

Third Harmonic Cavity Simulations for PETRA IV



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3HC in Time Domain

- String of 10 Resonators
- Energy Deposition per Resonator

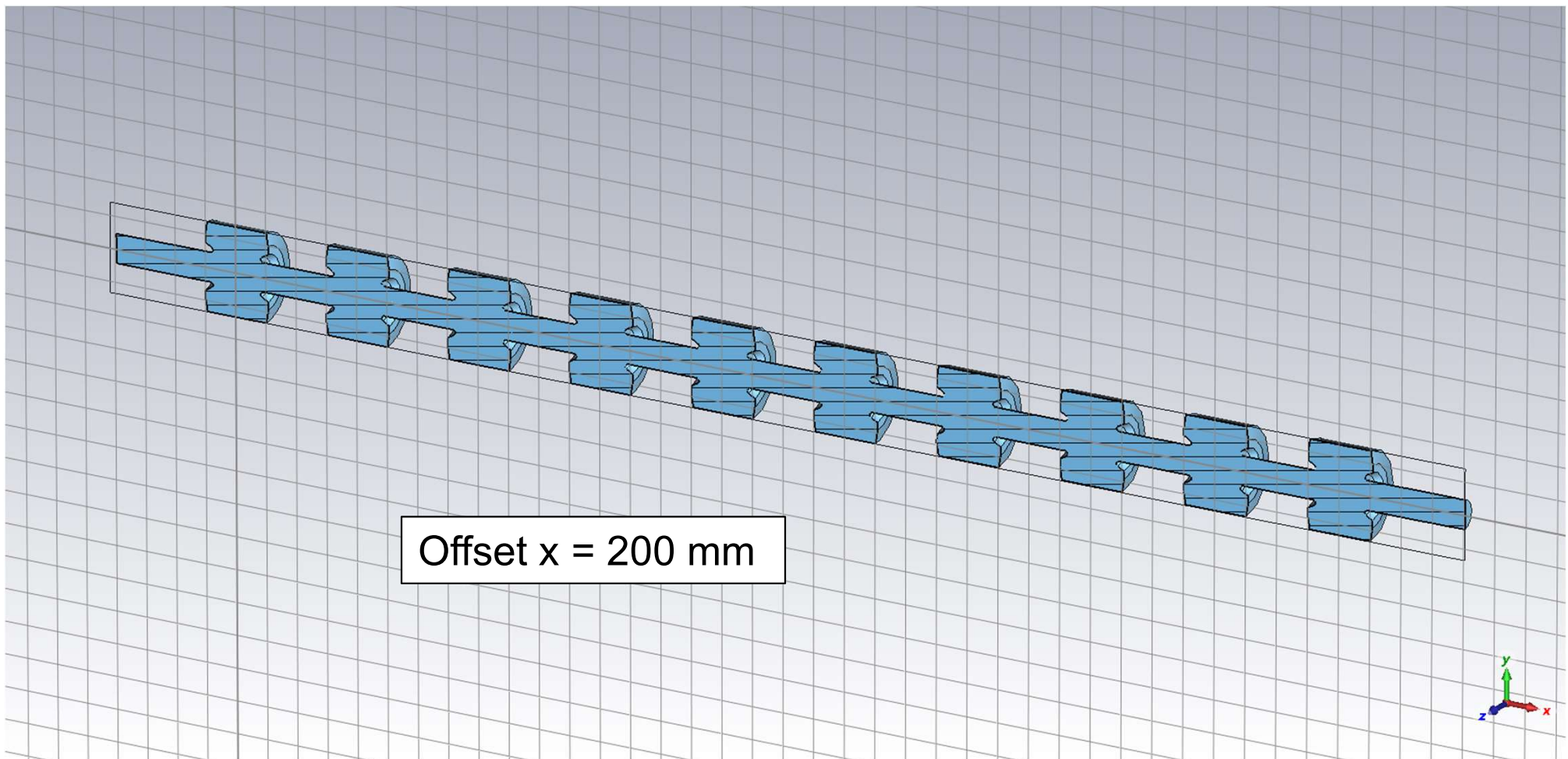
HOM Damper Signals

- Damper Wave Guide to Coax Transition
- S-Parameter (Transmission vs. Frequency)

String of 10 Resonators (3HC)



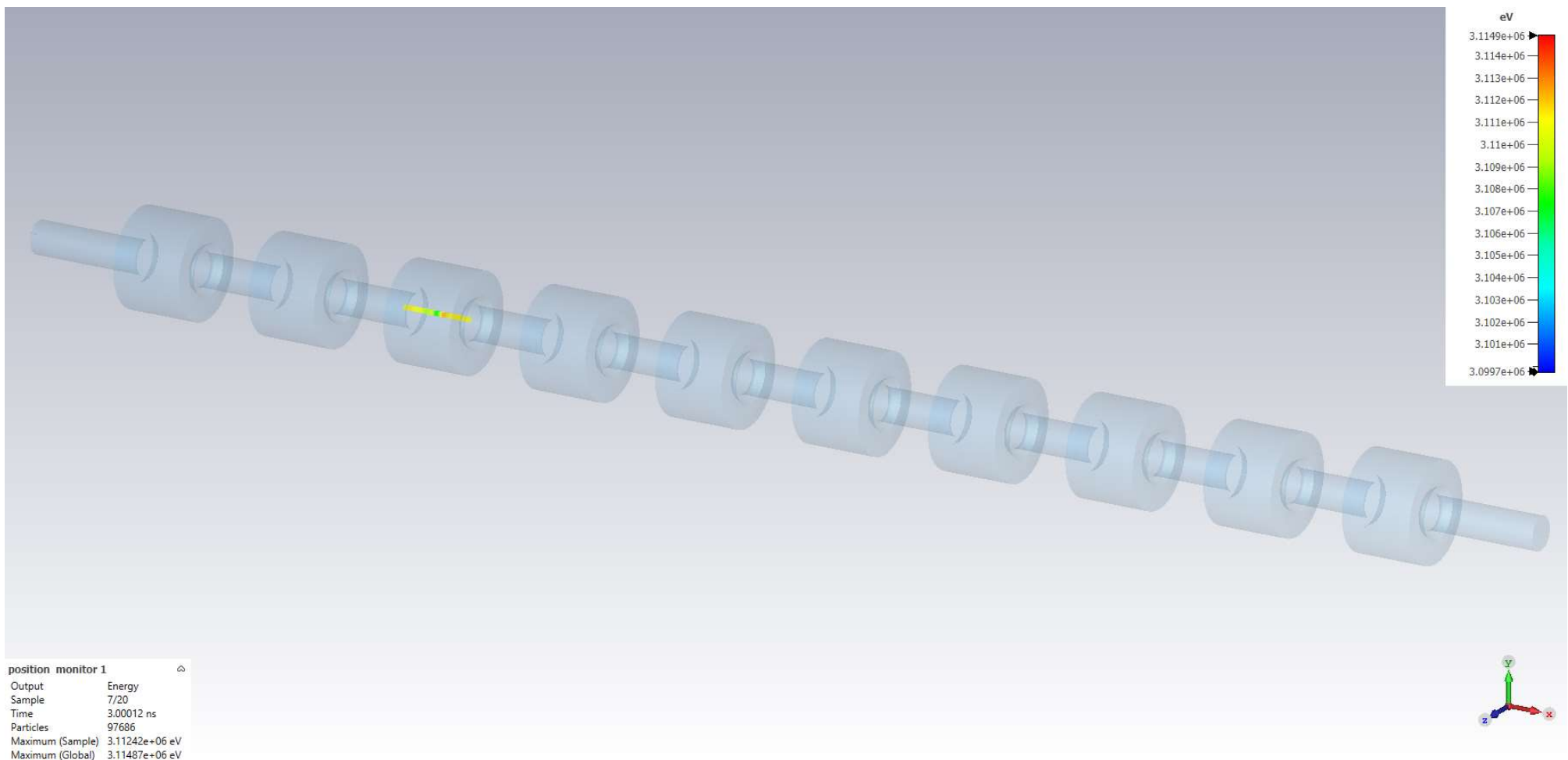
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Excitation by Single Bunch



