

TX/RX CHANNEL LOSS ANALYSIS

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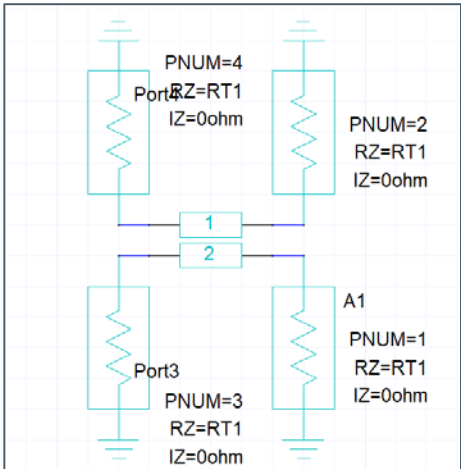
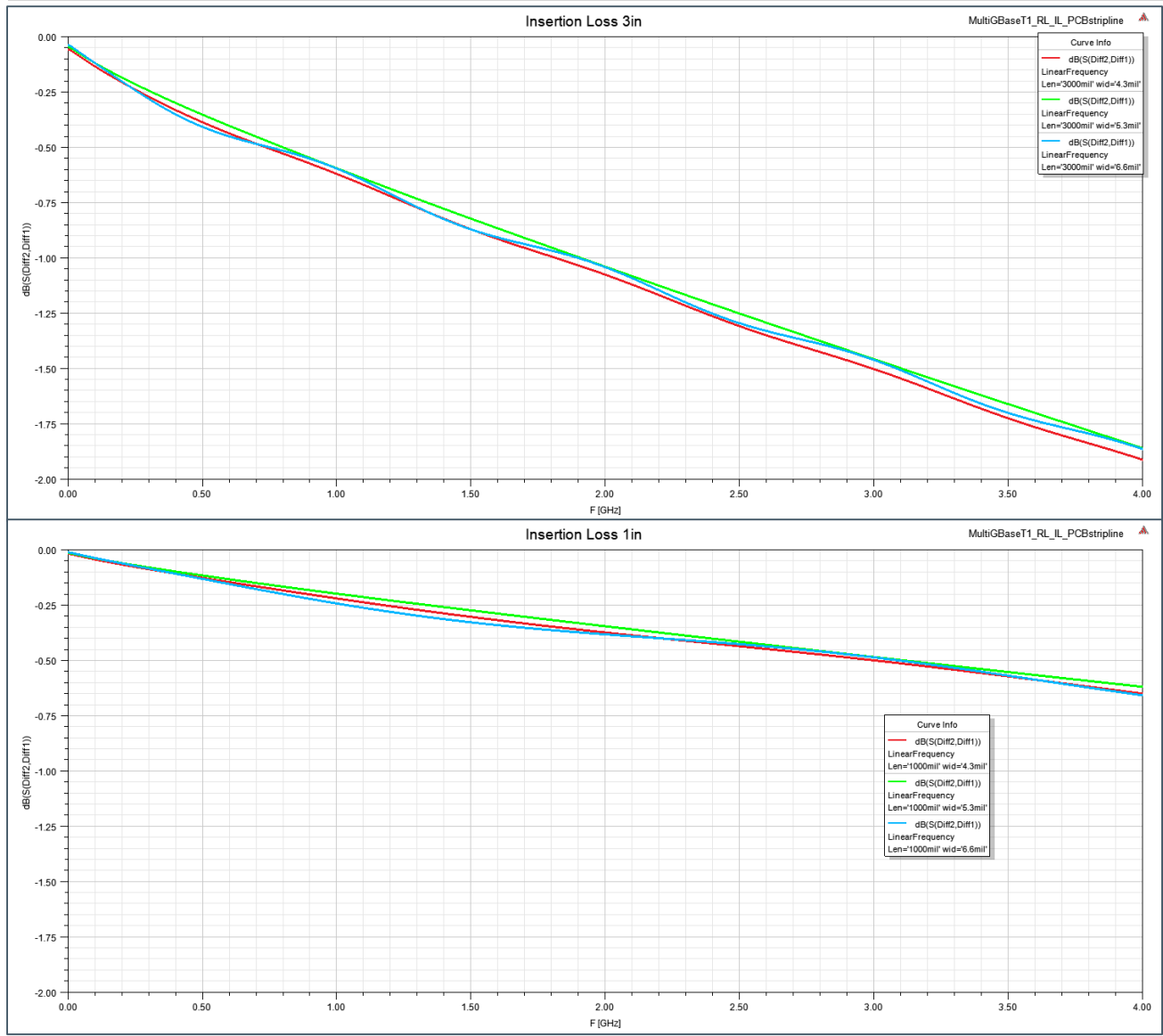
Agenda

- PCB Stripline Insertion Loss
- MDI Return Loss
- Channel Return Loss @ worst case

