



cmos028fdsoi Technology

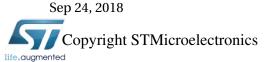
SG LLE PCpastRX models

DK1.2\_RF\_mmW

Comparison with DK1.1\_RF\_mmW model(s)

LLE - PCpastRX SG

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Technology R&D Crolles Site - TDP/TDS/SPICE Modeling





# General information on SG LLE PCpastRX models

- Maximum supply voltage is V.
- Validity domain is defined as follows:
  - ✓ Drawn gate length varies from 30nm to 10um.
  - ✓ Drawn transistor width varies from 80nm to 10um.
  - ✓ Device temperature varies from -40 °C to 125 °C.





# **Output parameters definitions**

- Model(s): lvtnfet\_acc, lvtpfet\_acc, nfet\_acc, pfet\_acc
  - ✓ Vt\_lin: Threshold voltage defined as Vgs value for which drain current is ivt\*M\*1\*W/(1\*L+0+1\*p\_la) at Vds = 0.05V.
  - ✓ Isat : Drain current at Vgs = 1V, Vds = VddV.
  - ✓ Vt\_sat: Threshold voltage defined as Vgs value for which drain current is ivt\*M\*1\*W/(1\*L+0+1\*p\_la) at Vds = vds\_satV.
  - ✓ Ilin : Drain current at Vgs = 1V, Vds = 0.05V.
  - ✓ Logioff: log10(Ioffsat).







# lvtnfet\_acc Electrical characteristics scaling







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=0.03u

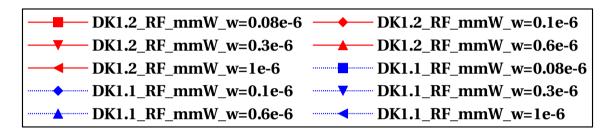


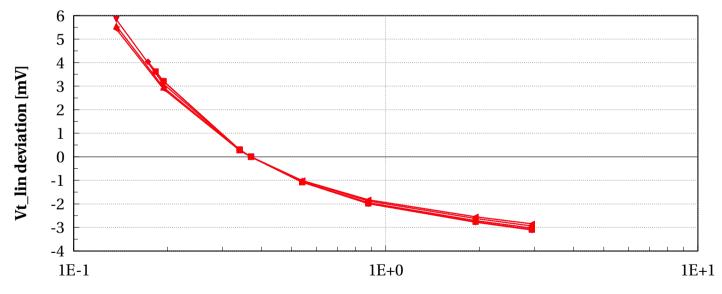




## lvtnfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.03e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

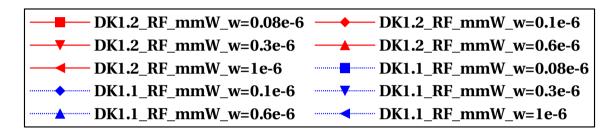


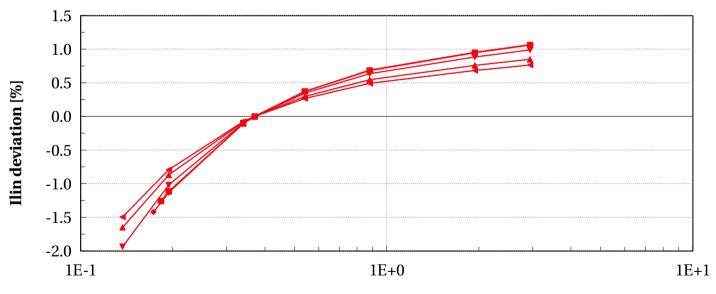




# lvtnfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.03e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

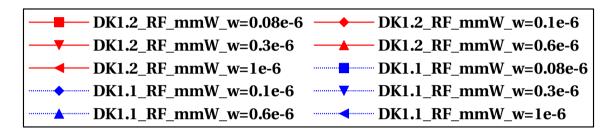


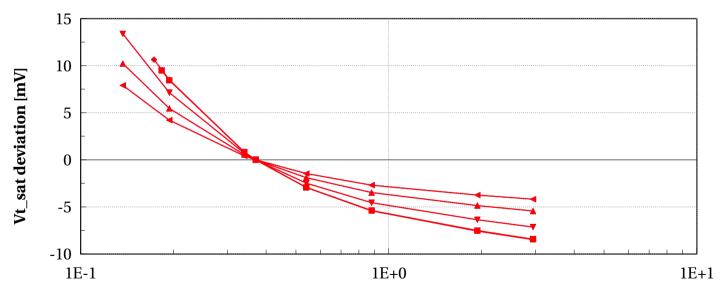




# lvtnfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.03e-6 and Temp==25 and p\_la==0





"PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

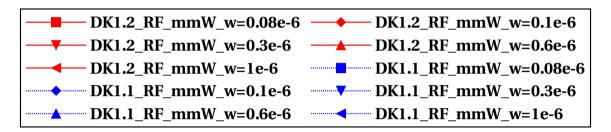


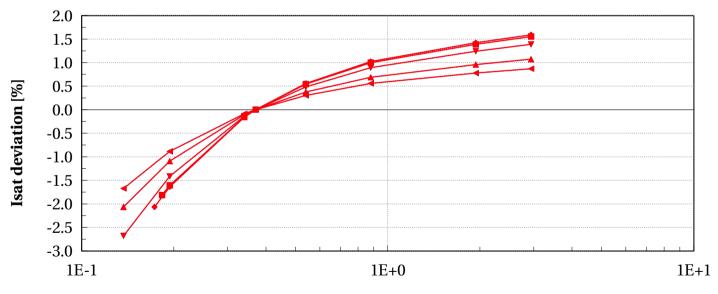




## lvtnfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L=0.03e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

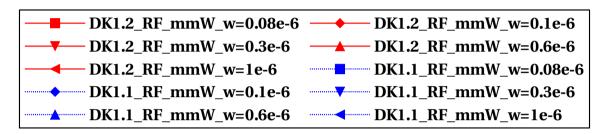


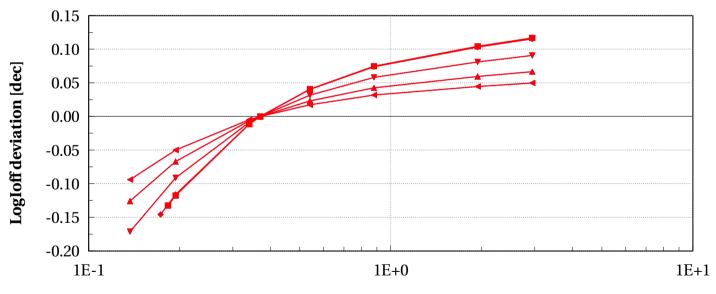




# lvtnfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.03e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=0.046u