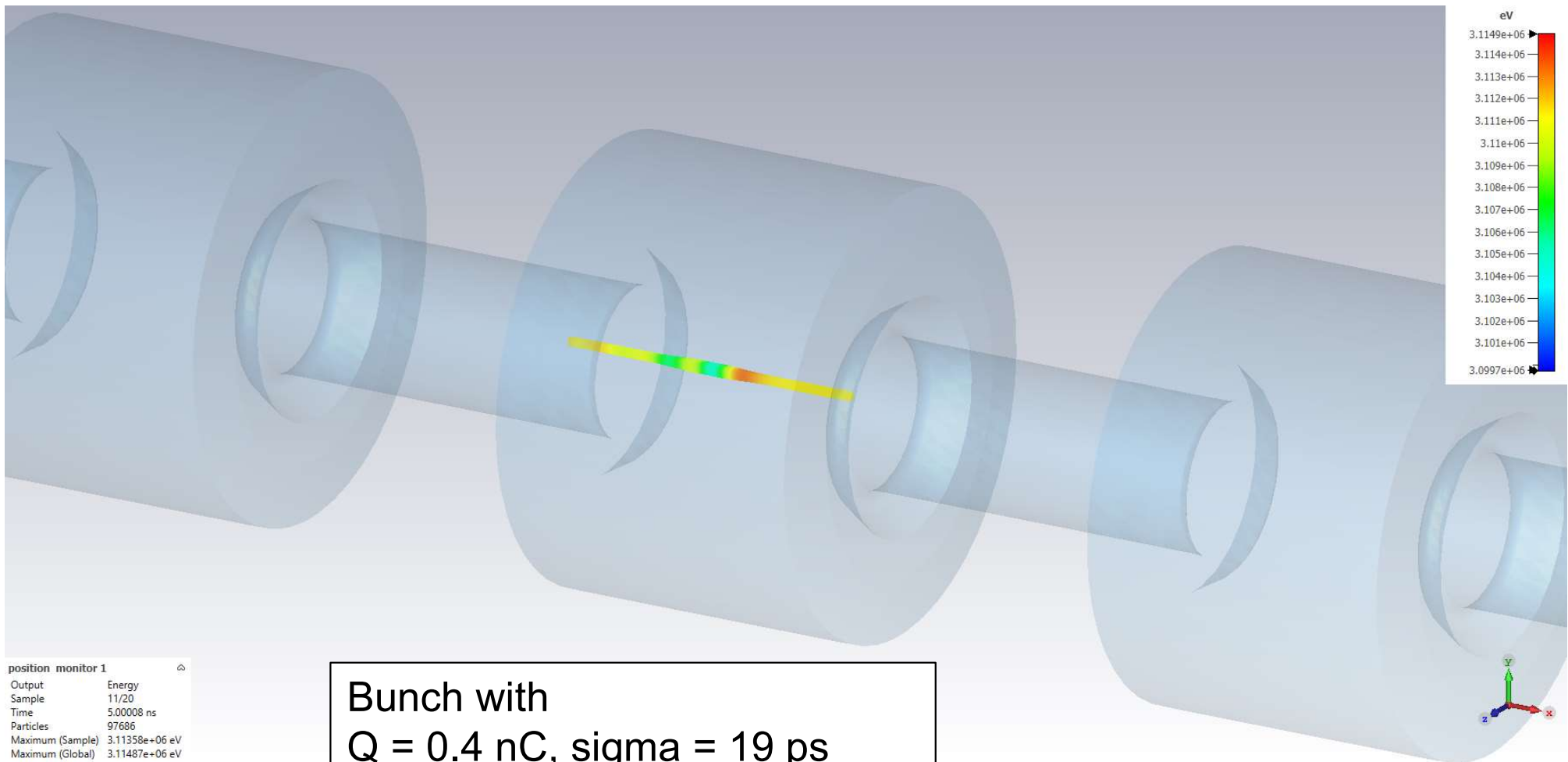
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Bunch Parameters



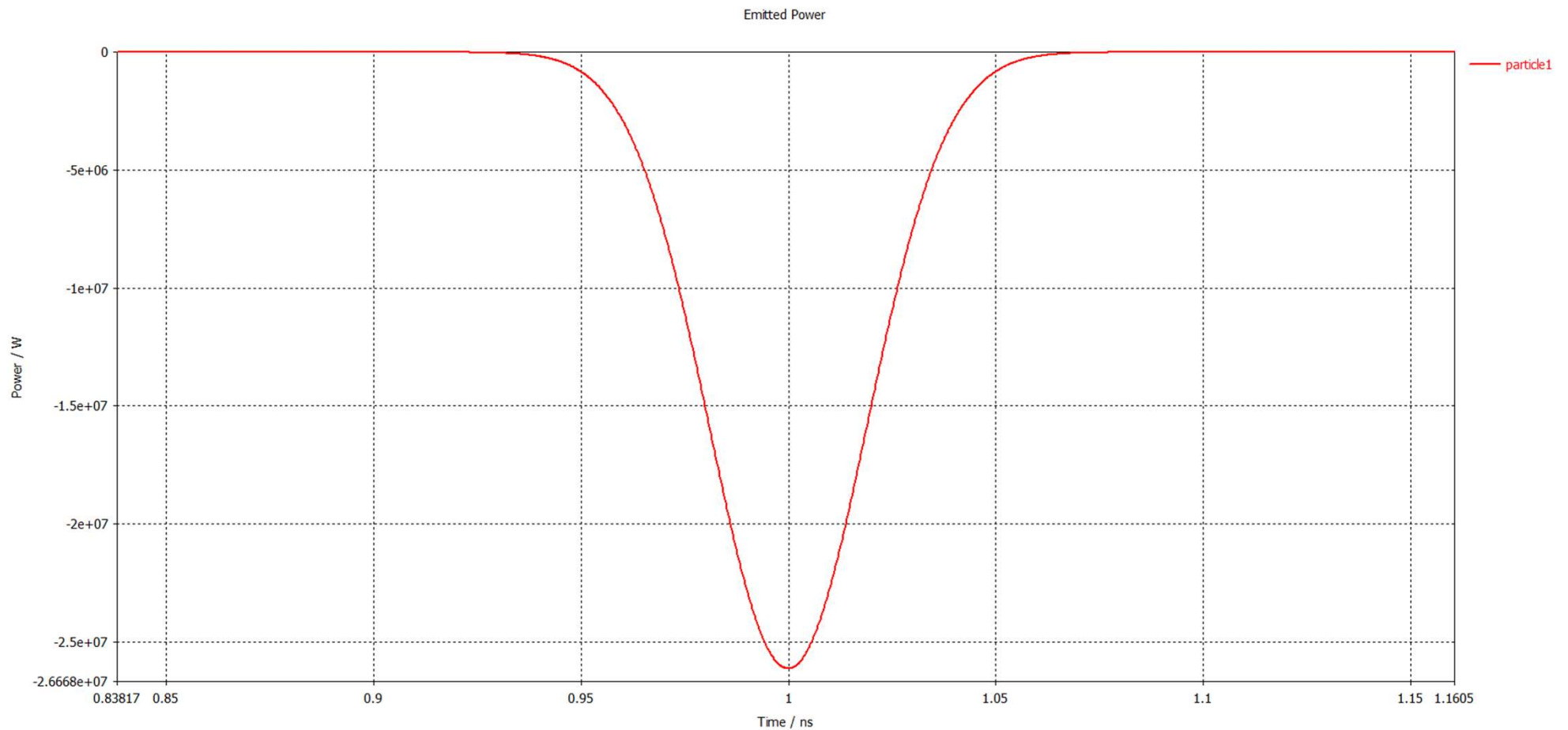
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Bunch Distribution



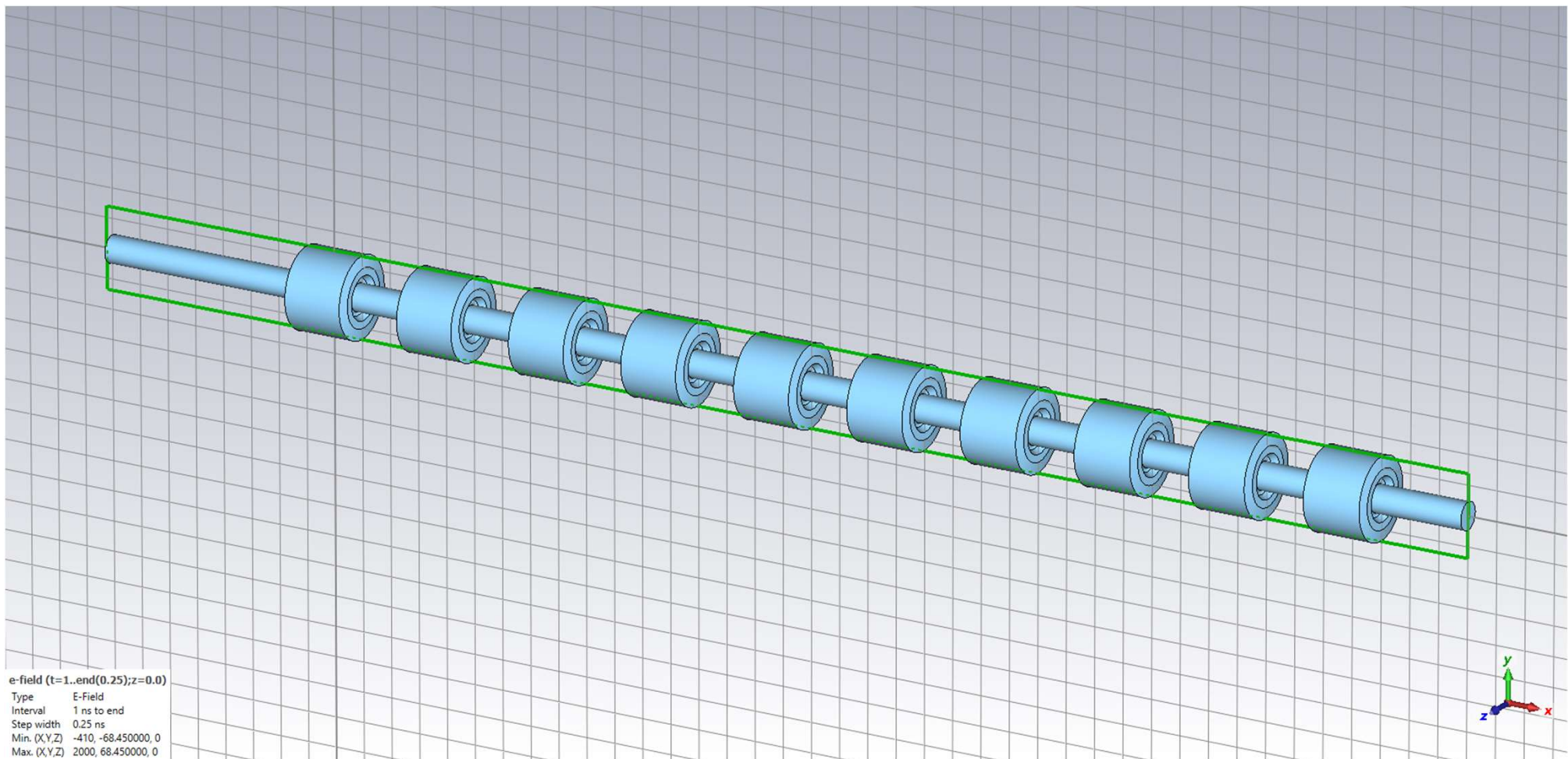
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E Field Monitor