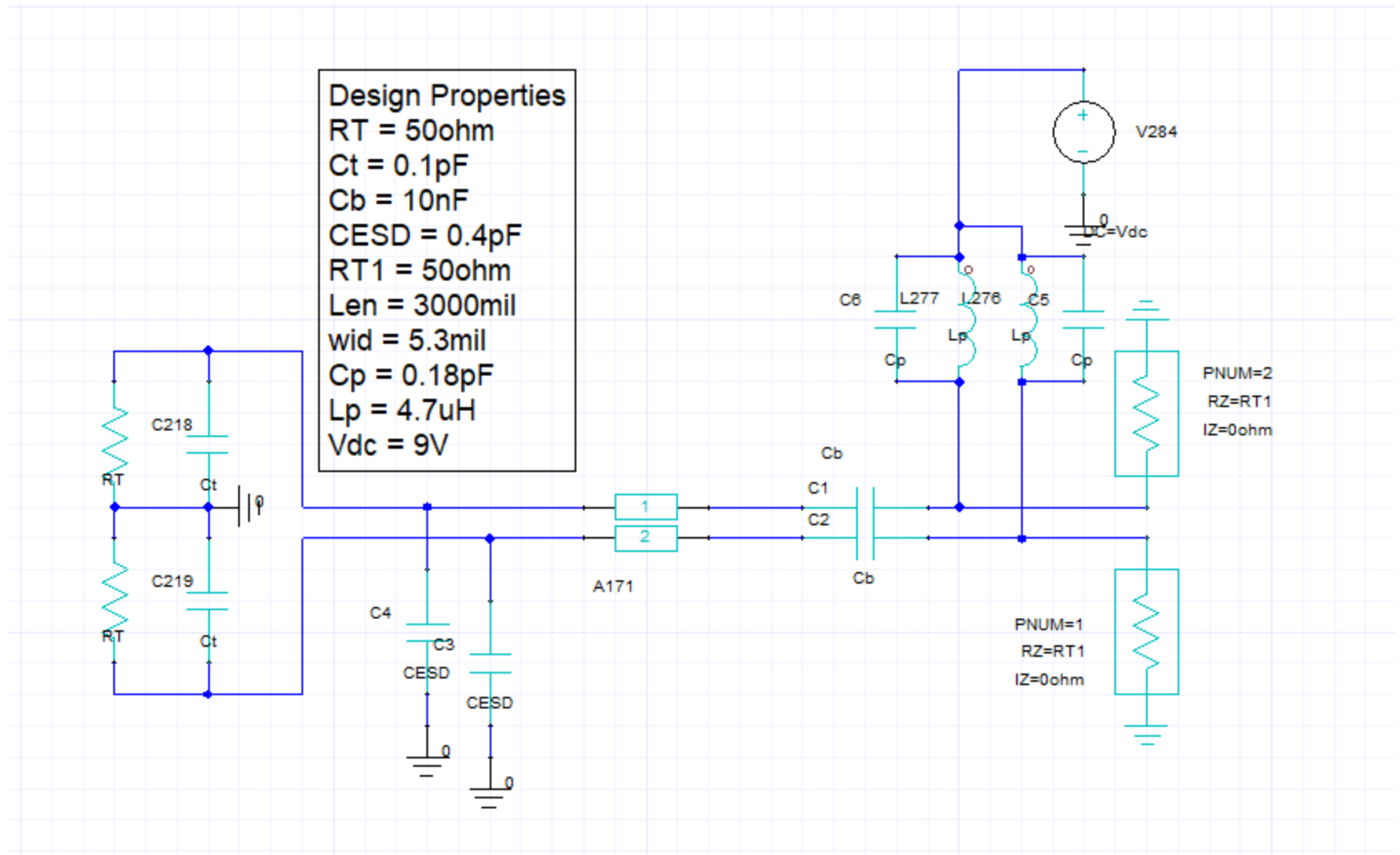


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PCB Insertion Loss



MDI Return Loss

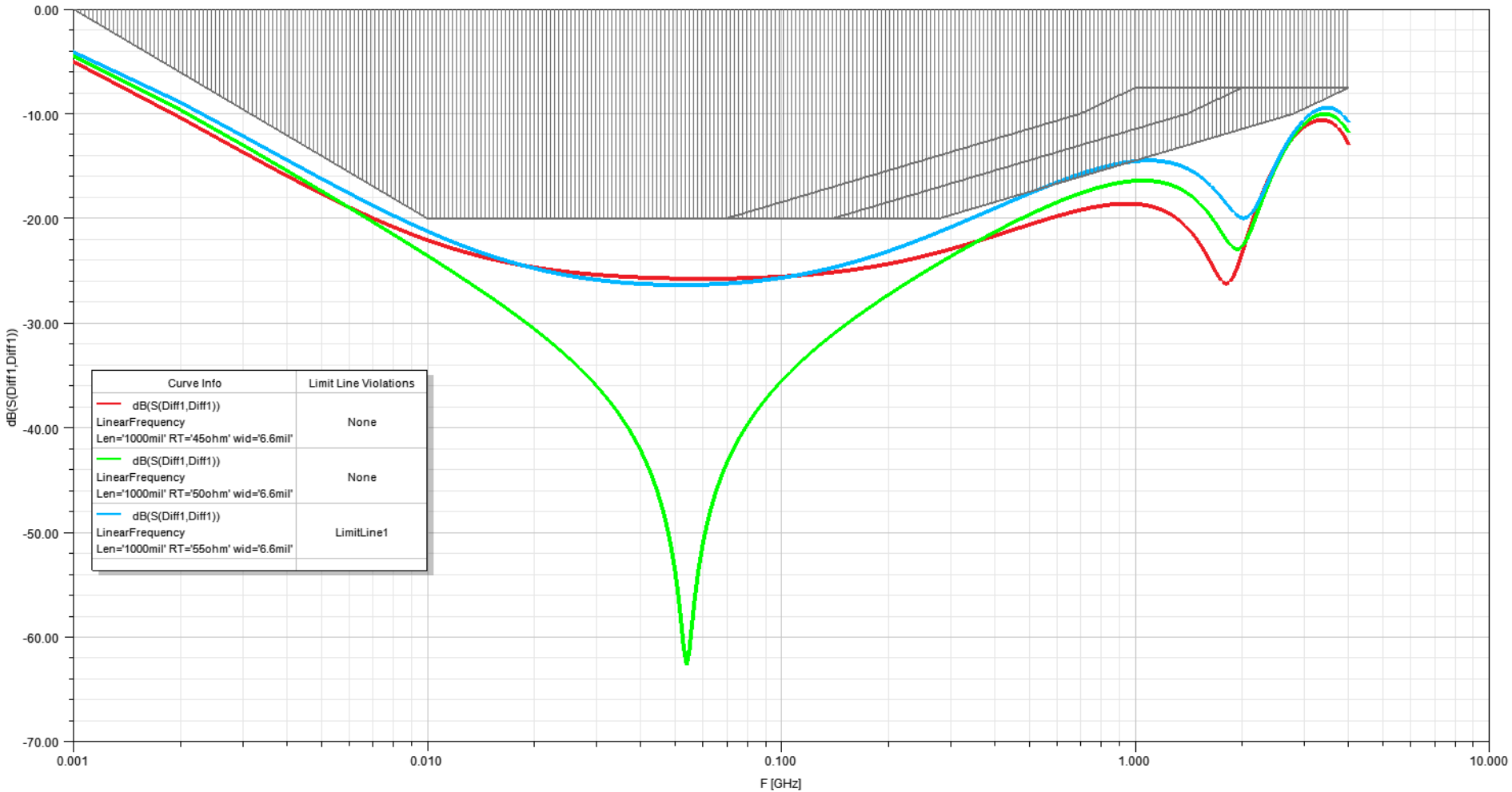


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MDI Return Loss Simulation [1 in, 90Ω, Rs=100 Ω, RT=(90,100,110) Ω]