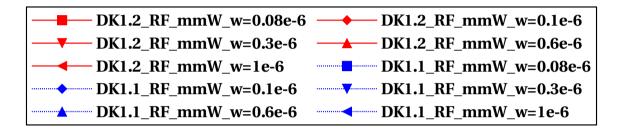


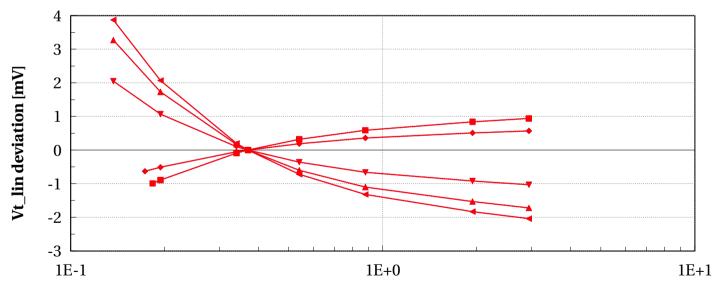




## lvtnfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.046e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

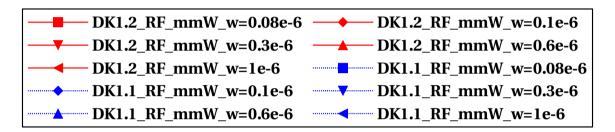


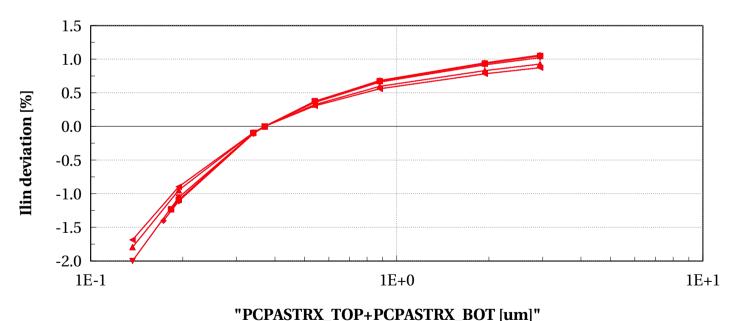


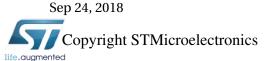


# lvtnfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.046e-6 and Temp==25 and p\_la==0





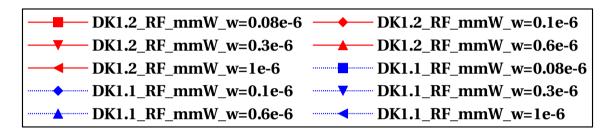


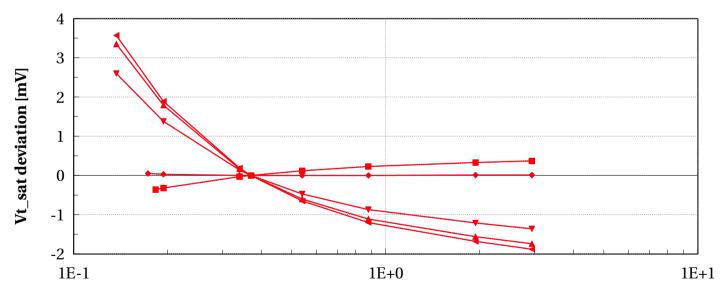




# lvtnfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.046e-6 and Temp==25 and p\_la==0





"PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

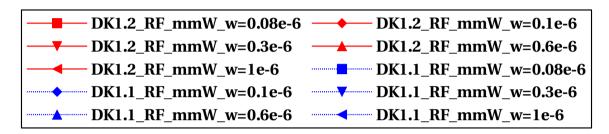


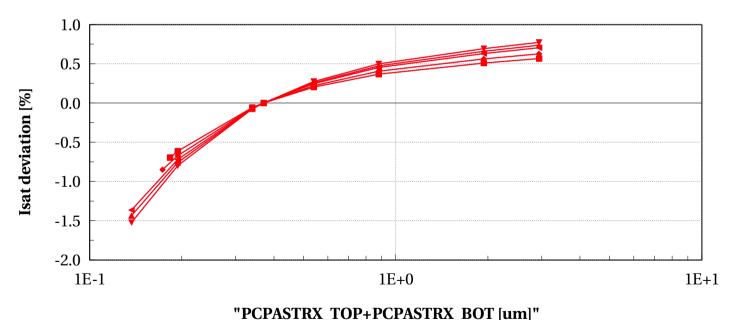


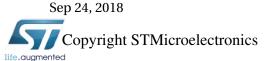


## lvtnfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.046e-6 and Temp==25 and p\_la==0





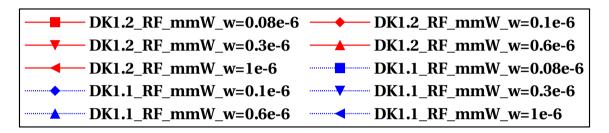


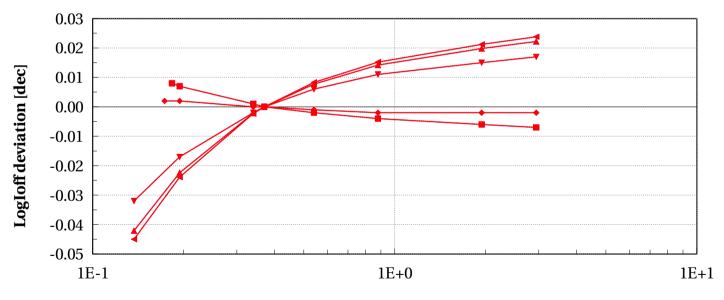




# lvtnfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.046e-6 and Temp==25 and p\_la==0





"PCPASTRX\_TOP+PCPASTRX\_BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=0.09u

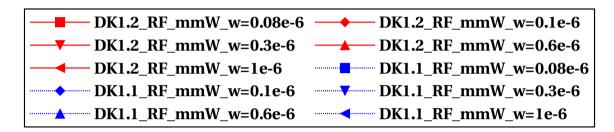


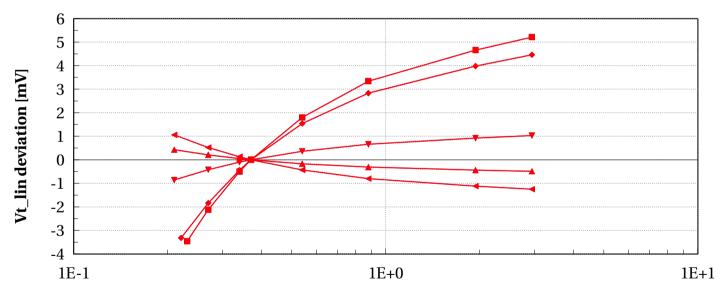




## lvtnfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.09e-6 and Temp==25 and p\_la==0





"PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

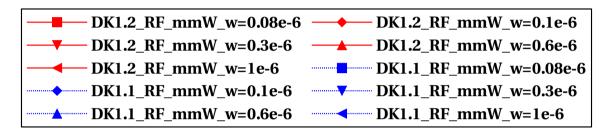


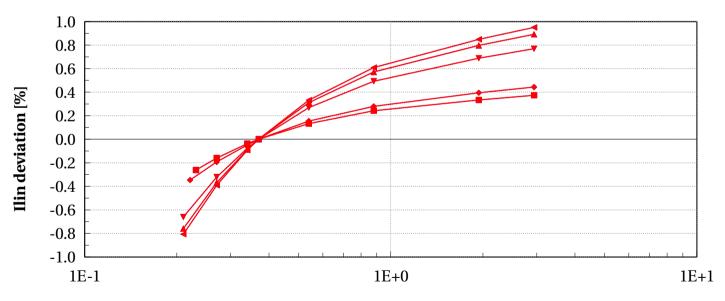




# lvtnfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.09e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

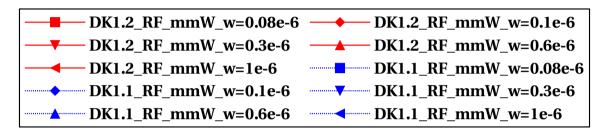


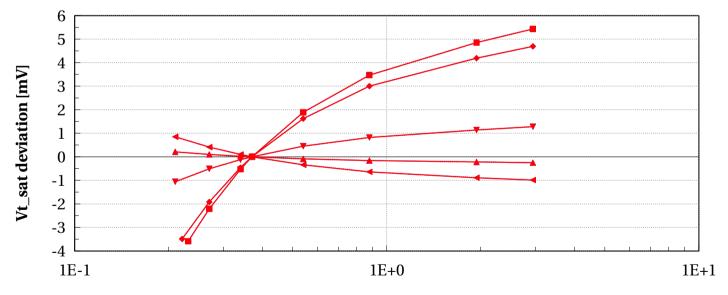




# lvtnfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.09e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

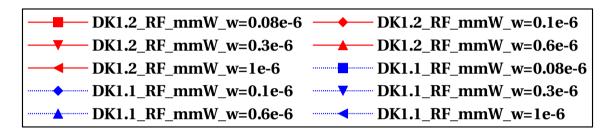


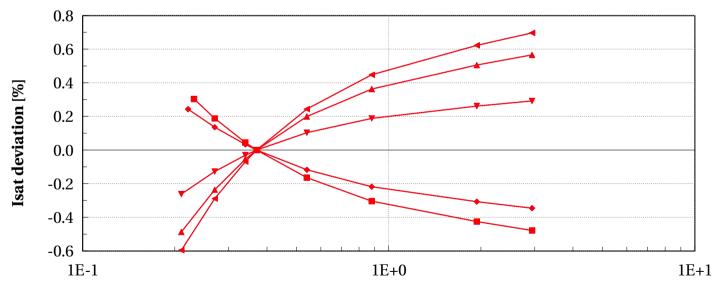




## lvtnfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.09e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

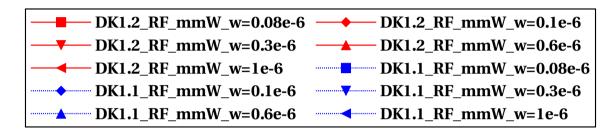


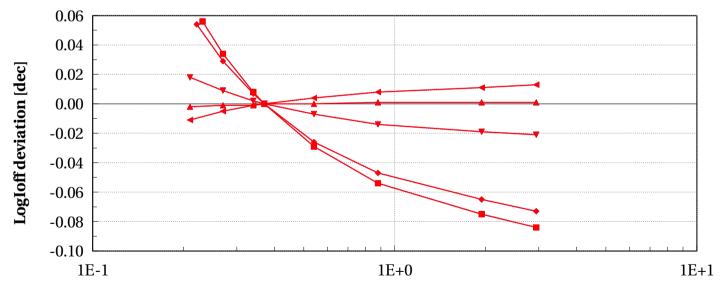




# lvtnfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.09e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=0.12u