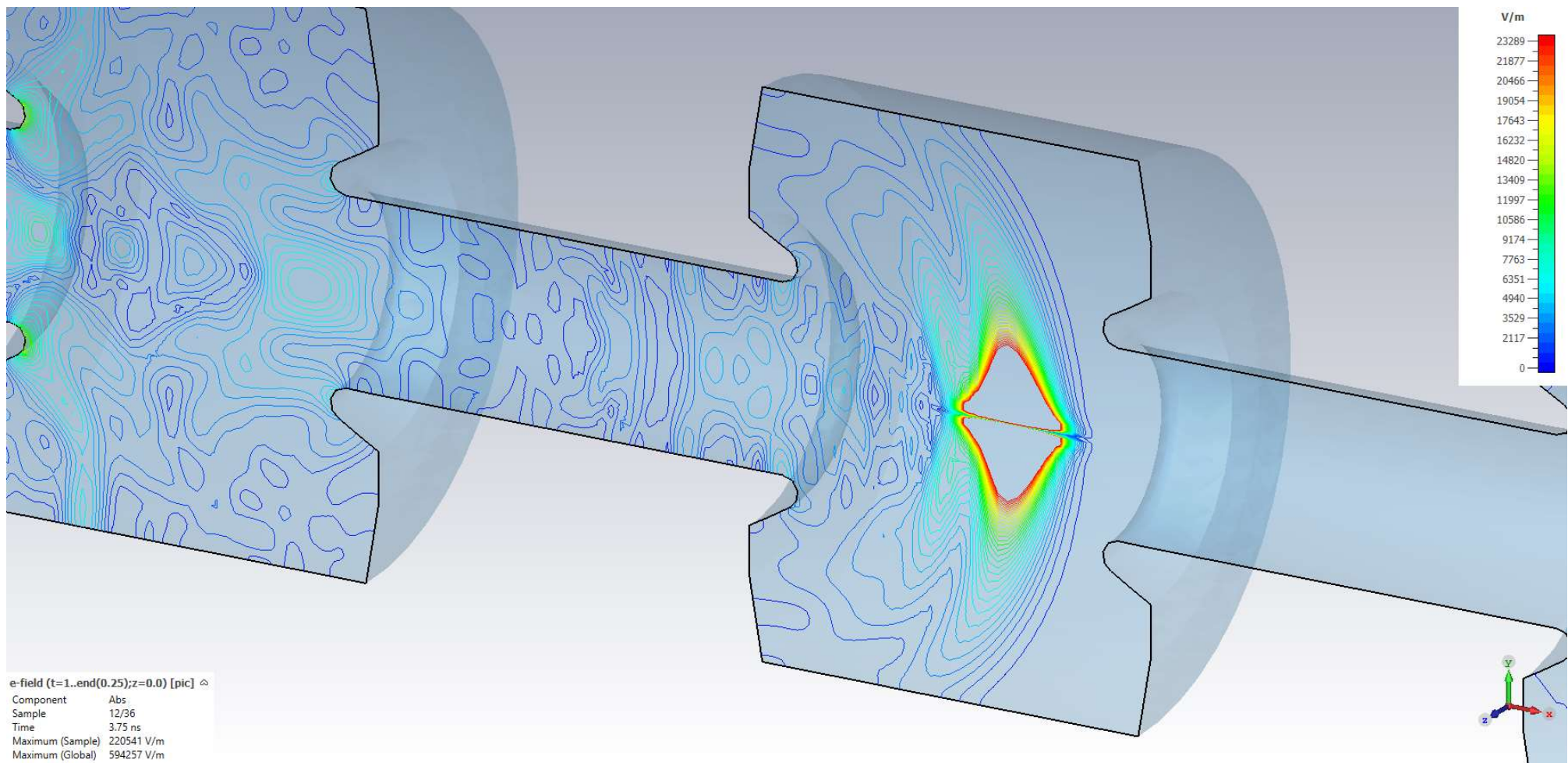
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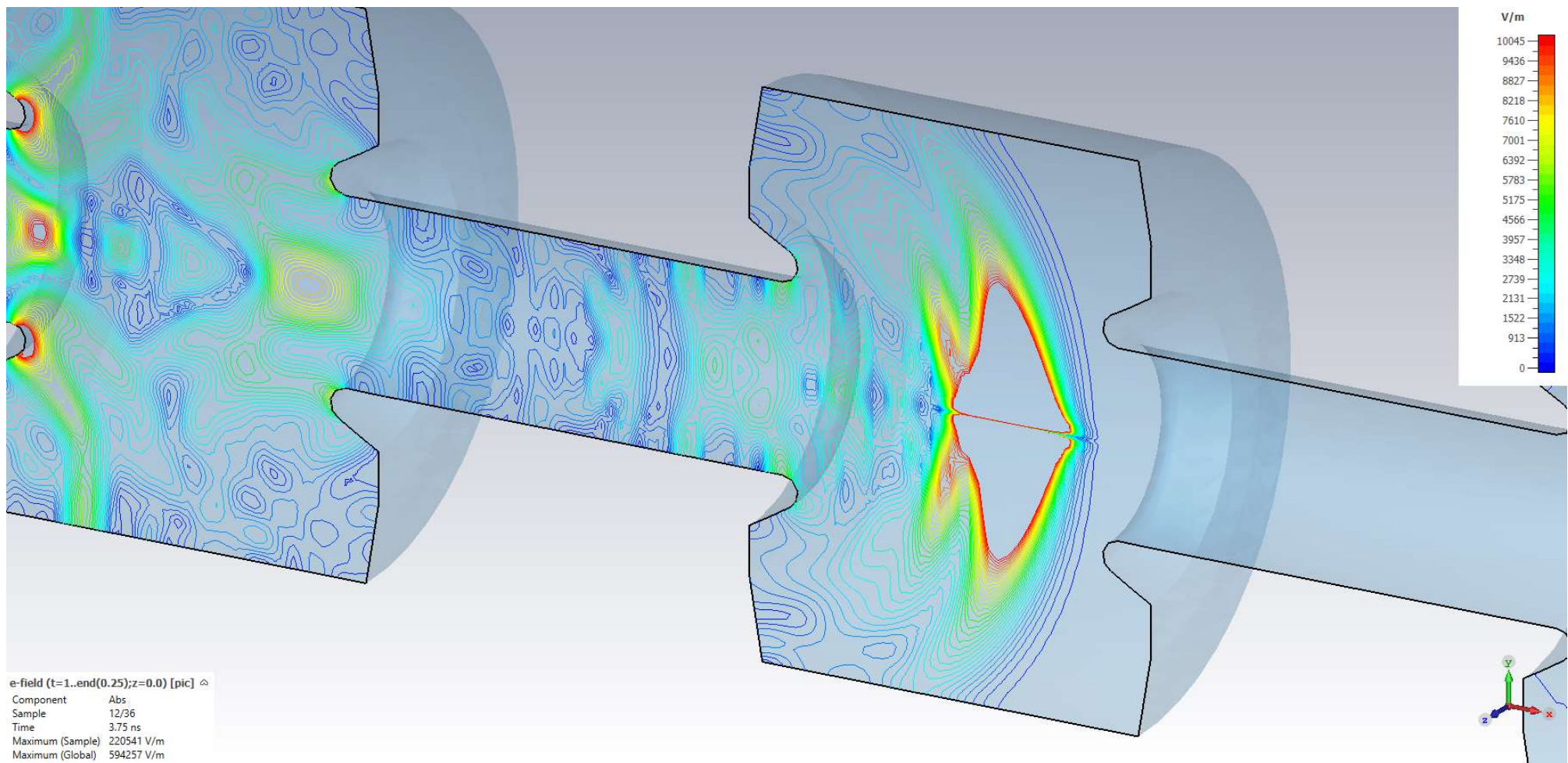
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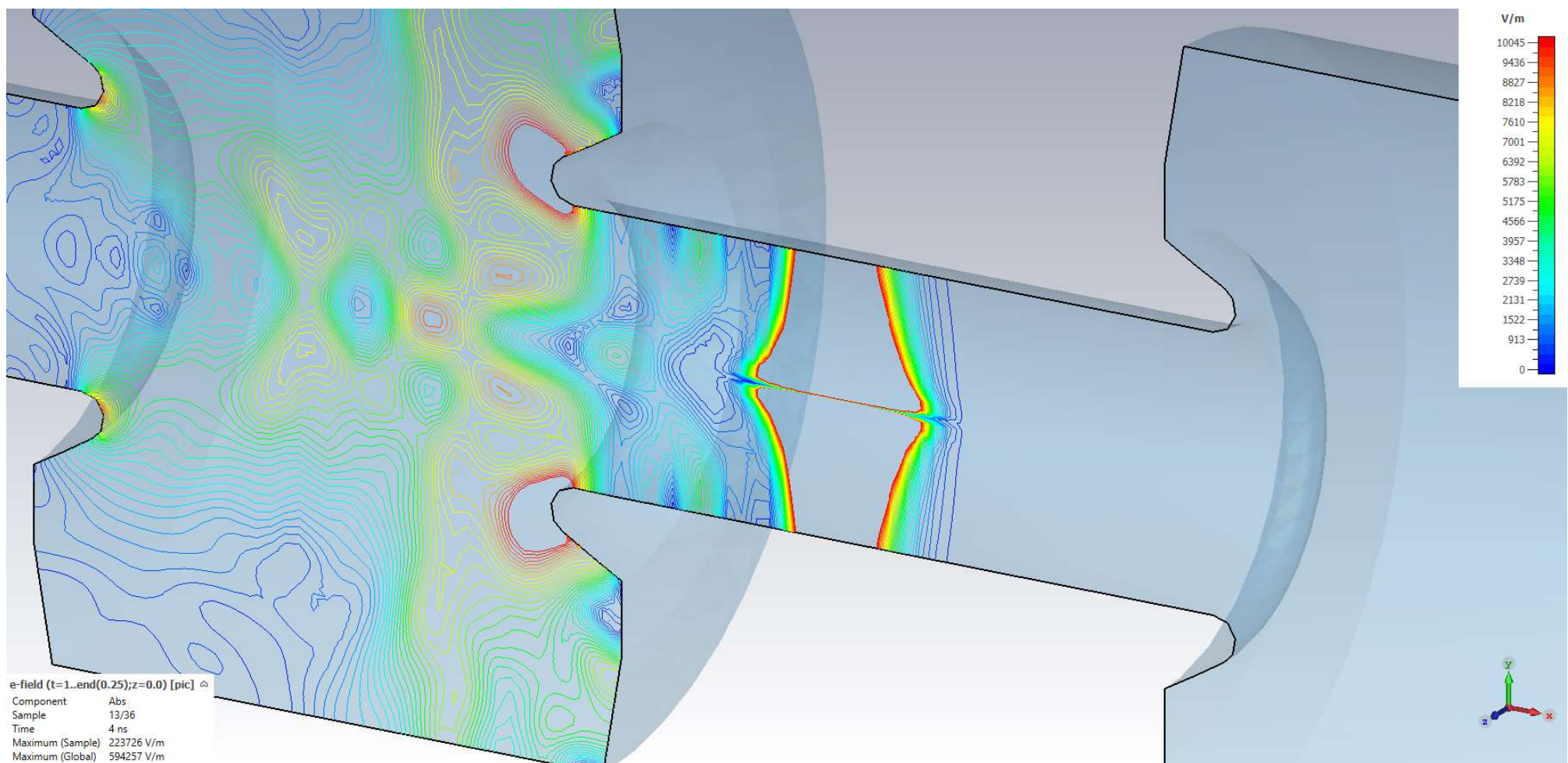
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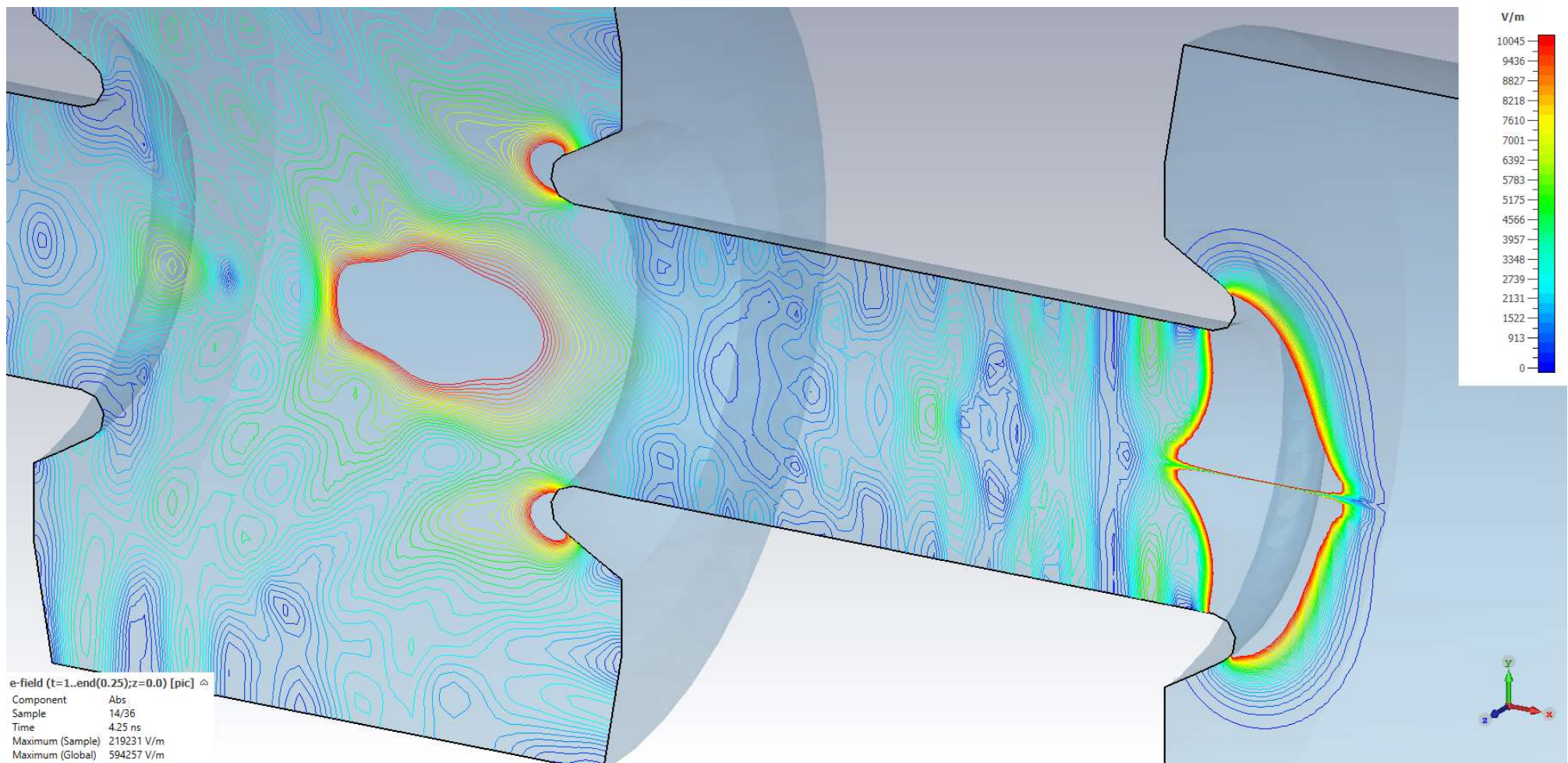