S Parameter Plot 1

MultiGBaseT1_RL_IL_MDI_PoDL_RX

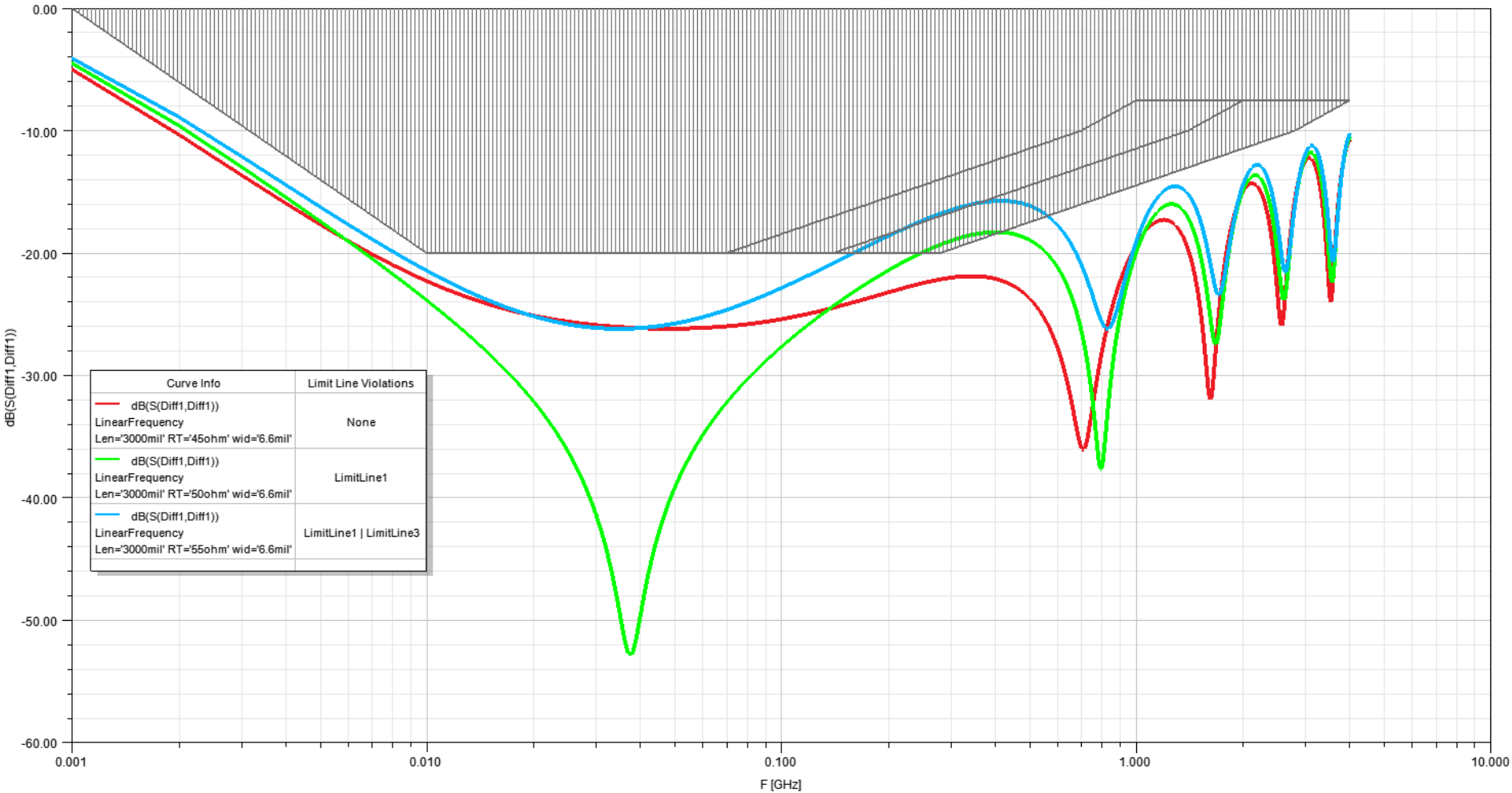


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MDI Return Loss Simulation [3in, 90Ω, Rs=100 Ω, RT=(90,100,110) Ω]

