

# Effects of DC blocking Cap

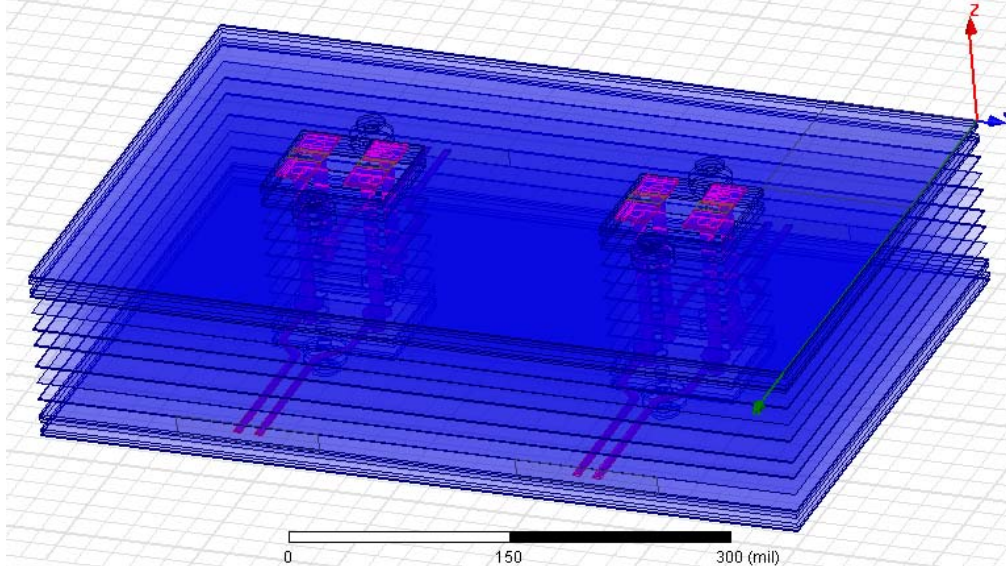
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04/16/2012

# DC blocking Cap

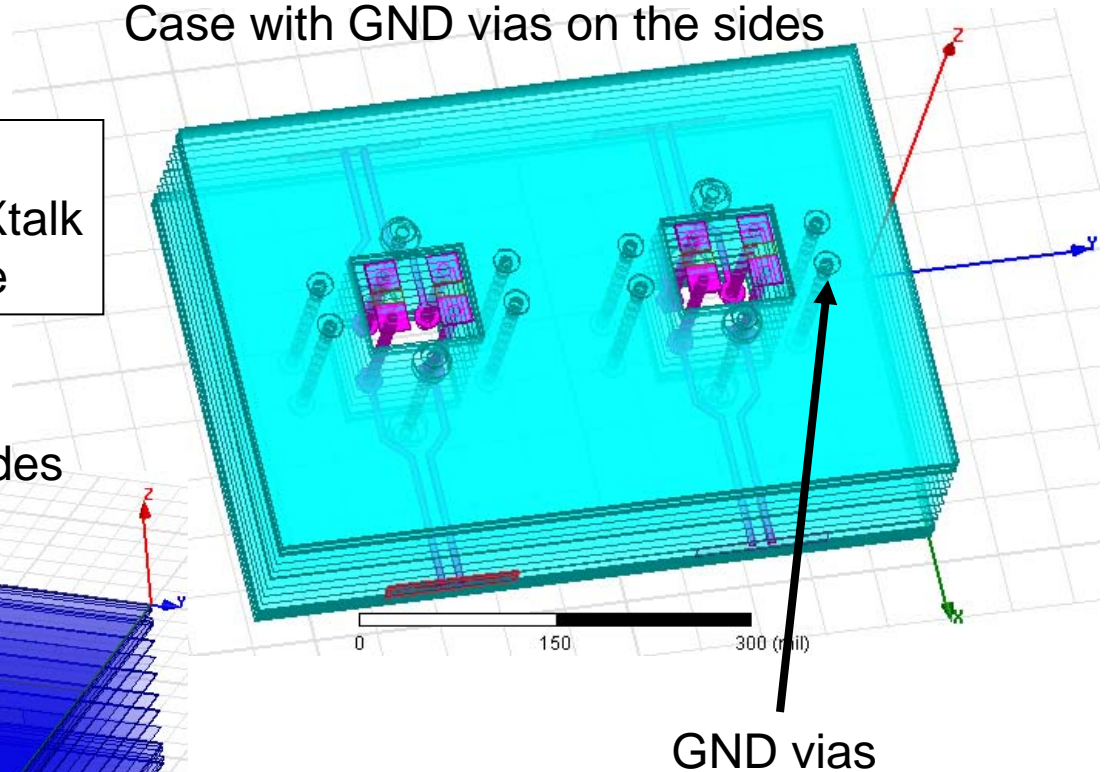
Design tradeoff:

- Adding GND improves loss and Xtalk
- Adding GND takes a larger space

Case without GND vias on the sides



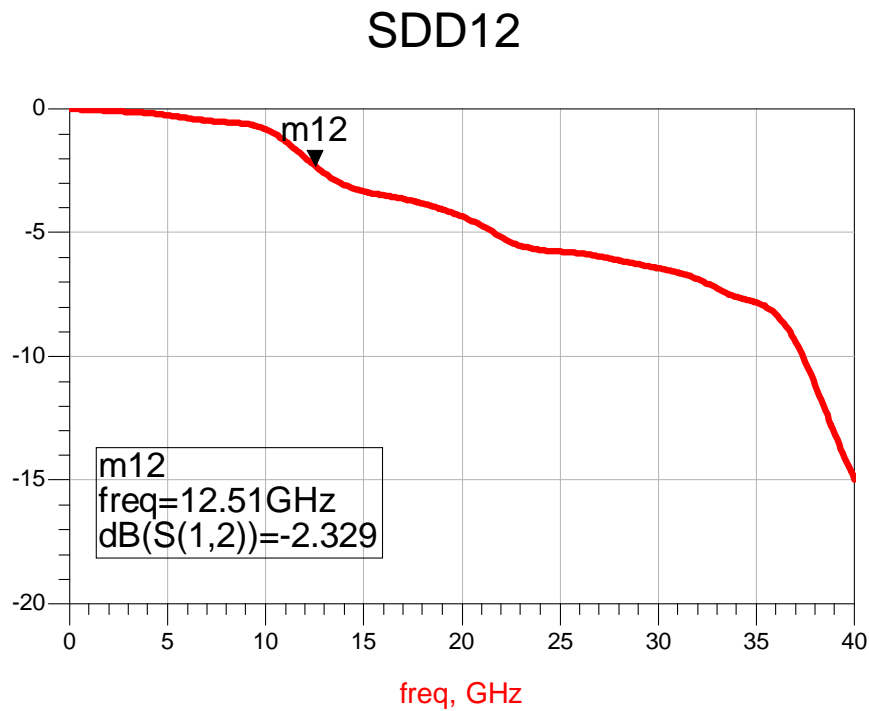
Case with GND vias on the sides



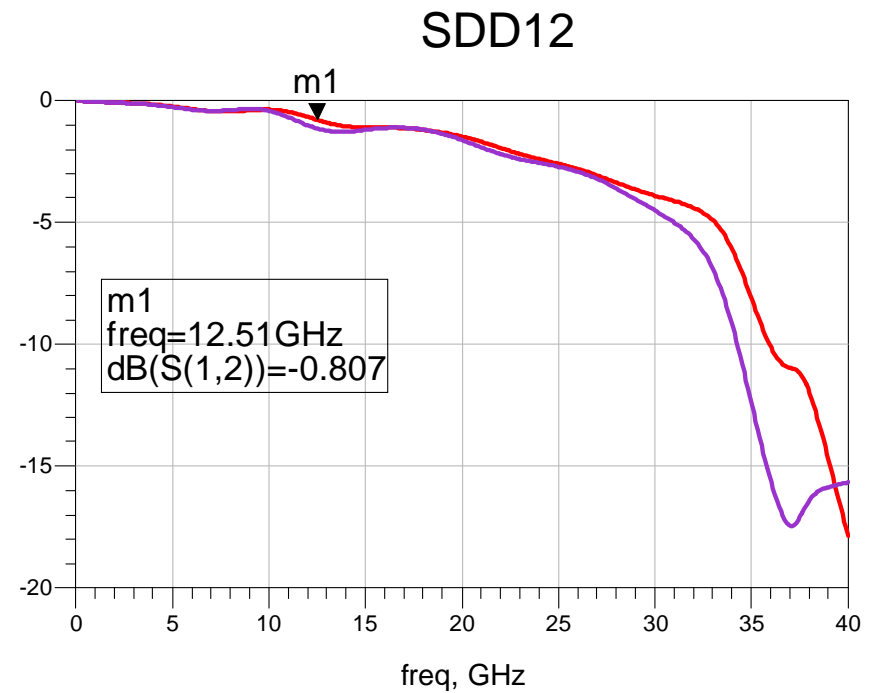
# Insertion Loss

with/without GND vias on the sides

without GND vias on the sides