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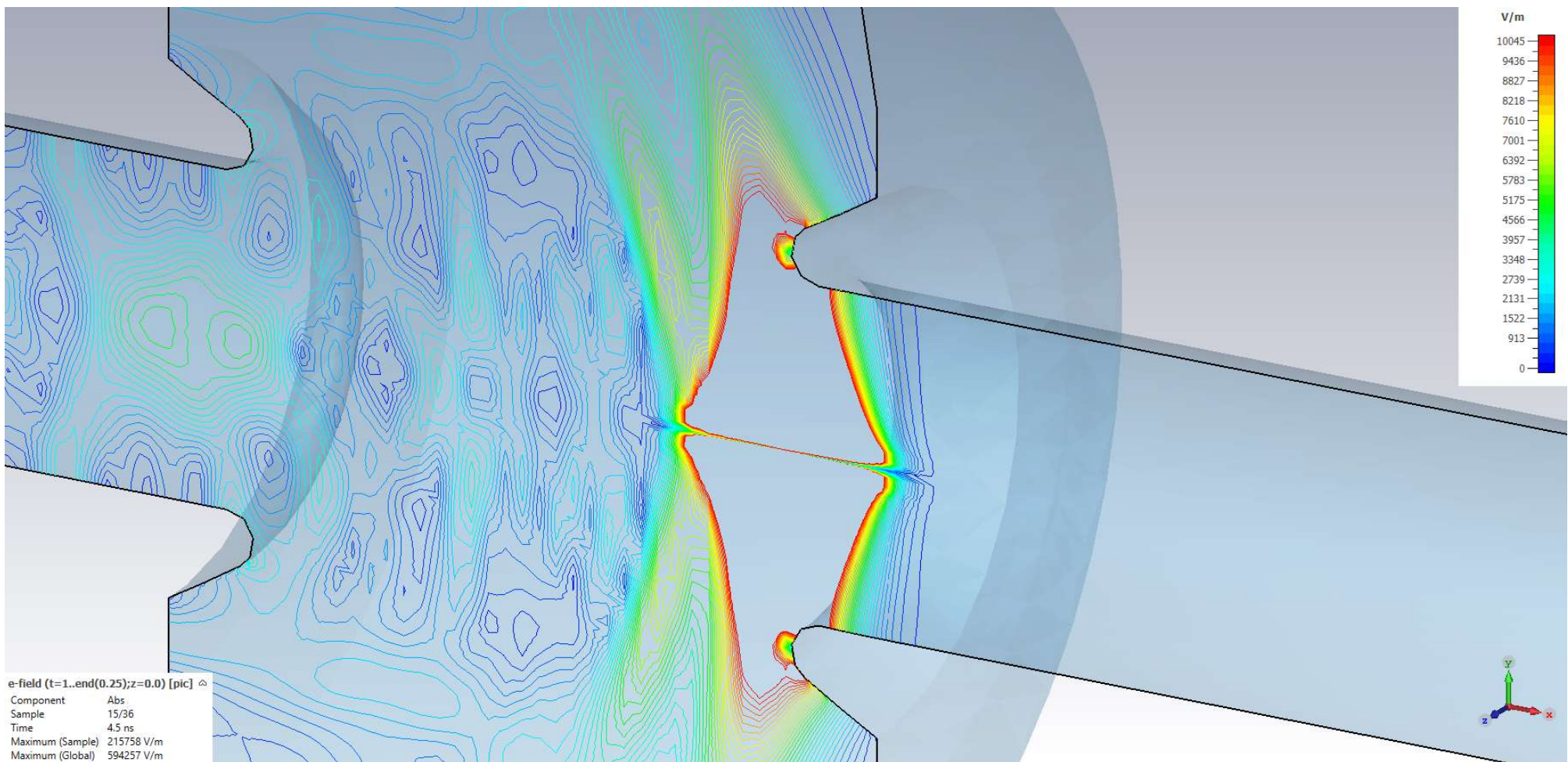
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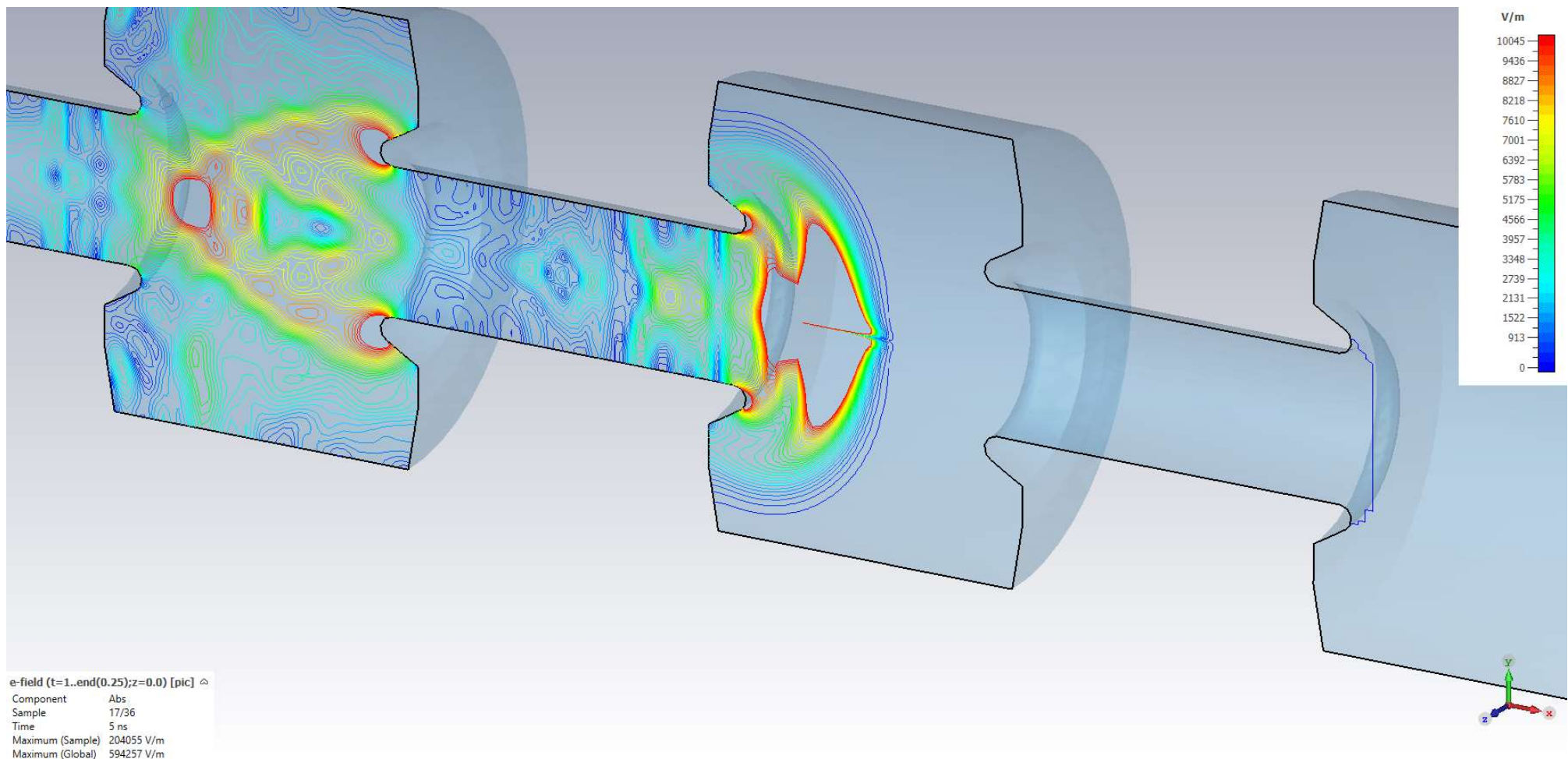
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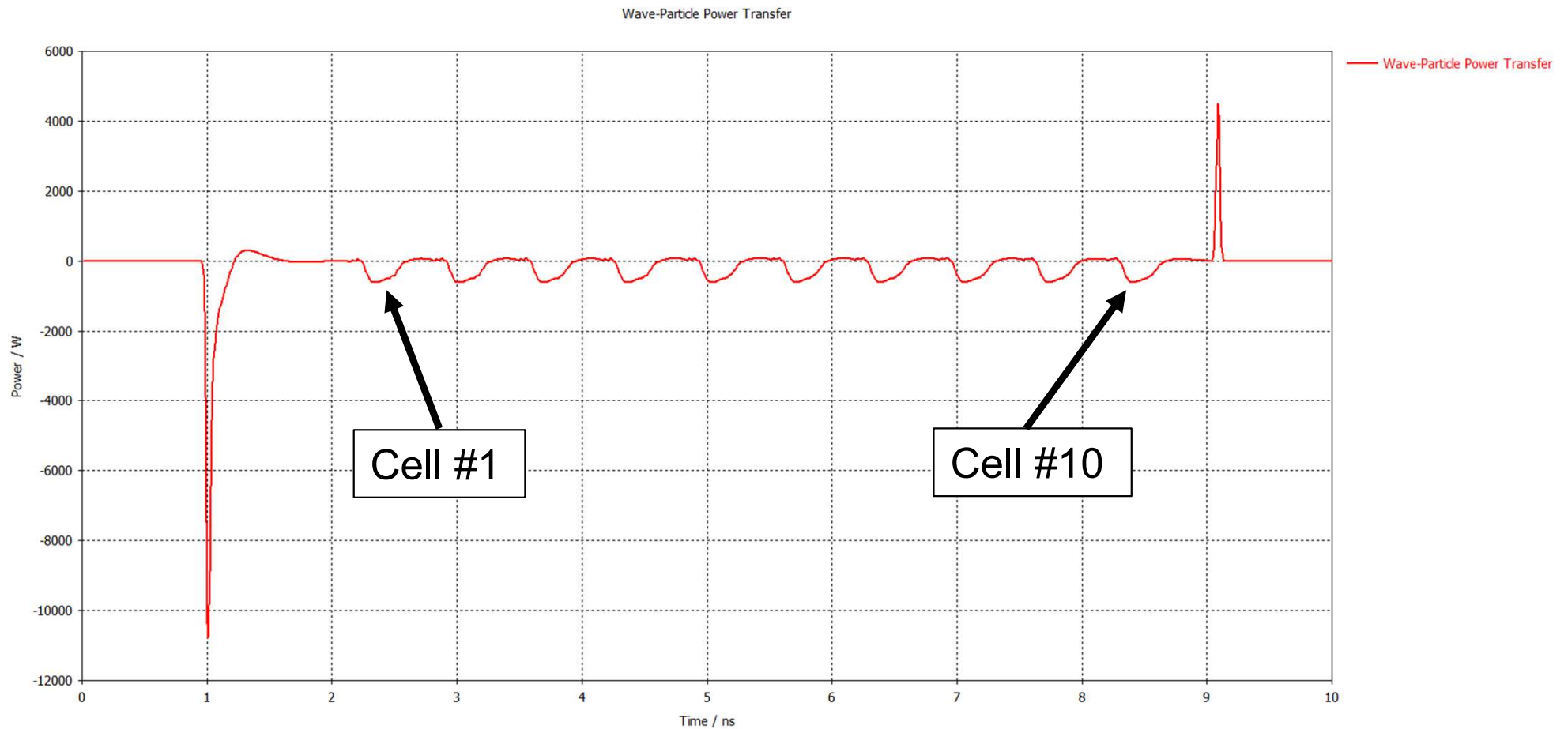
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Power Transfer