S Parameter Plot 1


MultiGBaseT1_RL_IL_MDI_PoDL_RX

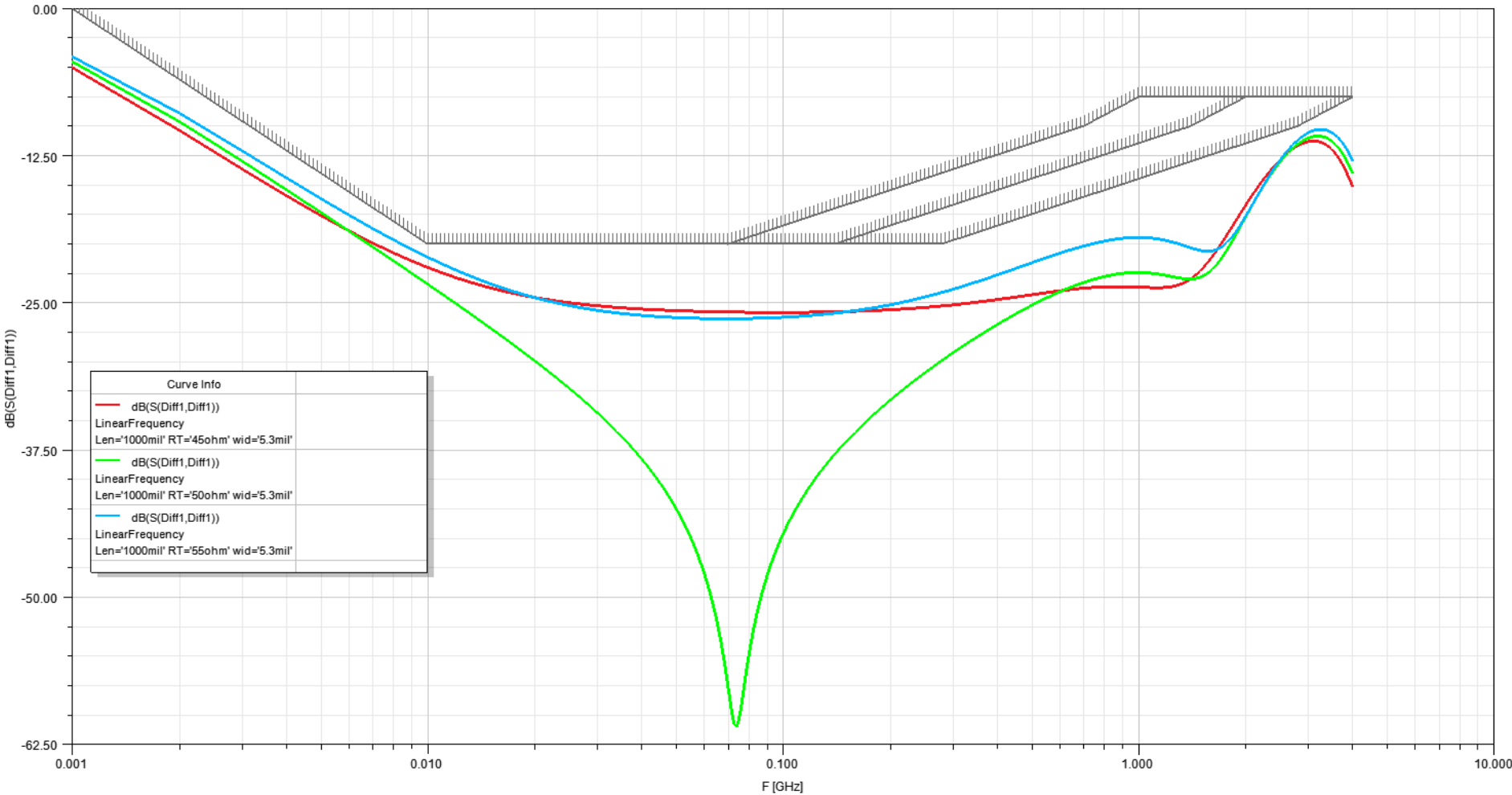


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MDI Return Loss Simulation [1in, 100Ω, Rs=100 Ω, RT=(90,100,110) Ω]

S Parameter Plot 1

MultiGBaseT1_RL_IL_MDI_PoDL_RX 

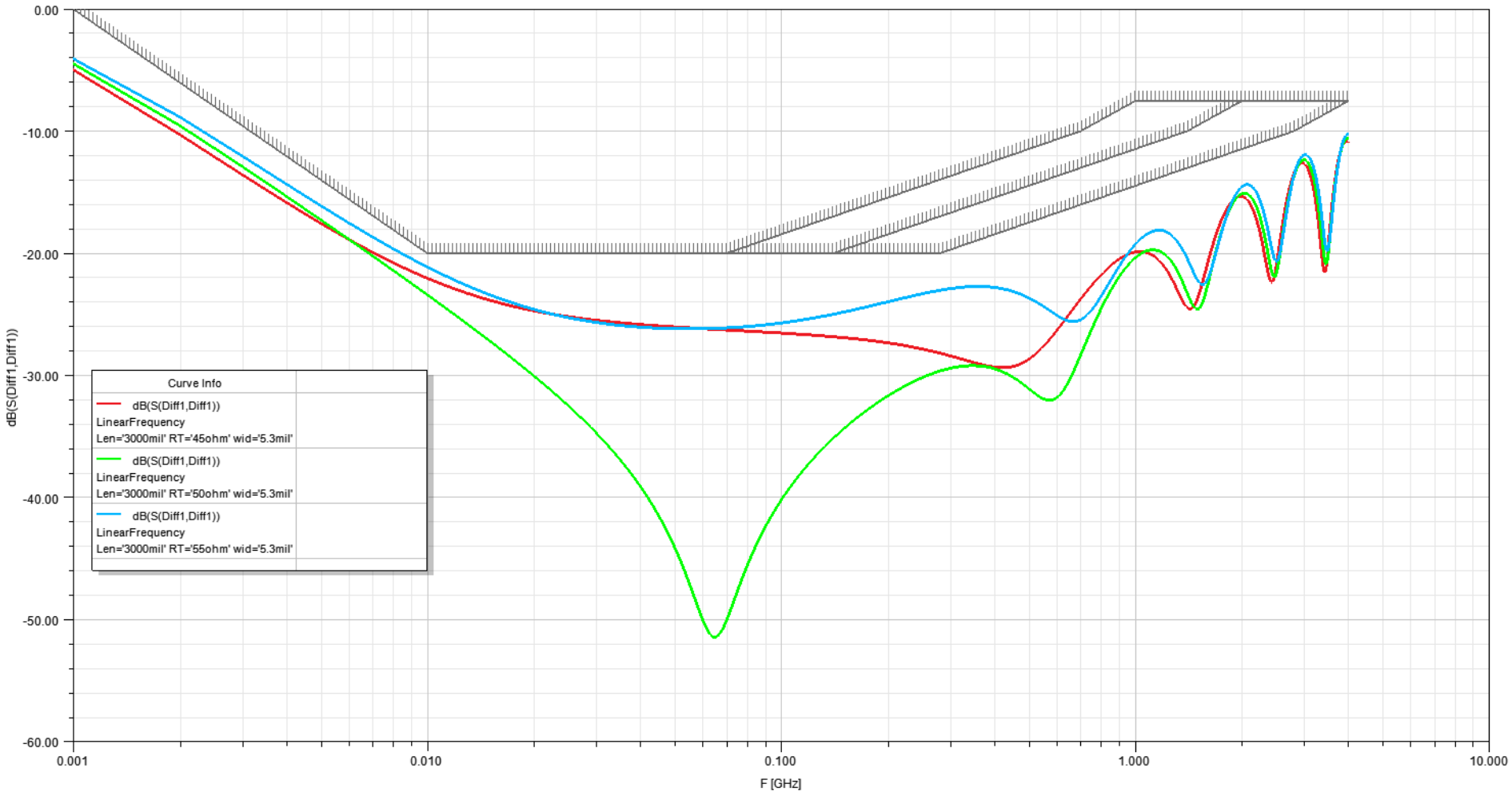


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MDI Return Loss Simulation [3in, 100Ω, Rs=100 Ω, RT=(90,100,110) Ω]