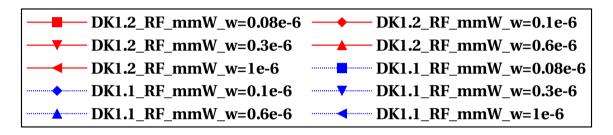


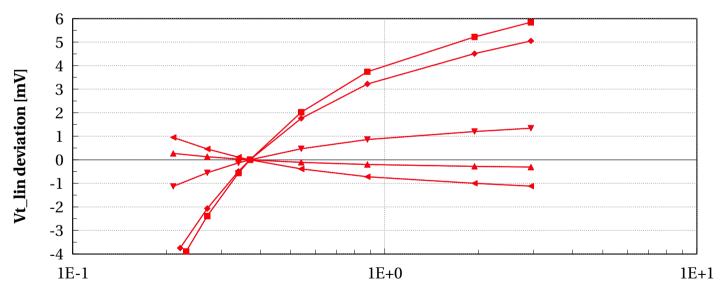




## lvtnfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.120e-6 and Temp==25 and p\_la==0





"PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

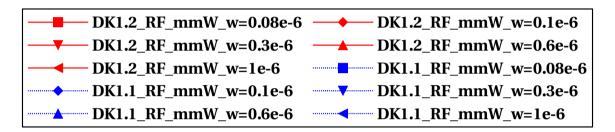


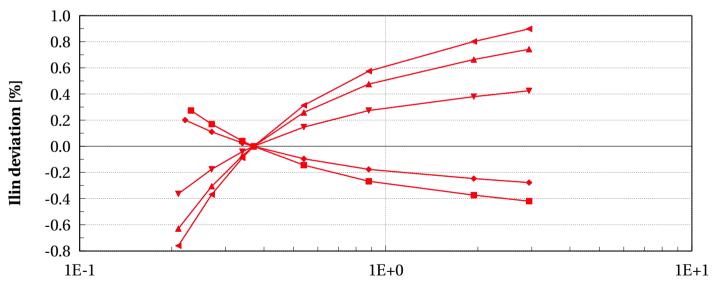




## lvtnfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.120e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

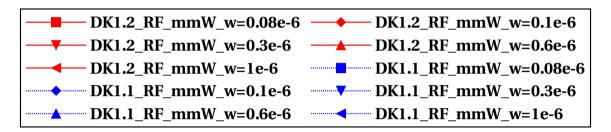


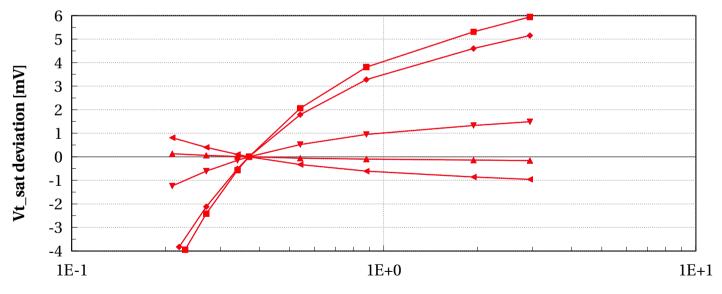




# lvtnfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.120e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

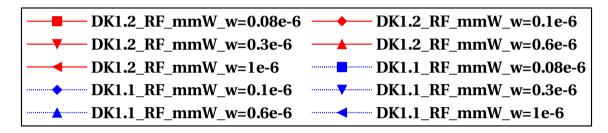


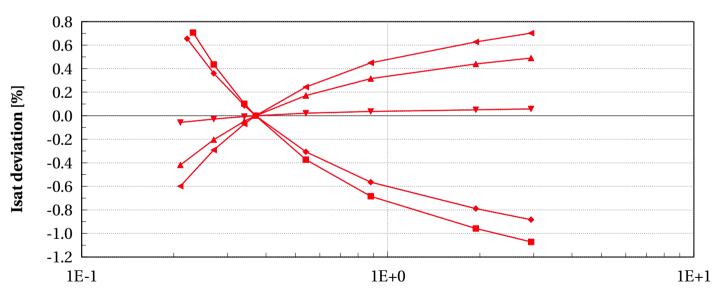




## lvtnfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.120e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

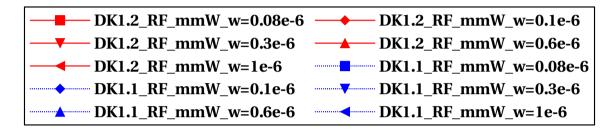


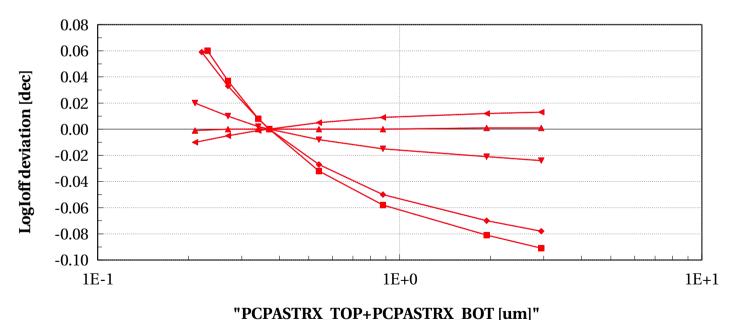


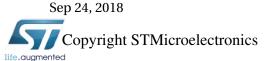


# lvtnfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.120e-6 and Temp==25 and p\_la==0











# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=0.5u

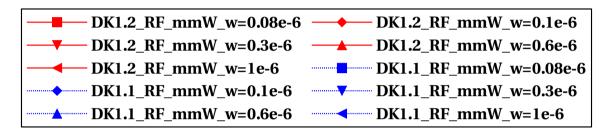


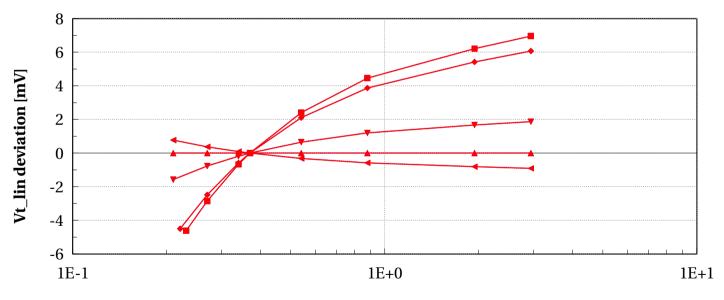




## lvtnfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.5e-6 and Temp==25 and p\_la==0





"PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

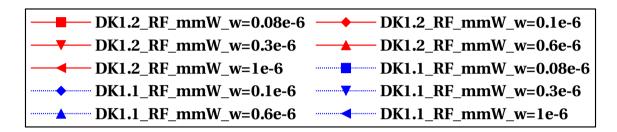


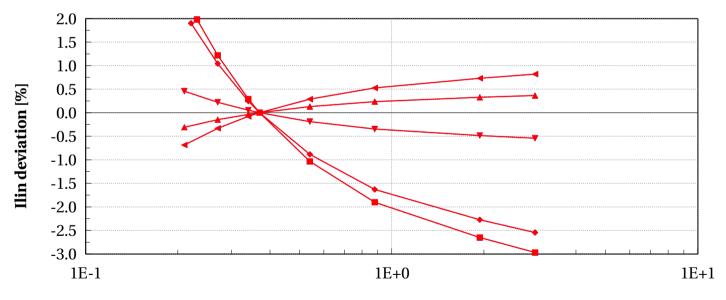




# lvtnfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.5e-6 and Temp==25 and p\_la==0







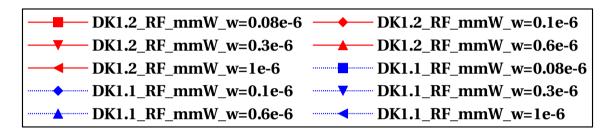


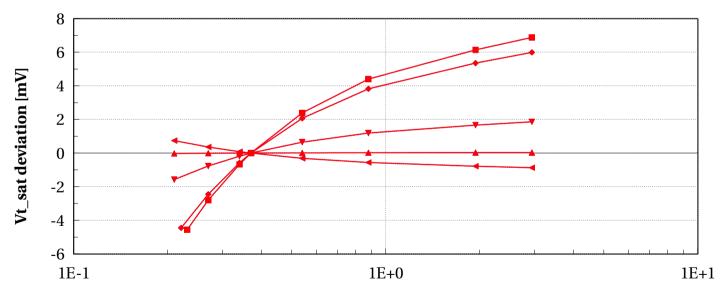




# lvtnfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.5e-6 and Temp==25 and p\_la==0





"PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

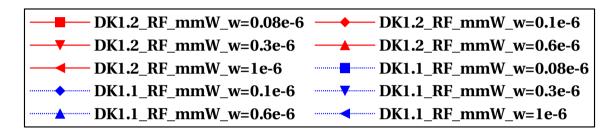


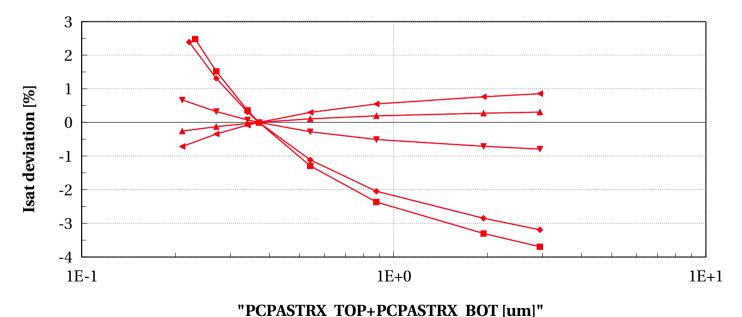




## lvtnfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.5e-6 and Temp==25 and p\_la==0





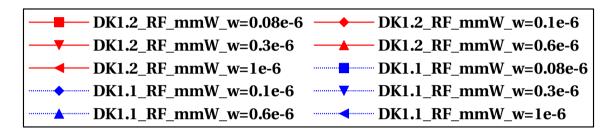


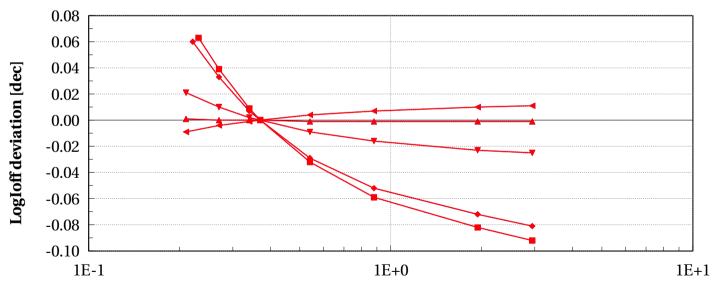
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# lvtnfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.5e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=1u

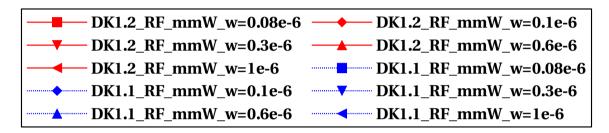


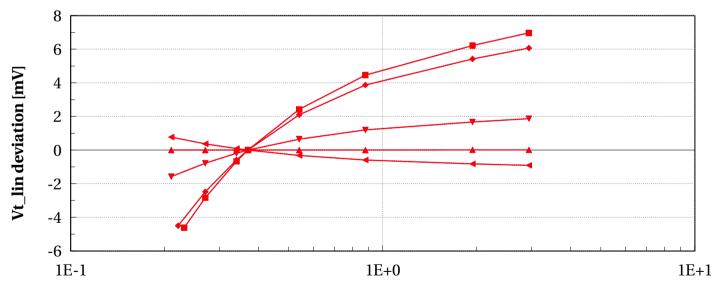




#### lvtnfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

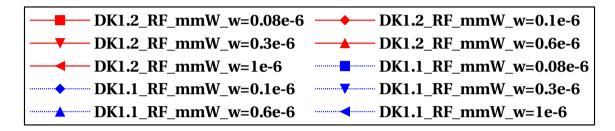


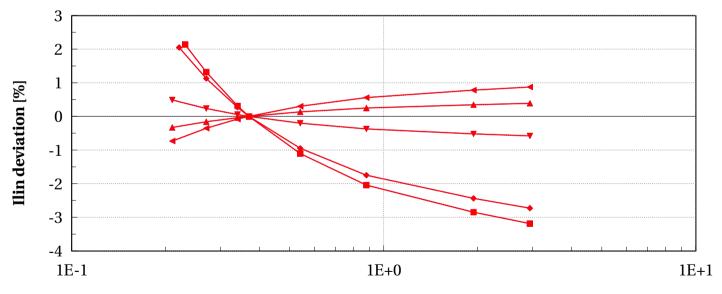




#### lvtnfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

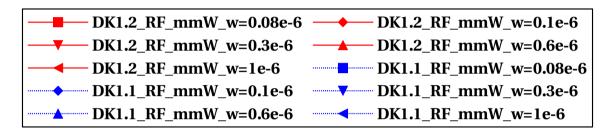


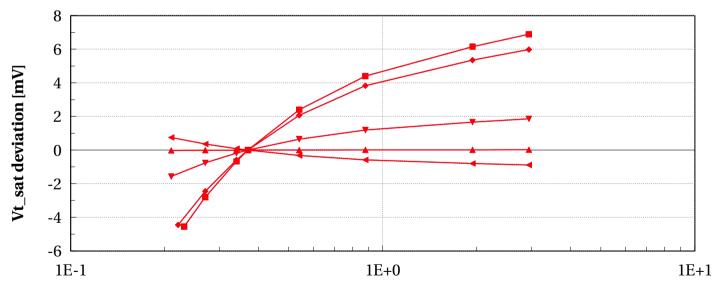




#### lvtnfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

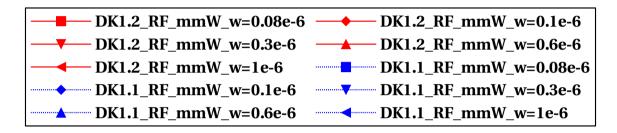


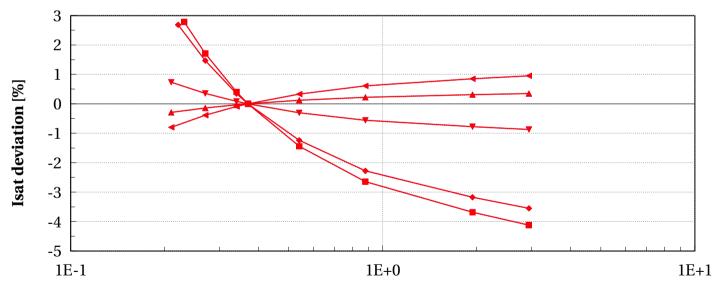




#### lvtnfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

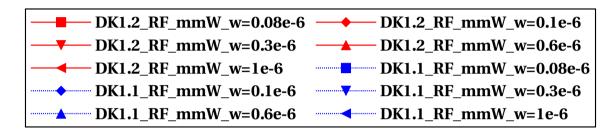


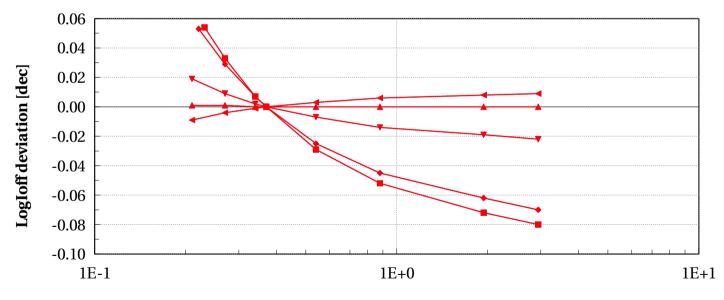




#### lvtnfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==1e-6 and Temp==25 and  $p_la==0$ 













## Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Lscaling @ W=0.08u



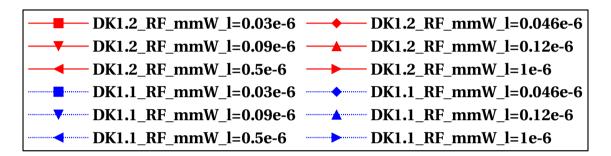


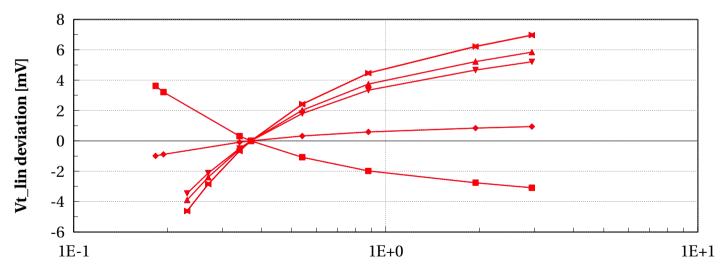
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#### lvtnfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.08e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