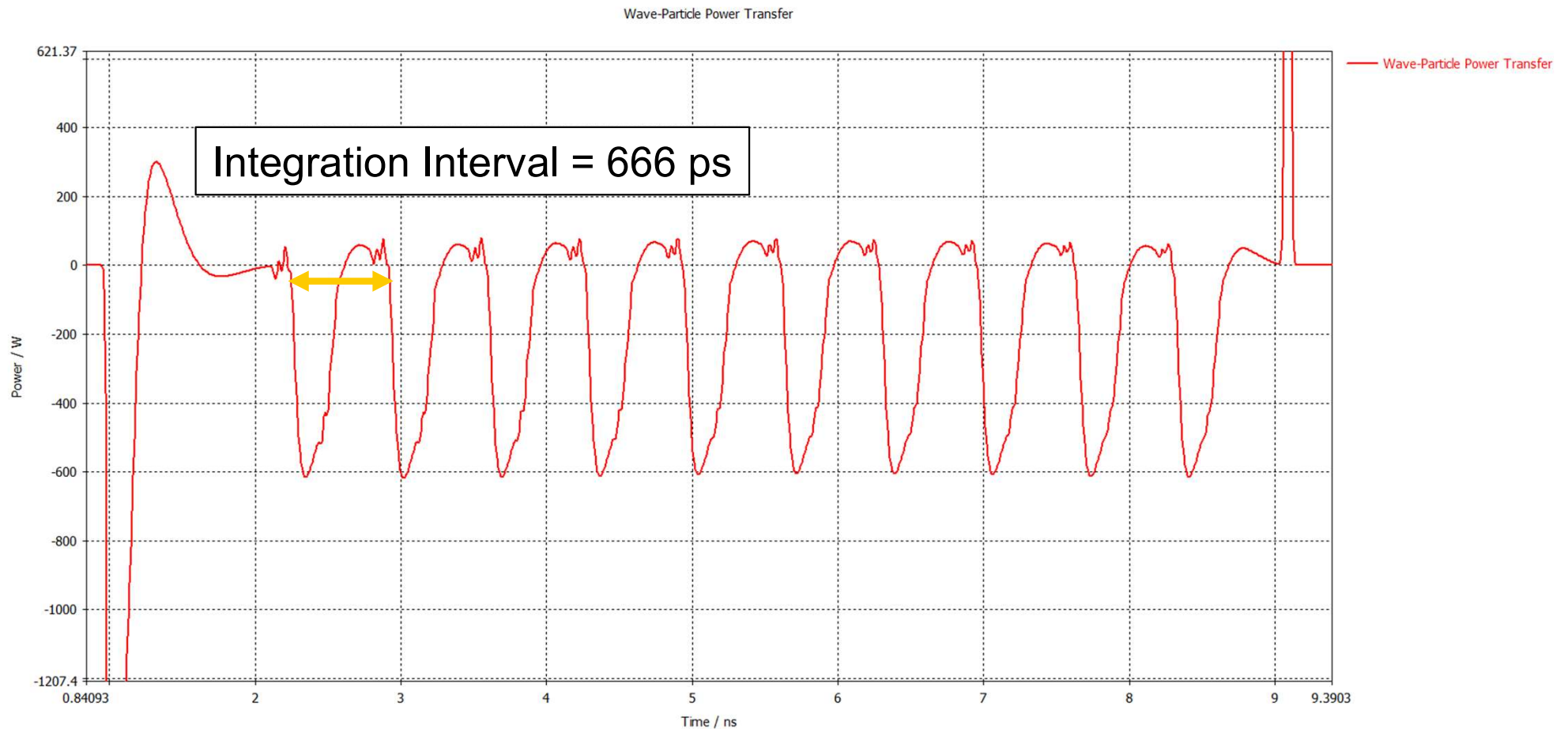
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Power Transfer (Zoom)