S Parameter Plot 1

MultiGBaseT1_RL_IL_MDI_PoDL_RX

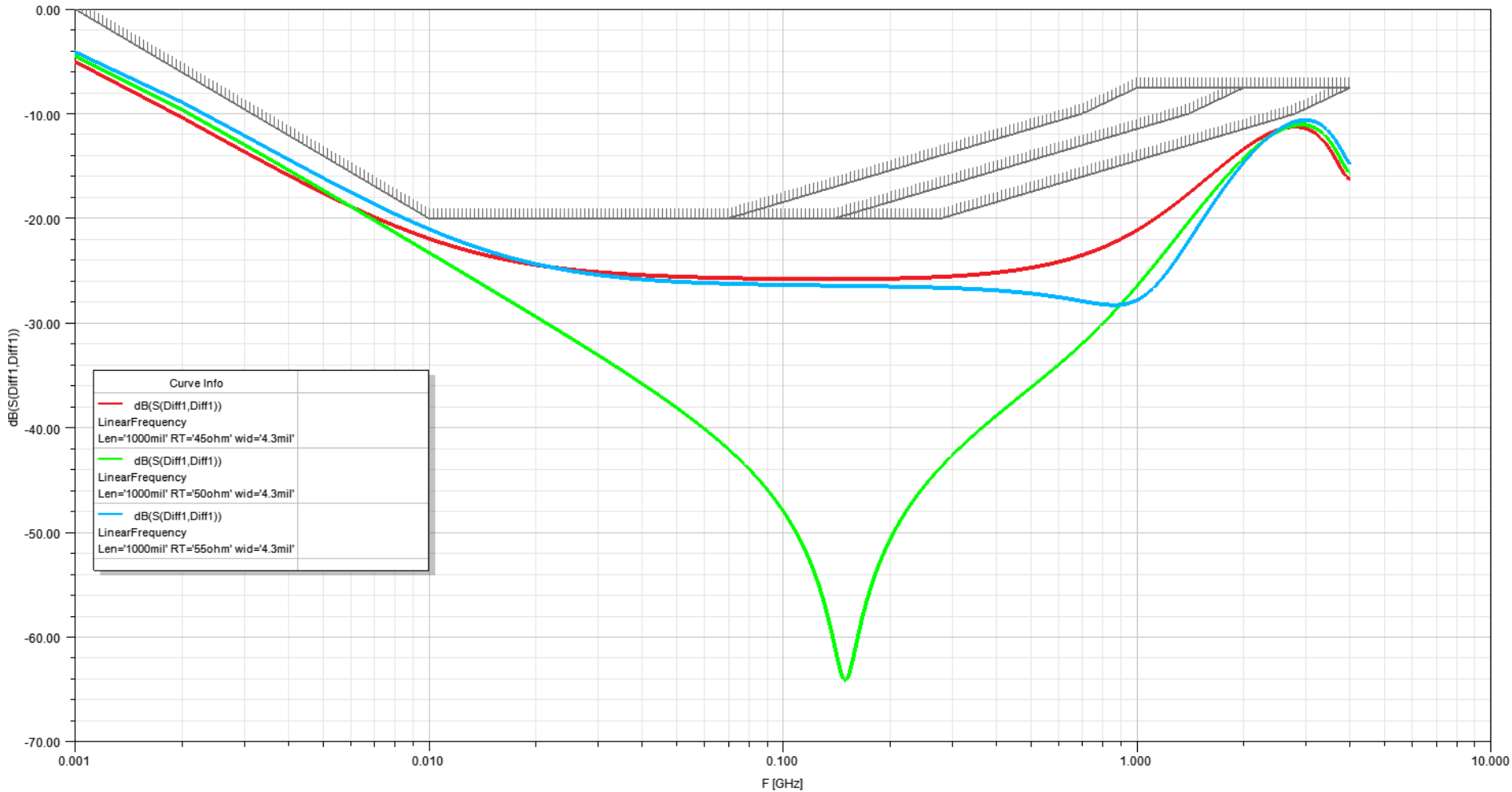


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MDI Return Loss Simulation [1in, 110Ω, Rs=100 Ω, RT=(90,100,110) Ω]

