse structures with $\epsilon \in \{28, 29, 31, 32\}$. Errors are shown in Figs.3-7.
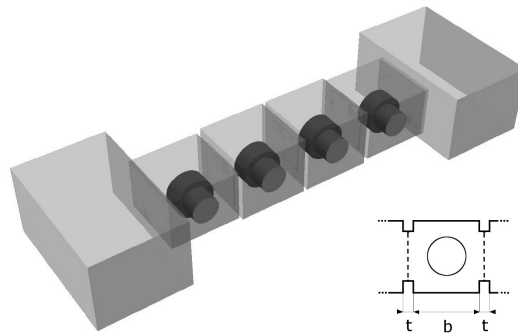
References

Figure 1: Analysed structure: waveguide filter with 4 dielectric pucks.
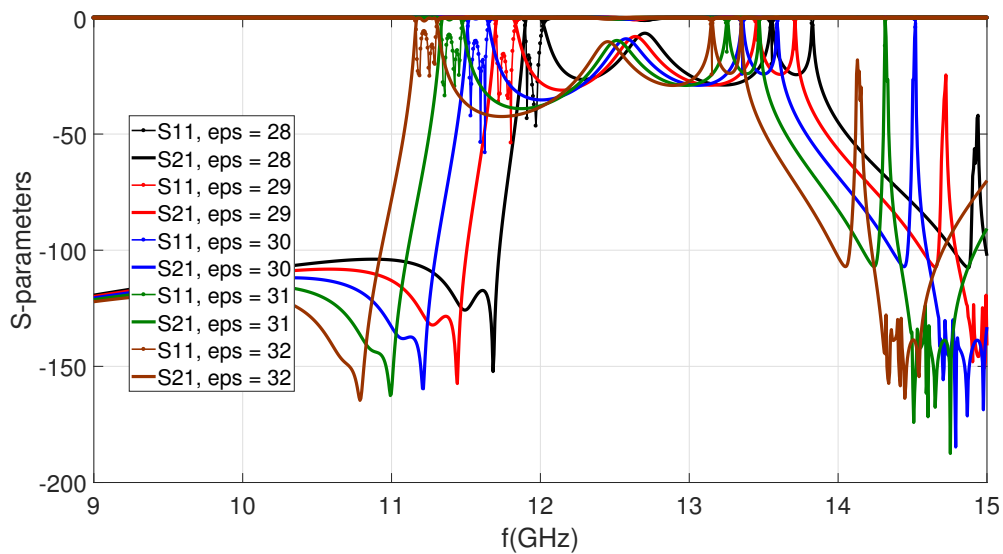