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Energy Loss per Cell



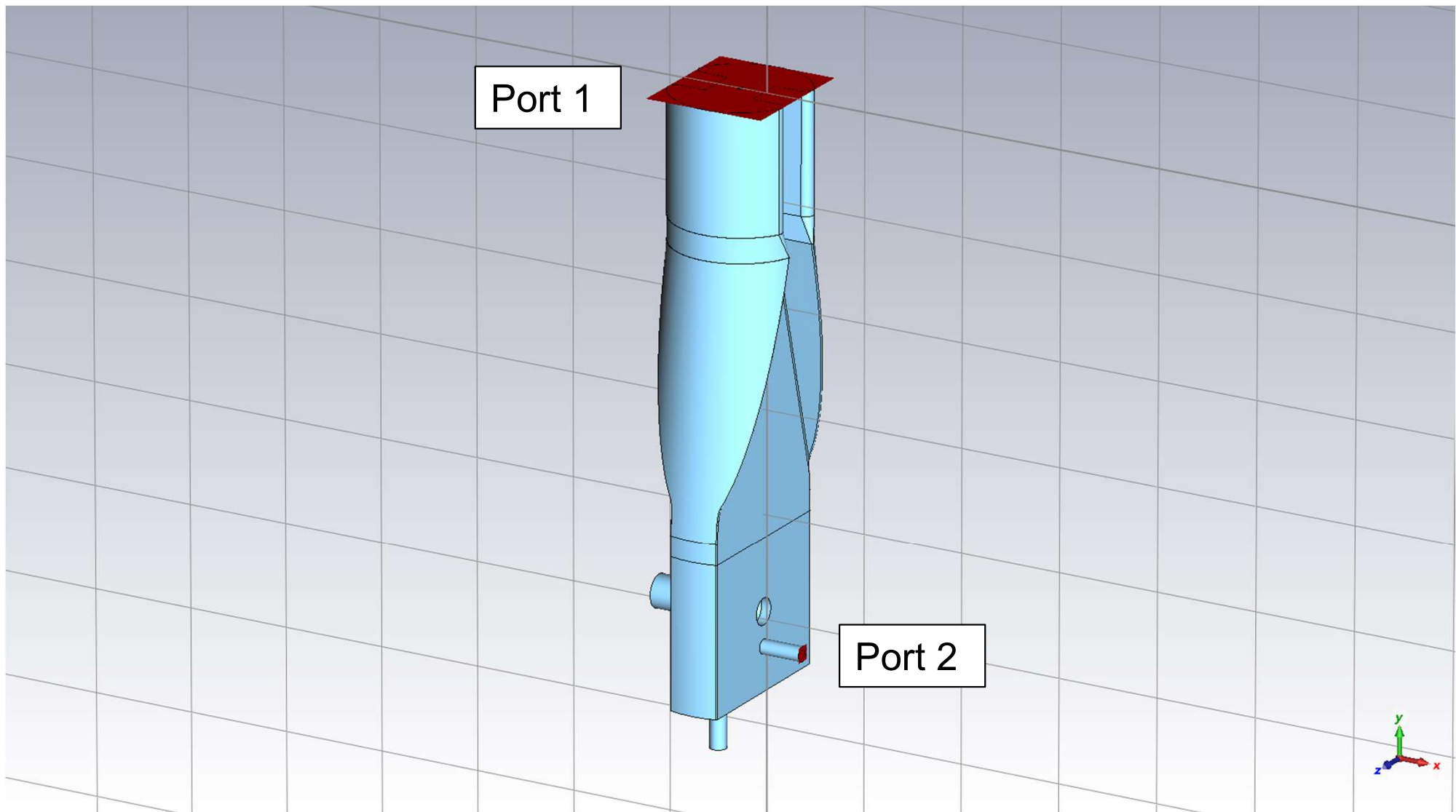
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Cell [#]	E [nJ]
1	-128.96
2	-129.31
3	-129.19
4	-128.86
5	-128.58
6	-128.37
7	-127.70
8	-126.13
9	-123.89
10	-113.46