S Parameter Plot 1


MultiGBaseT1_RL_IL_MDI_PoDL_RX

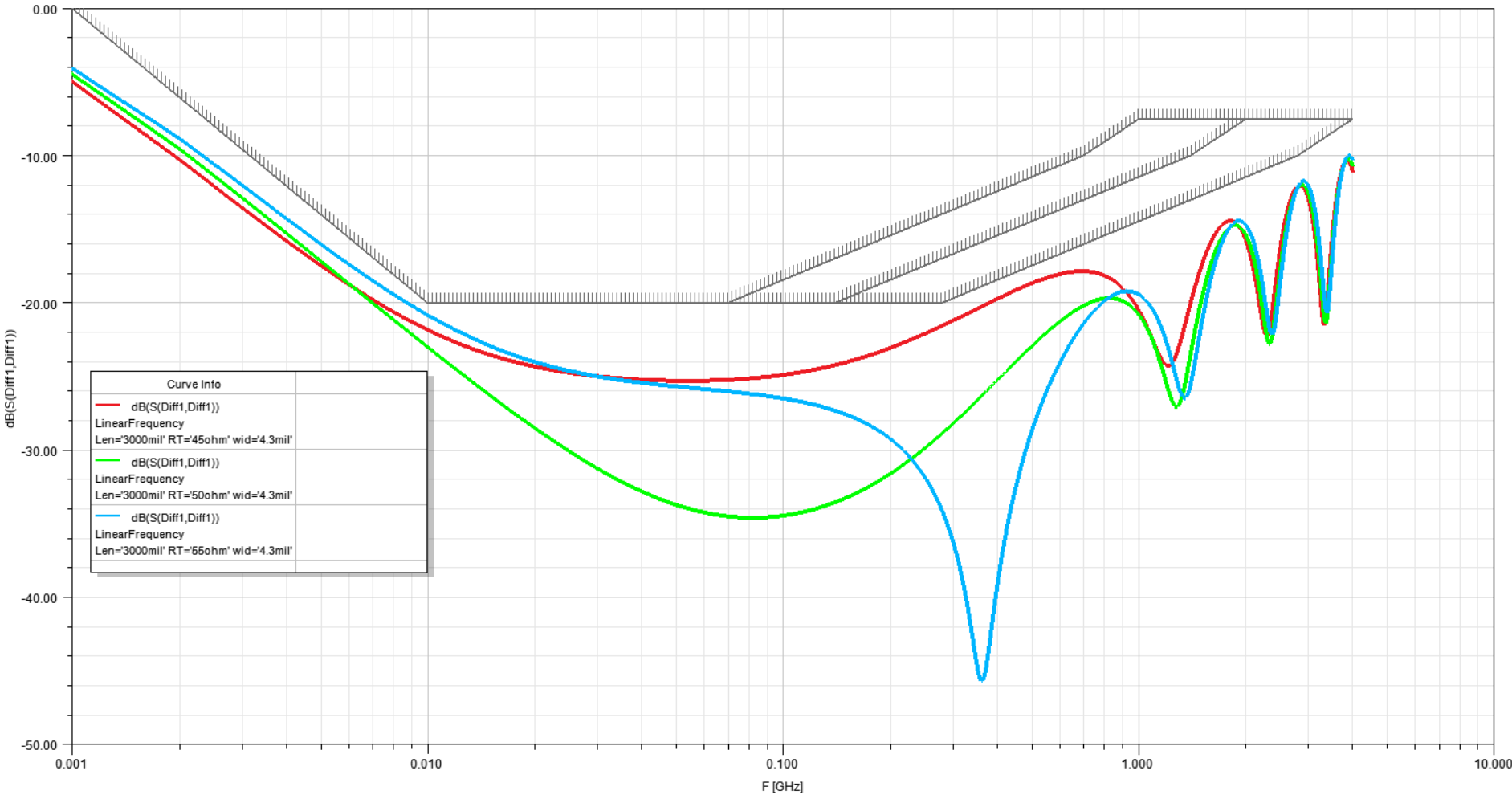


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MDI Return Loss Simulation [3in, 110Ω, Rs=100 Ω, RT=(90,100,110) Ω]

S Parameter Plot 1

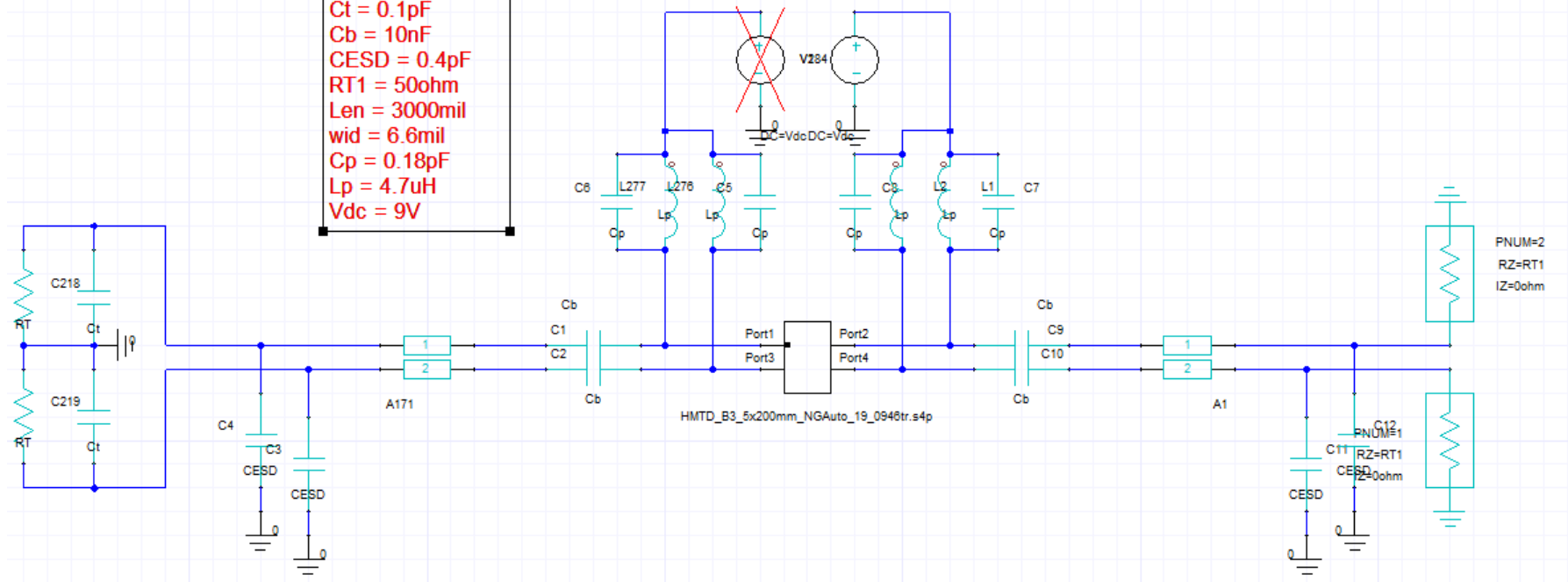
MultiGBaseT1_RL_IL_MDI_PoDL_RX 



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Channel Return Loss (2 MDI, 1m 4 inline Cable)

Design Properties
 RT = 55ohm
 Ct = 0.1pF
 Cb = 10nF
 CESD = 0.4pF
 RT1 = 50ohm
 Len = 3000mil
 wid = 6.6mil
 Cp = 0.18pF
 Lp = 4.7uH
 Vdc = 9V