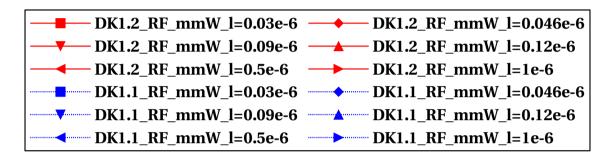


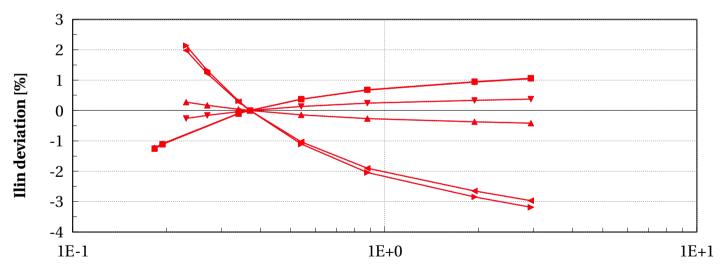




#### lvtnfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.08e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

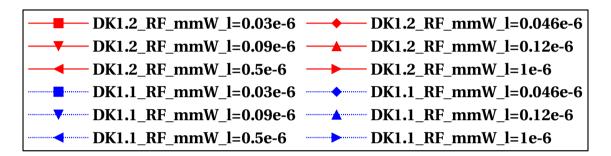


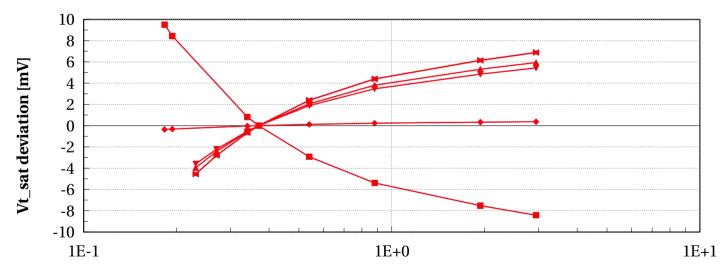
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#### lvtnfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.08e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

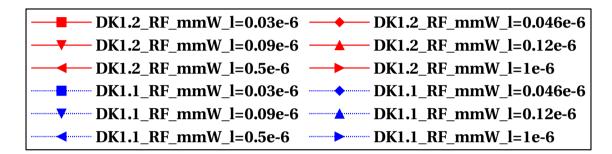


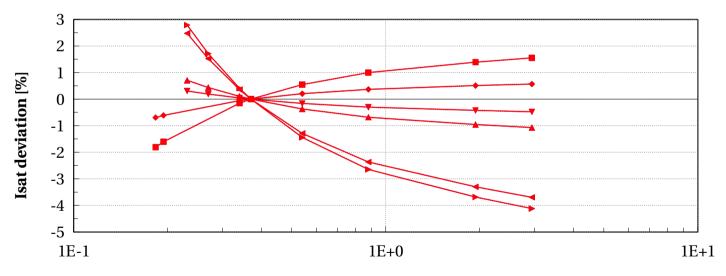




#### lvtnfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.08e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

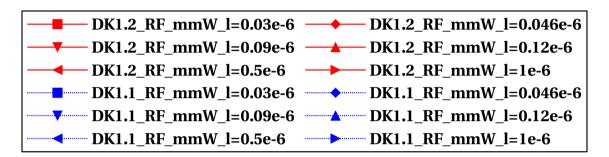


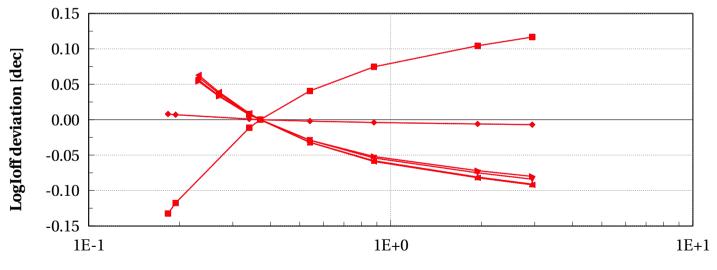
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#### lvtnfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.08e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"







## Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Lscaling @ W=0.1u



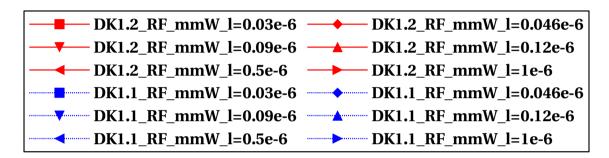


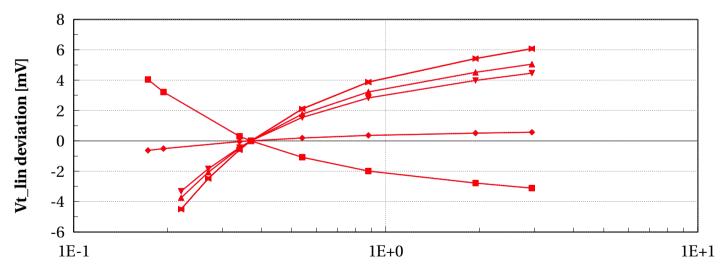
dormieub



#### lvtnfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

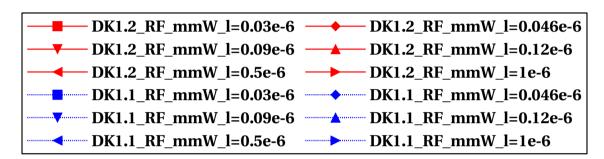


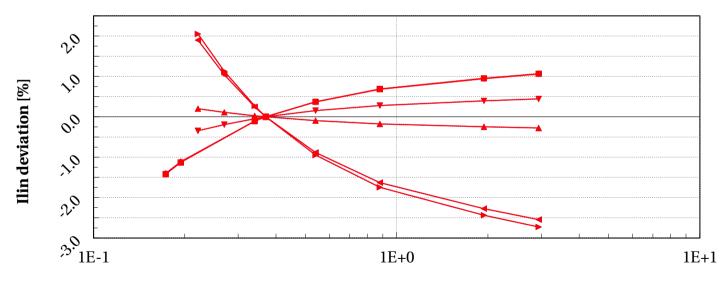




#### lvtnfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

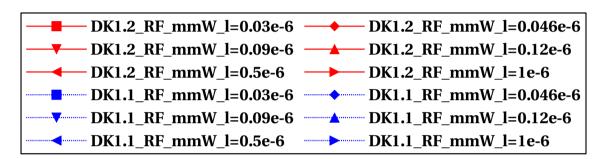


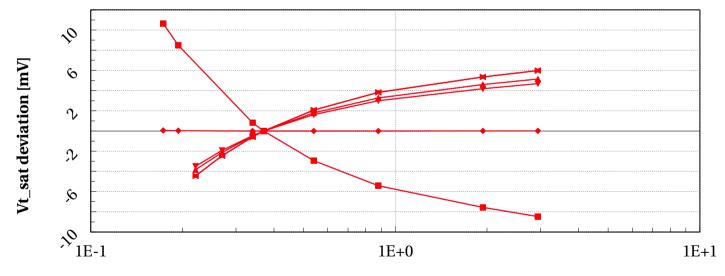




#### lvtnfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

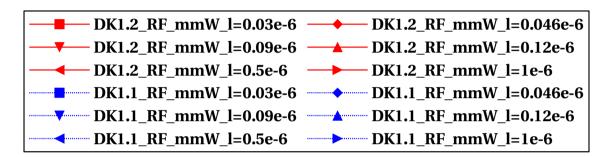


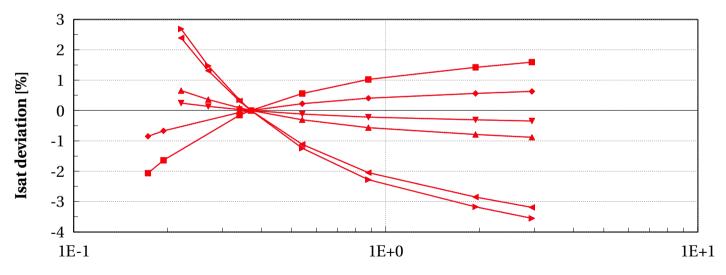




#### lvtnfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

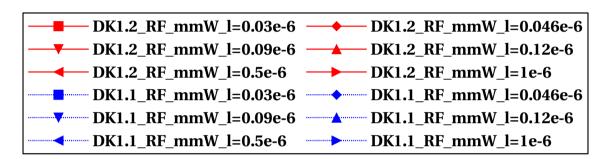


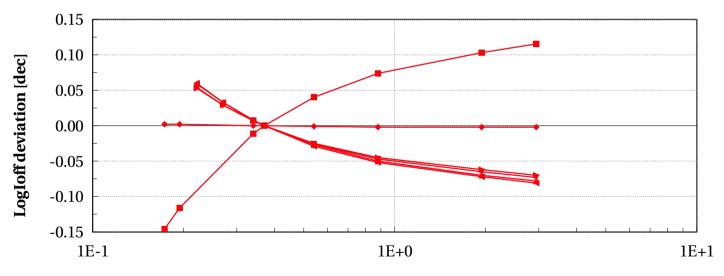




#### lvtnfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"







## Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Lscaling@W=0.3u



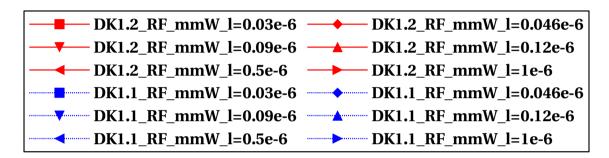


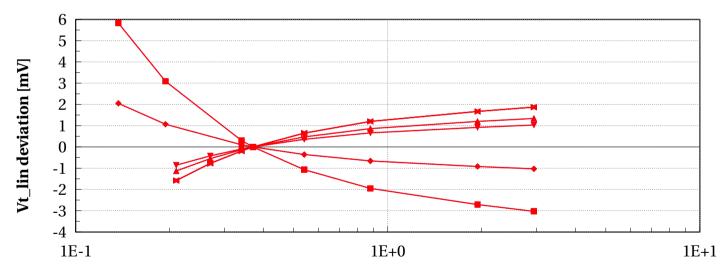
dormieub



#### lvtnfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.3e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

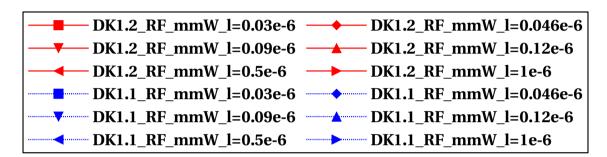


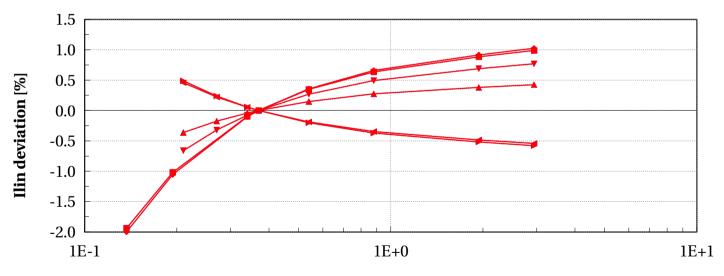




#### lvtnfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.3e-6 and Temp==25 and p la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

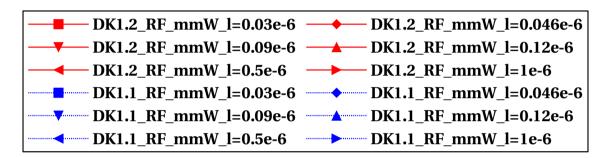


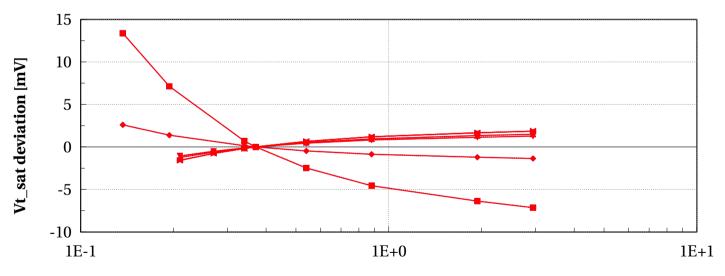
**ST Confidential** 



#### lvtnfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.3e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

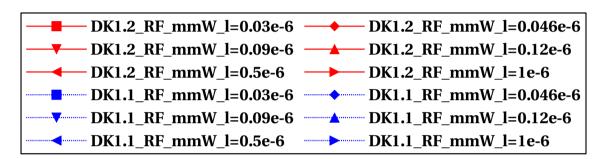


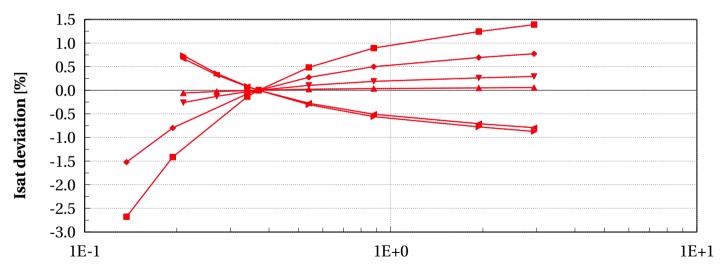




#### lvtnfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.3e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

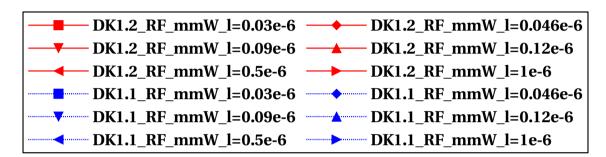


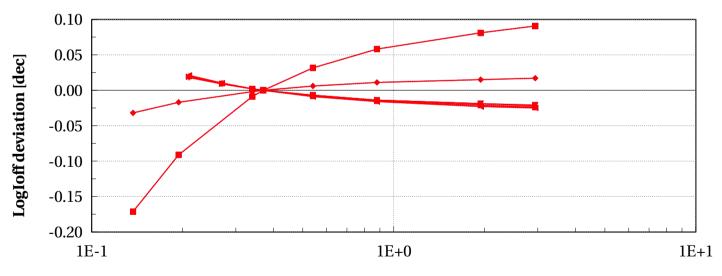




#### lvtnfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.3e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Lscaling@W=0.6u