HOM Wave Guide to Coax Transition



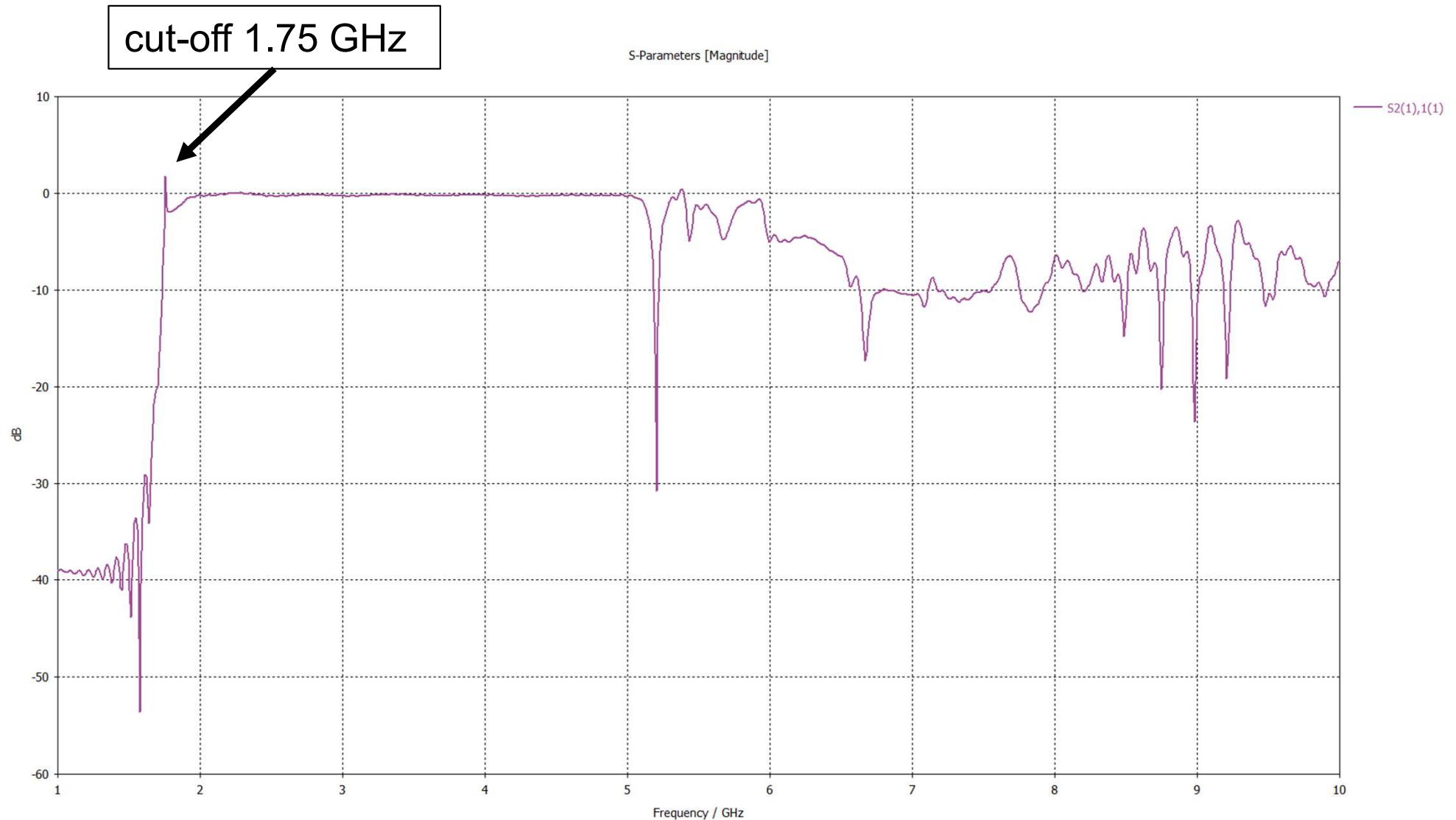
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Transmission Mode 1 to Mode 1



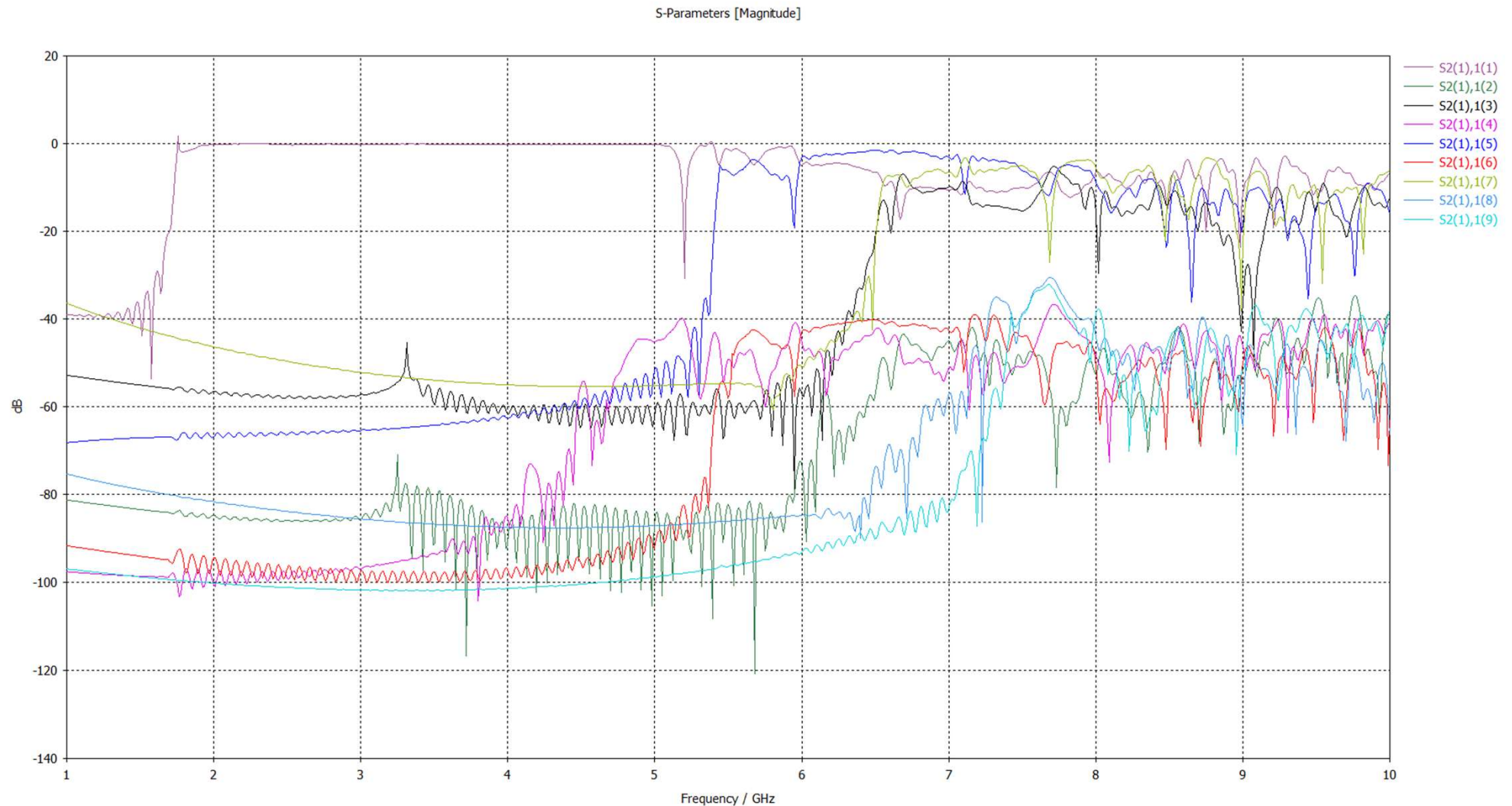
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Transmission Mode n to Mode 1