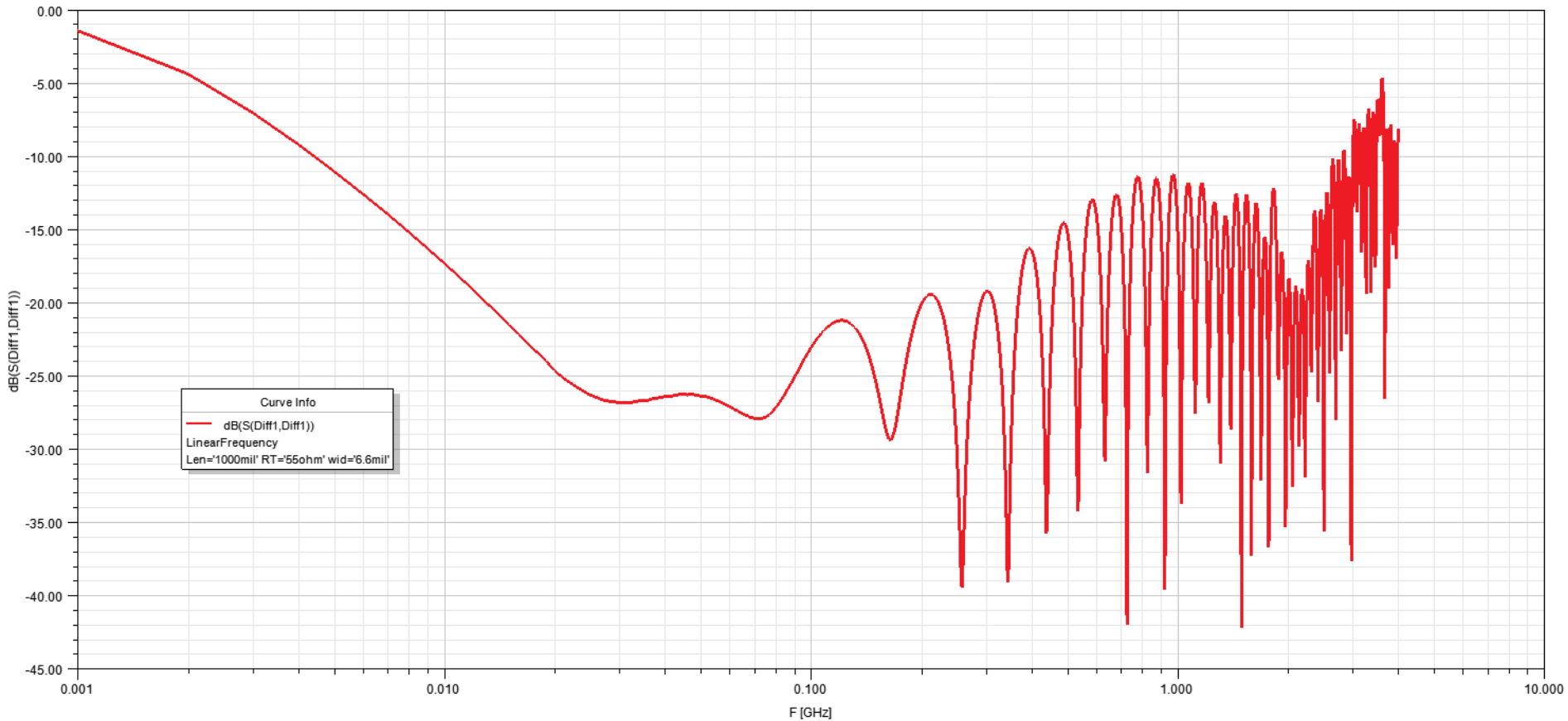
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Channel Return Loss Simulation

MDI[RS=100,1in@90Ω] + Link Segment[1m 4inlines] + MDI [ZL=110, 1in@90Ω]

S Parameter Plot 2

MultiGBaseT1_RL_IL_MDI_PoDL_1m4in_RX_Channel_ros



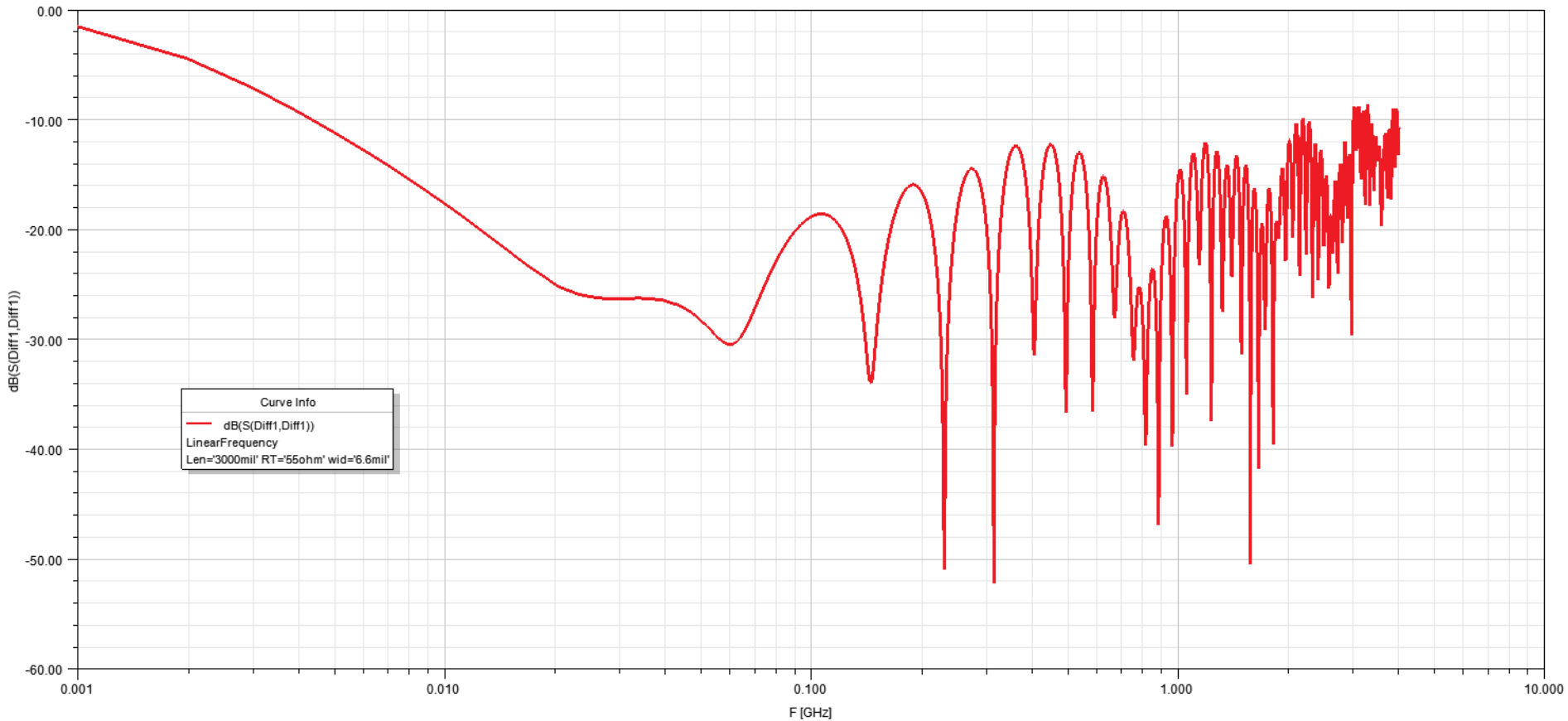
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Channel Return Loss Simulation