Figure 2: Reference characteristics (obtained by means of the FEM). $\epsilon \in \{28, 29, 30, 31, 32\}$
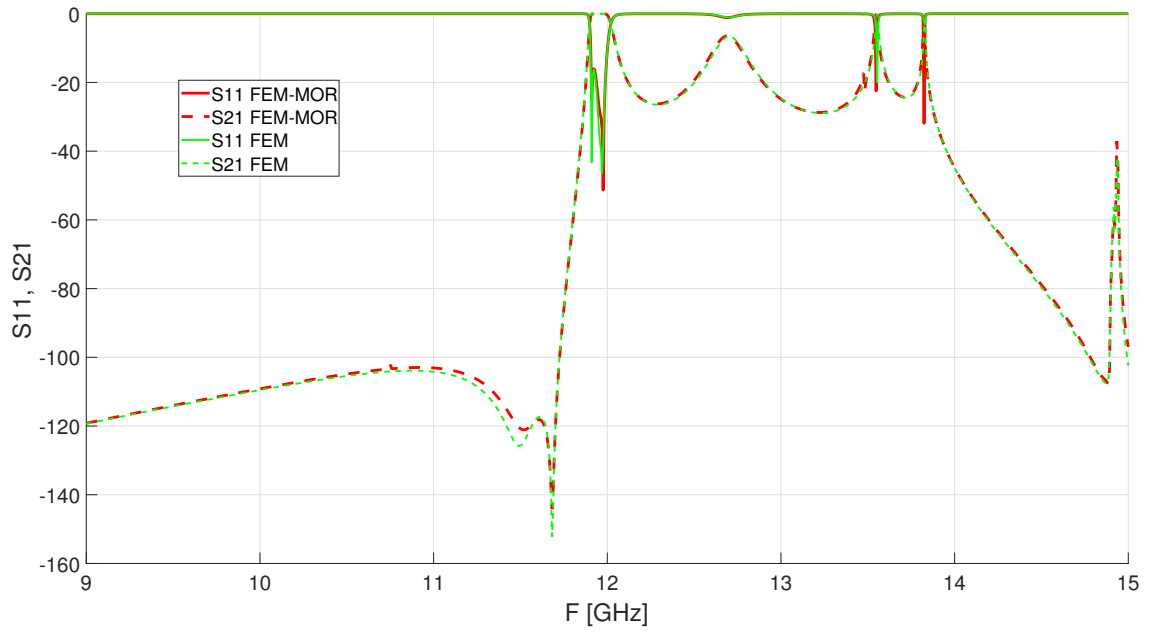
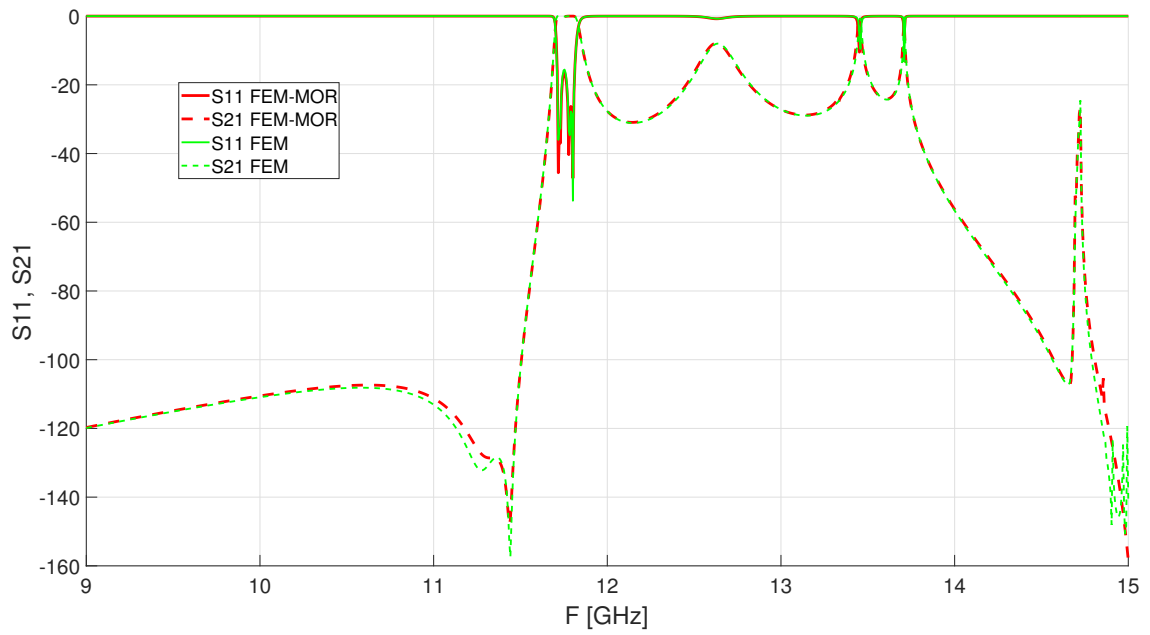Figure 3: Error plots for $\epsilon = 28$