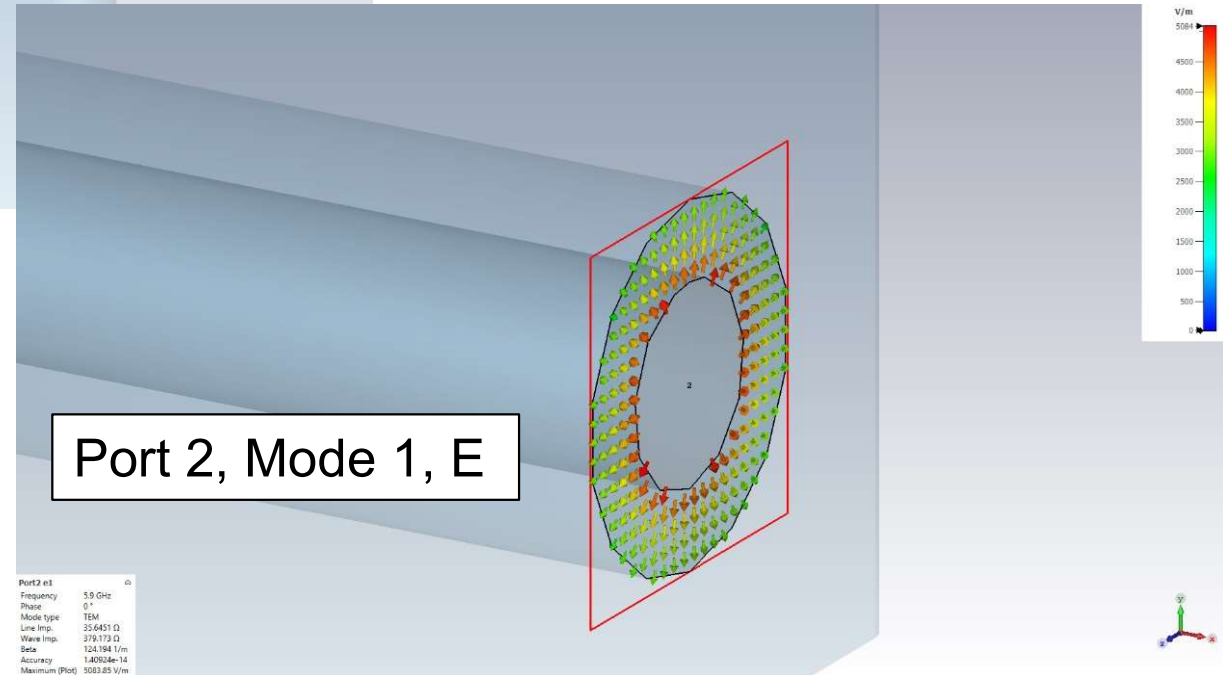
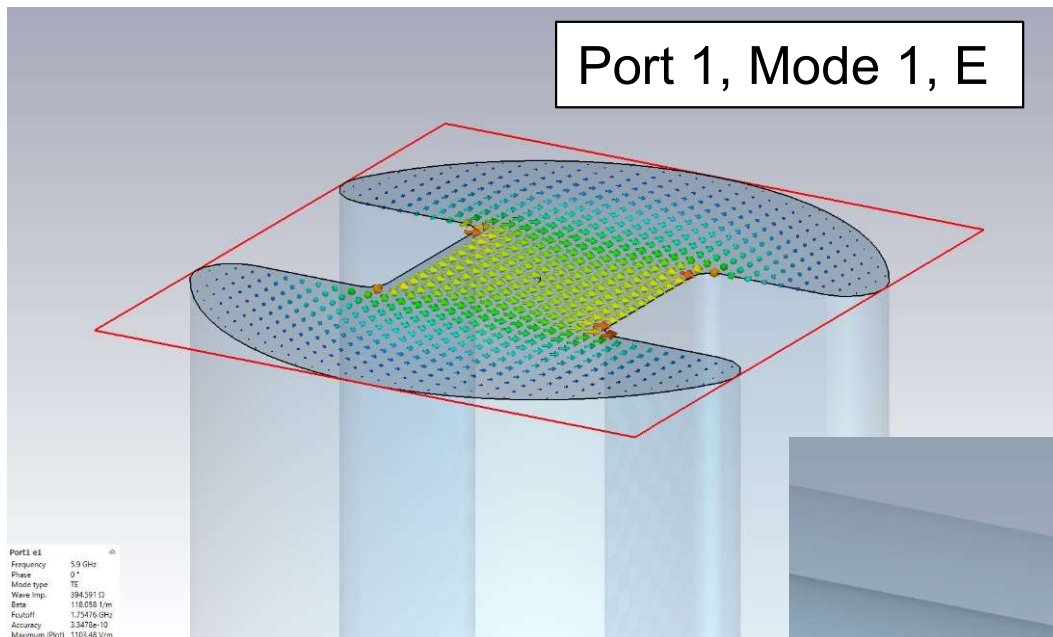
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Transmission Mode 1 to Mode 1



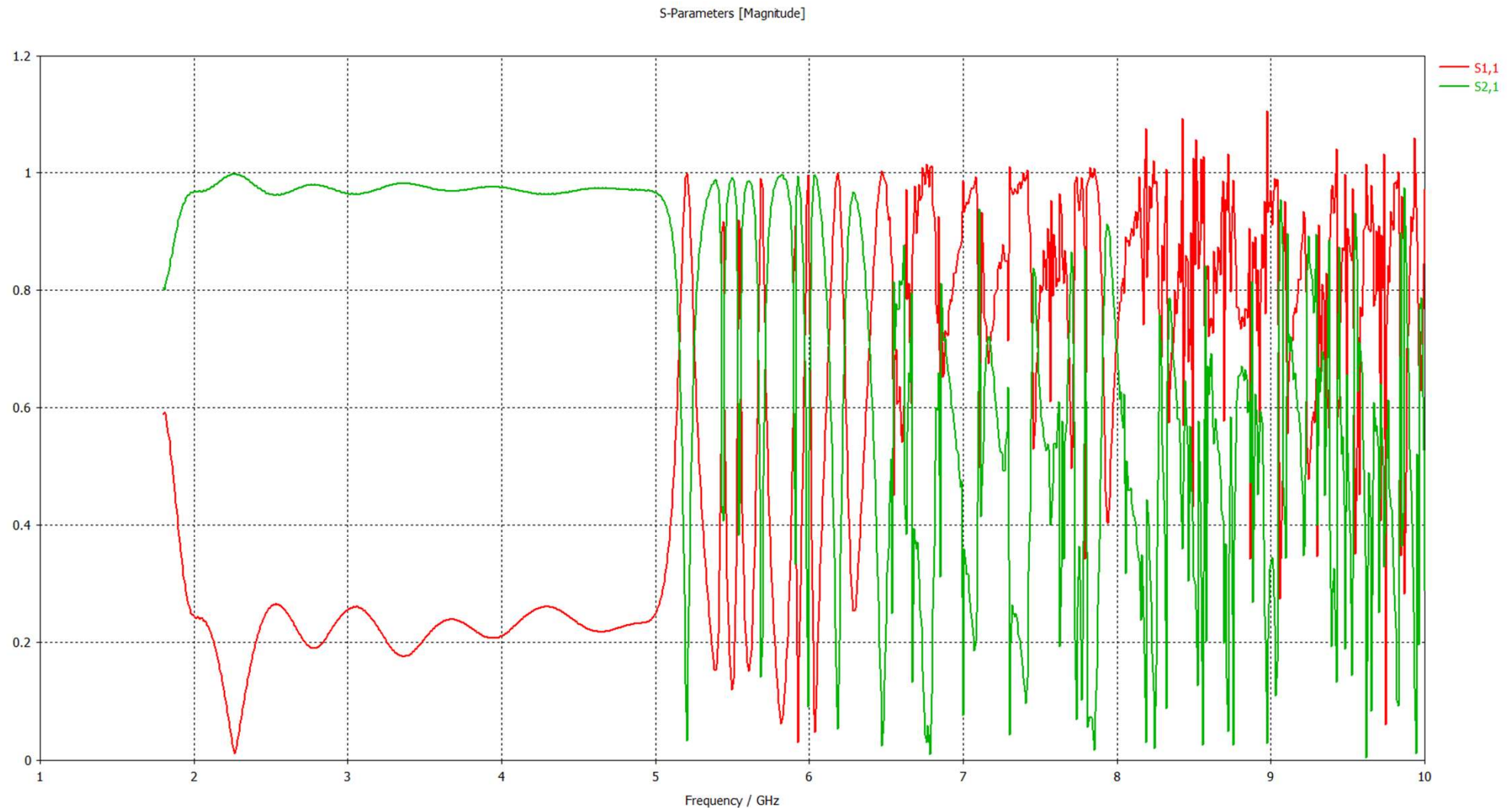
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Transmission Mode 1 to Mode 1



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Transmission Mode 1 to Mode 1



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