MDI[RS=100,3in@90Ω] + Link Segment[1m 4inlines] + MDI [ZL=110, 3in@90Ω]

S Parameter Plot 2

MultiGBaseT1_RL_IL_MDI_PoDL_1m4in_RX_Channel_ros



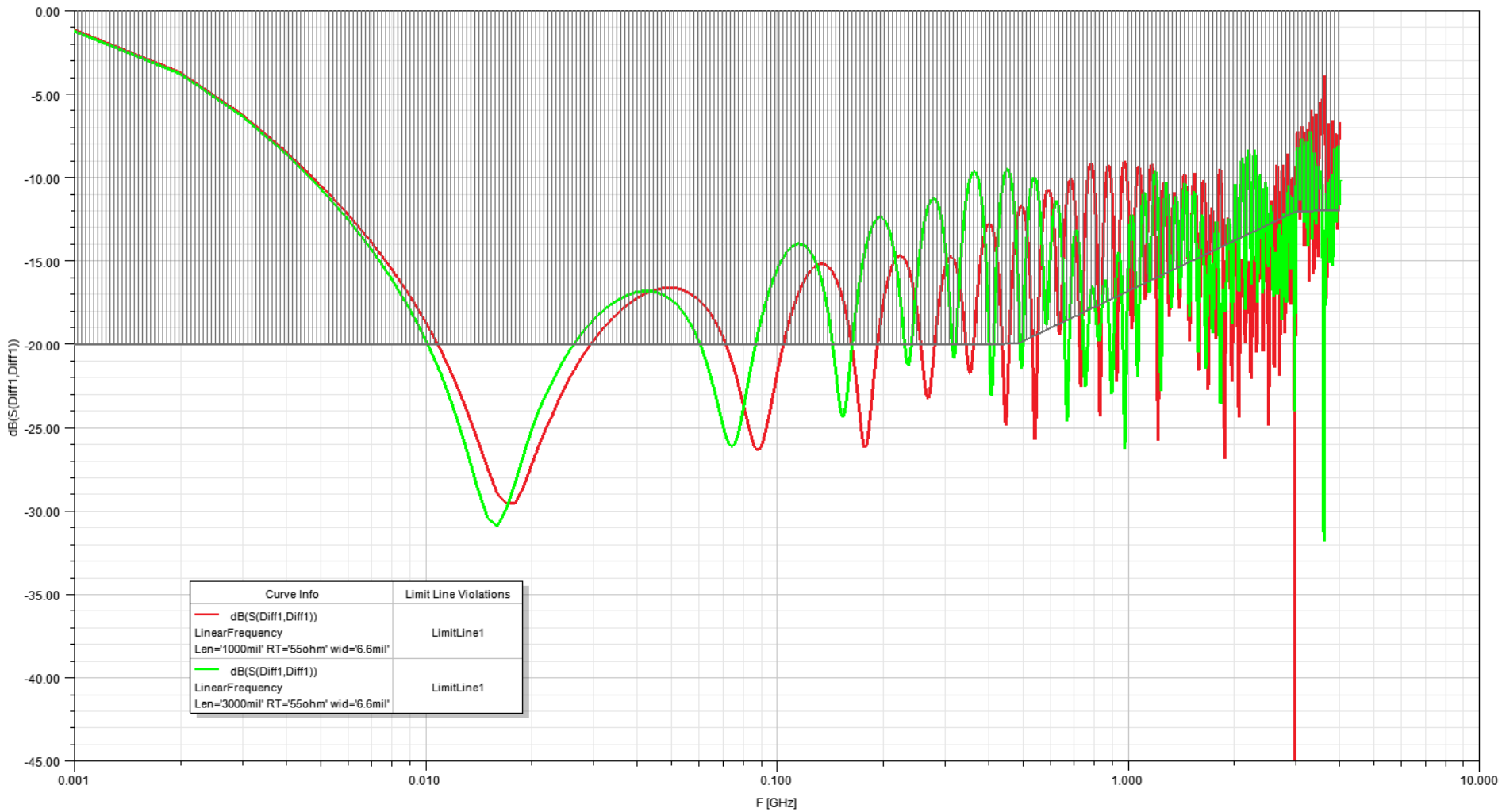
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Channel Return Loss Simulation

MDI[RS=100,3 & 1in@90Ω] + Link Segment[1m 4inlines] + MDI [ZL=110, 3in@90Ω]

S Parameter Plot 4

MultiGBaseT1_RL_IL_MDI_PoDL_1m4in_RX_Channel_ros



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Thank you!

Questions?



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