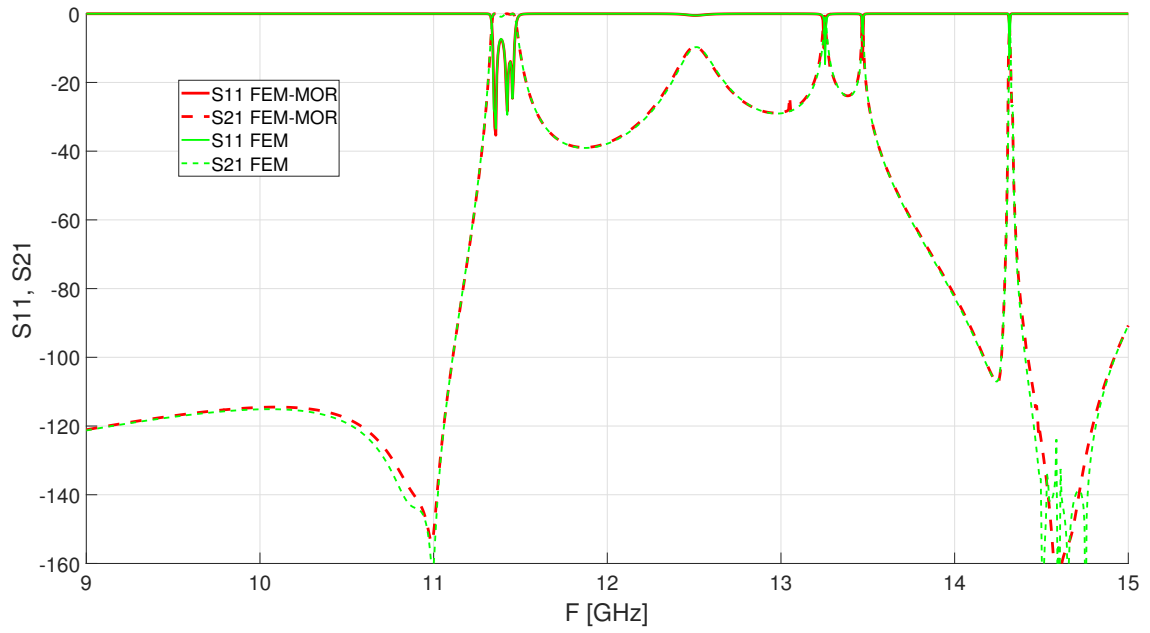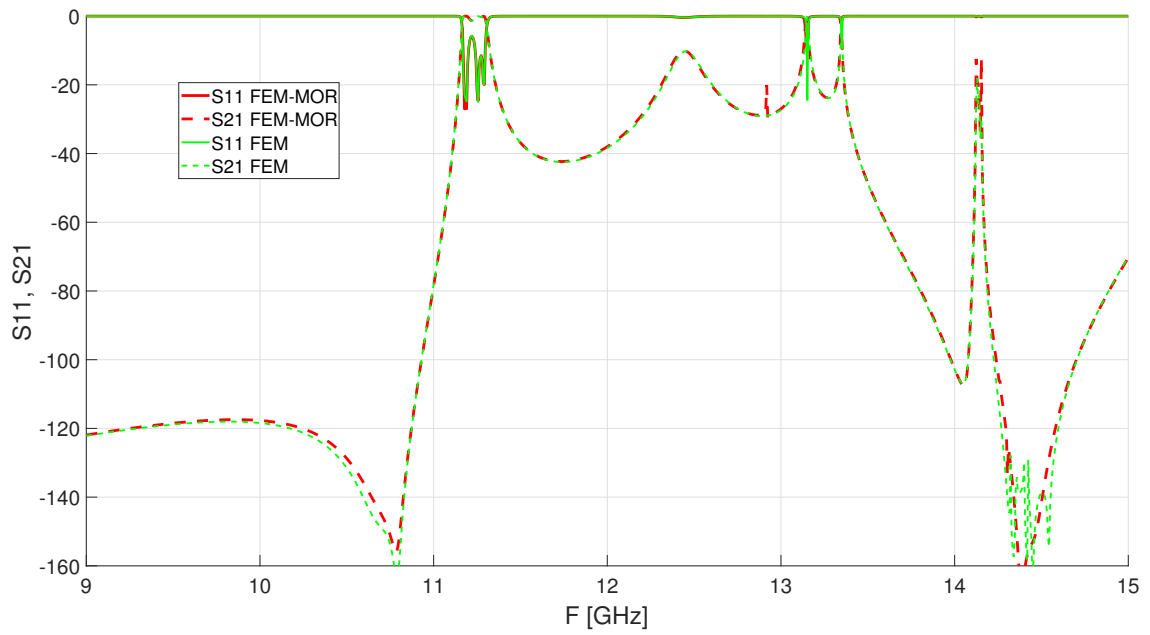Figure 4: Error plots for $\epsilon = 29$

Figure 5: Error plots for $\epsilon = 31$

Figure 6: Error plots for $\epsilon = 32$