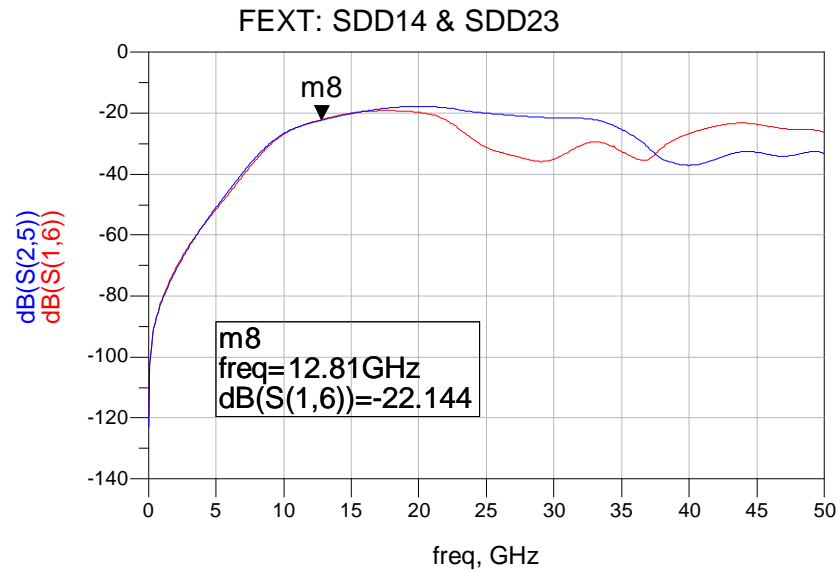


with GND vias on the sides

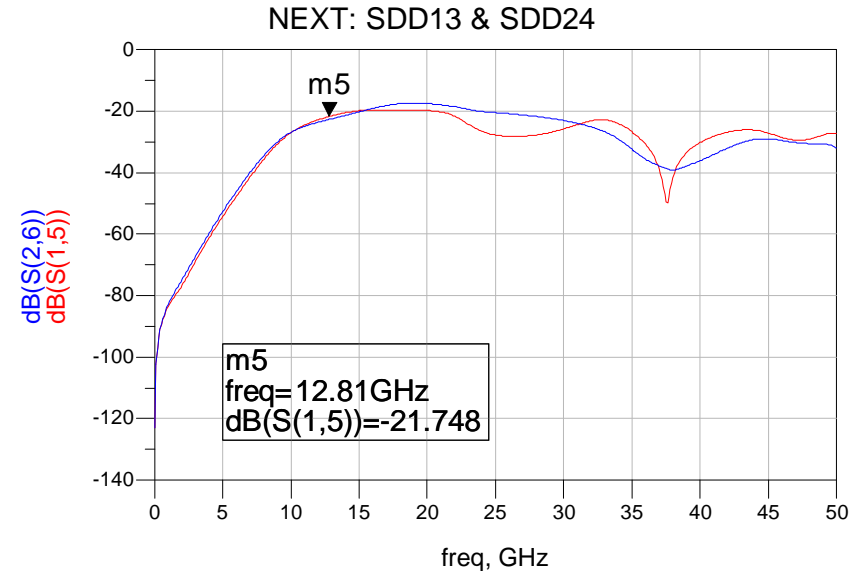


# Xtalk, with/without GND vias on the sides

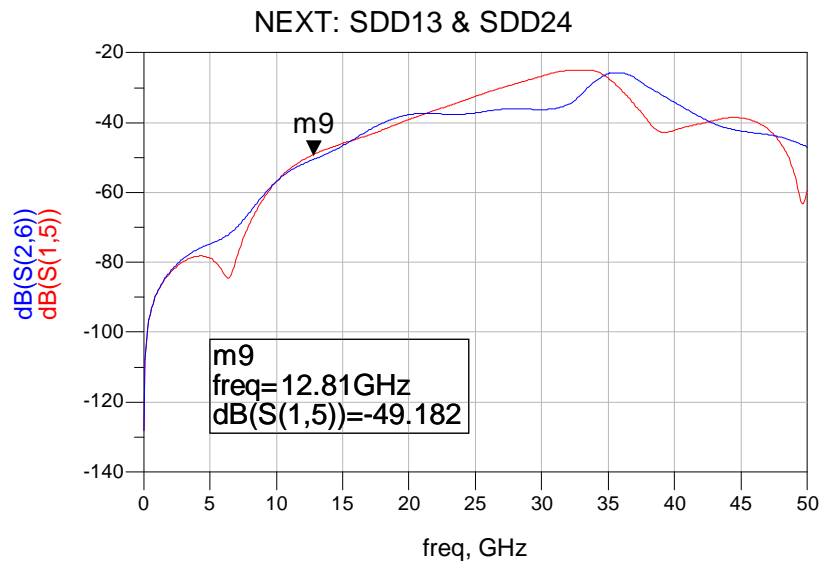
without GND vias on the side



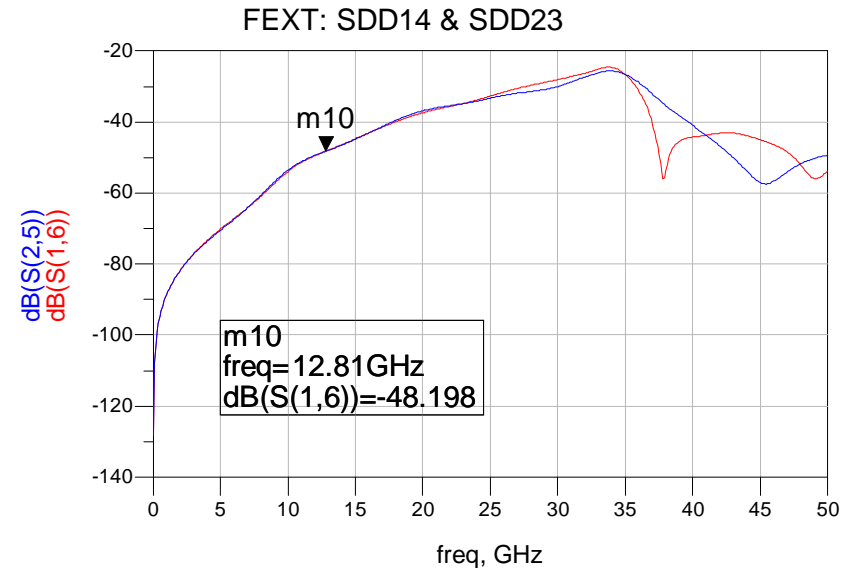
without GND vias on the side



with GND vias on the side



with GND vias on the side



# Conclusions

- Cap structures have the loss and the xtalk effects.
- Cap effects can not be ignored.
- System designers need the flexibility to determine the cap structure.
- Cap should be included in the channel budget.