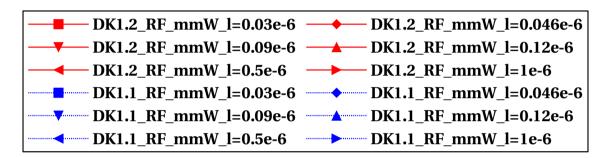


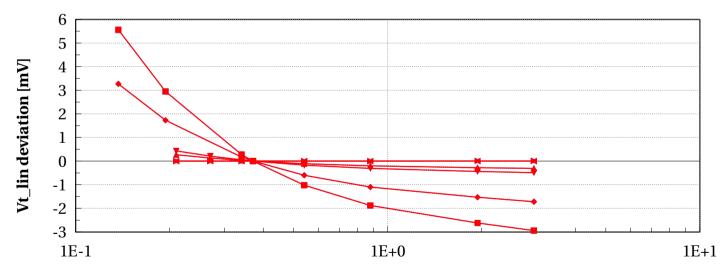
dormieub



#### lvtnfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.6e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

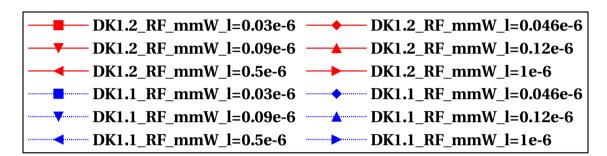


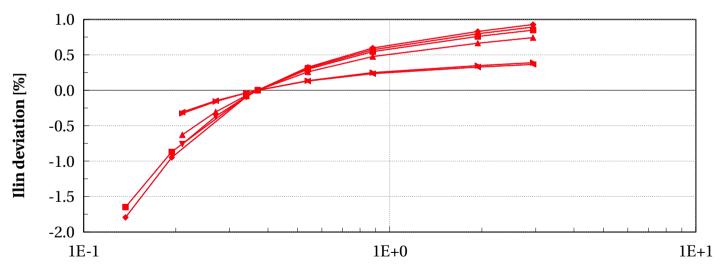




#### lvtnfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.6e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

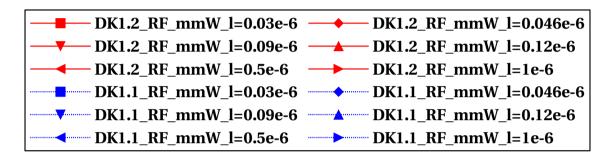


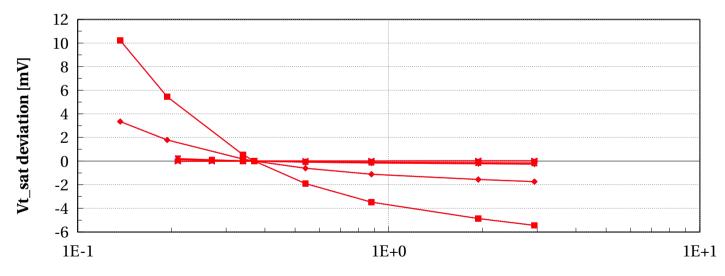




#### lvtnfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.6e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

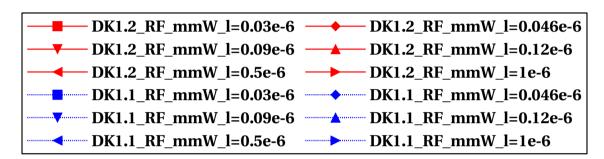


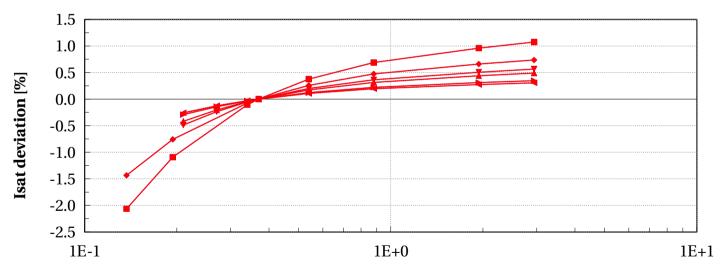




#### lvtnfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.6e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

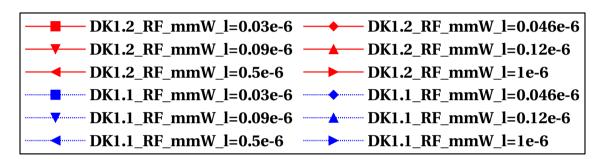


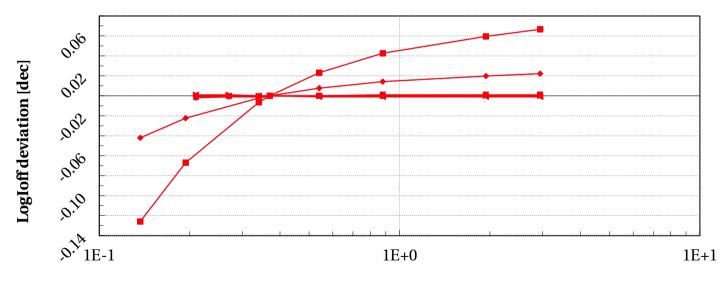




#### lvtnfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.6e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"







## Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Lscaling @ W=1u



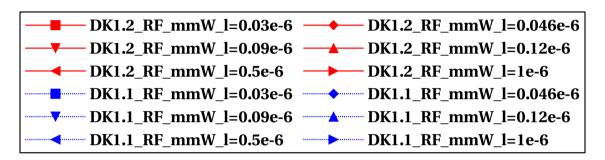


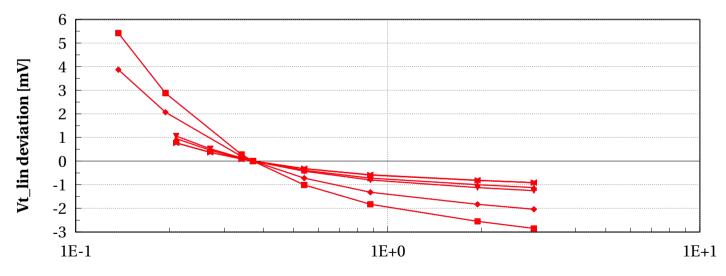
dormieub



#### lvtnfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

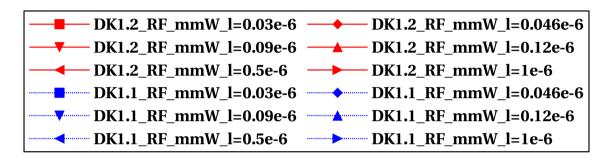


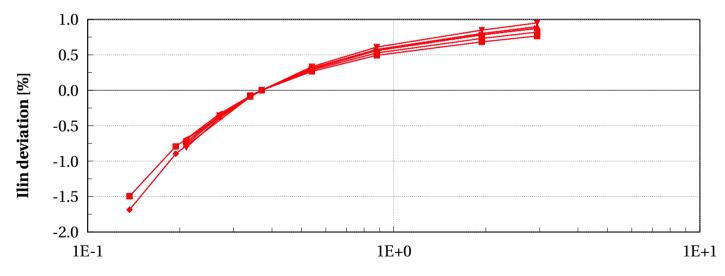




#### lvtnfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

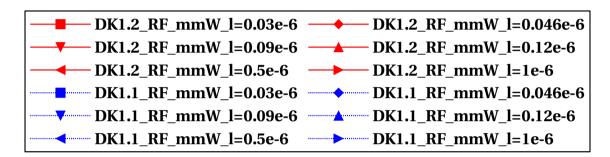


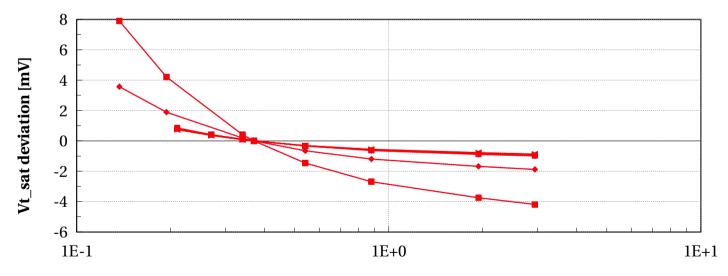




#### lvtnfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

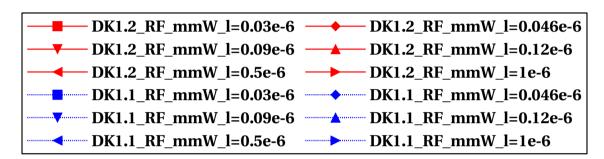


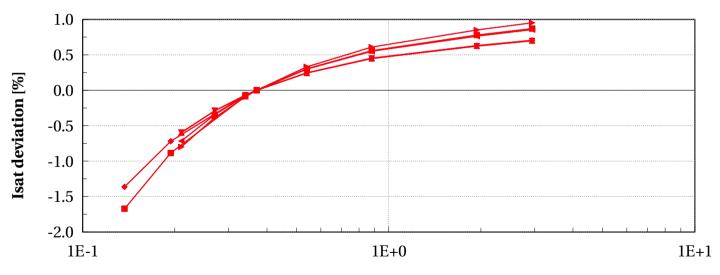




#### lvtnfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

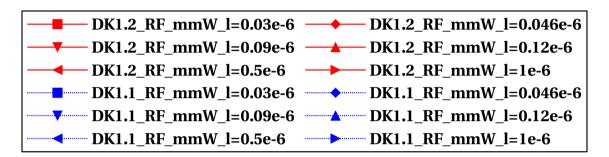


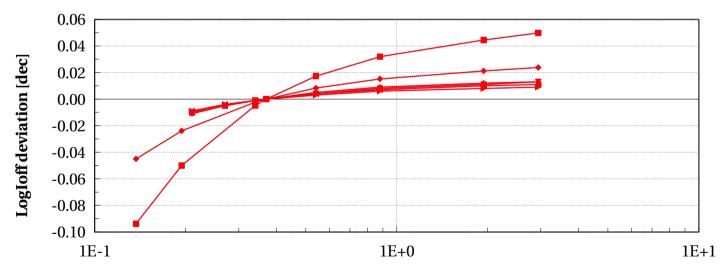




#### lvtnfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"







## lvtpfet\_acc Electrical characteristics scaling







### Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=0.03u



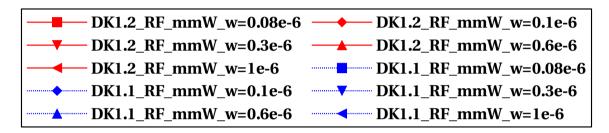


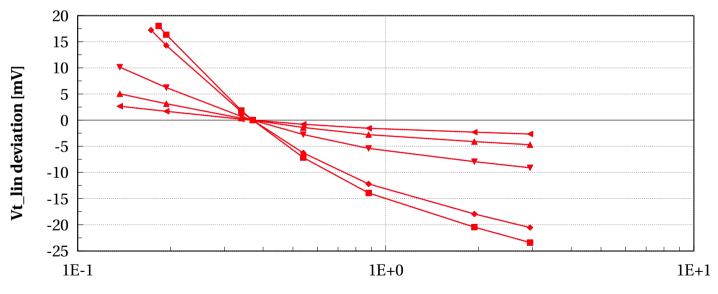
dormieub



#### lvtpfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.03e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

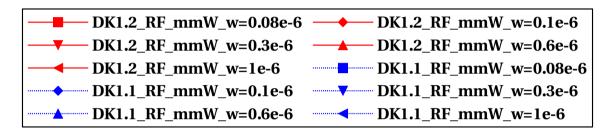


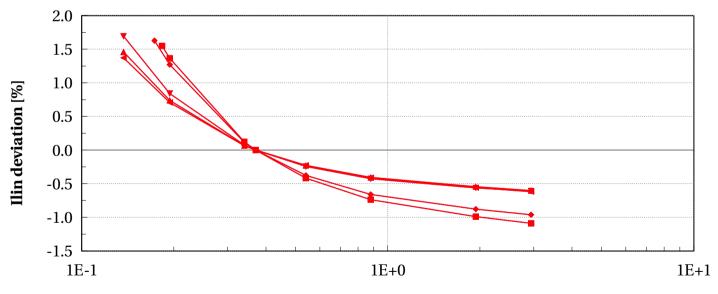




#### lvtpfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.03e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

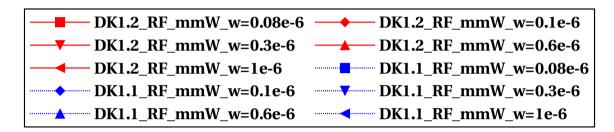


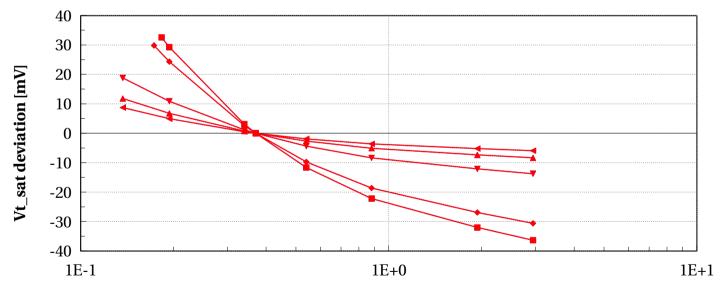




#### lvtpfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.03e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

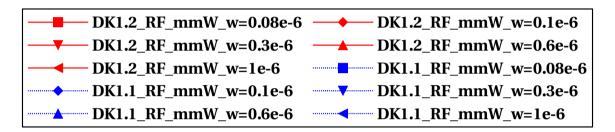


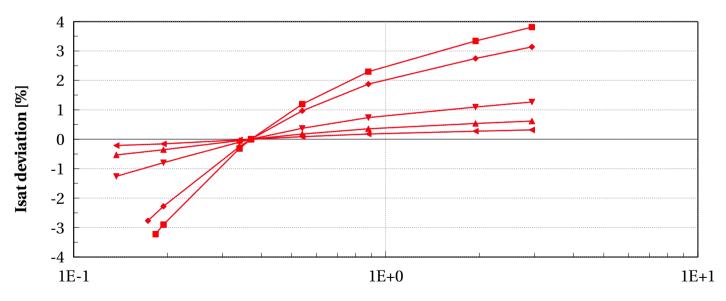




#### lvtpfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.03e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

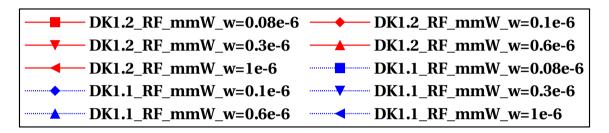


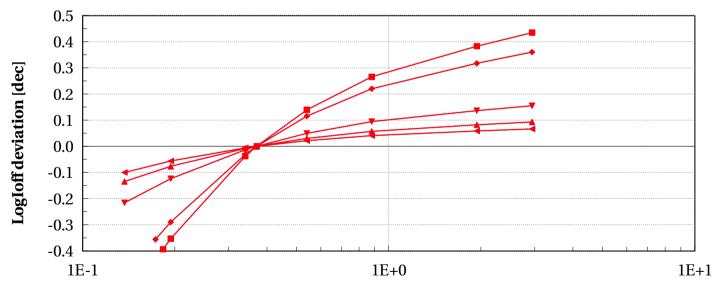




#### lvtpfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L=0.03e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"





dormieub



# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=0.046u



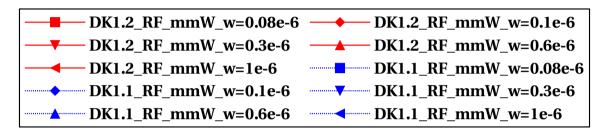


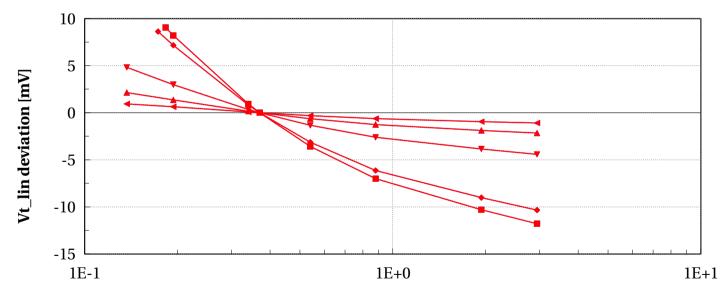
dormieub



#### lvtpfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.046e-6 and Temp==25 and  $p_la==0$ 







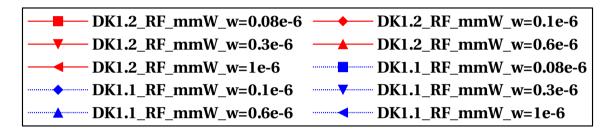


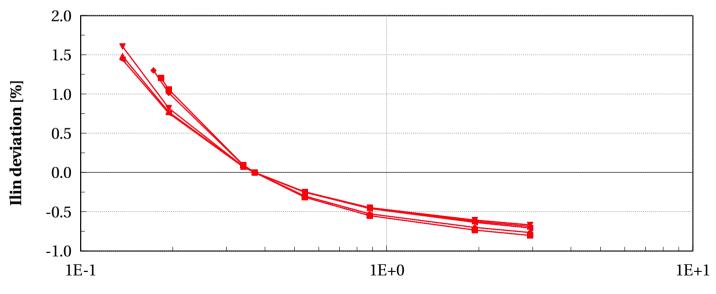




#### lvtpfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.046e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

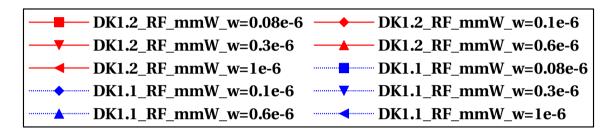


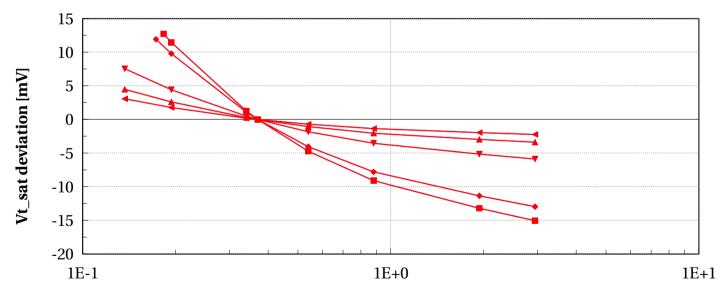




#### lvtpfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.046e-6 and Temp==25 and p\_la==0







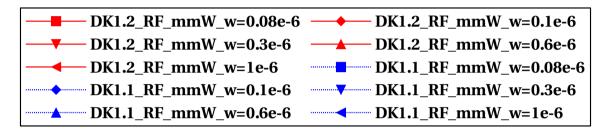


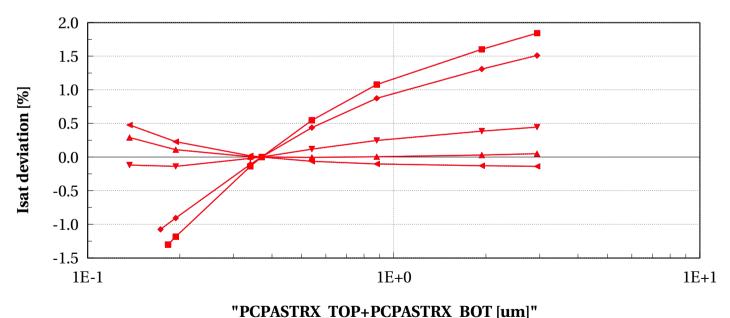


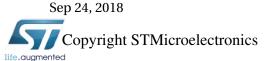


#### lvtpfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.046e-6 and Temp==25 and p\_la==0





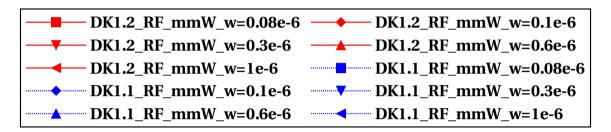


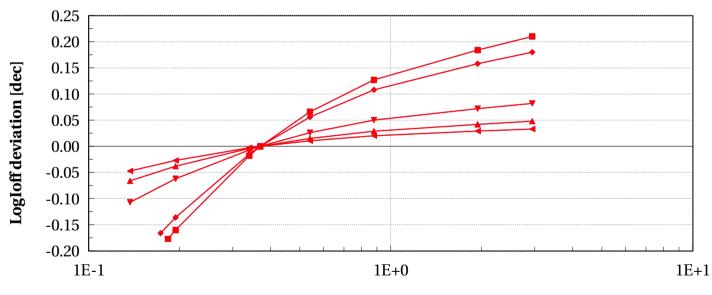




#### lvtpfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.046e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"







### Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=0.09u



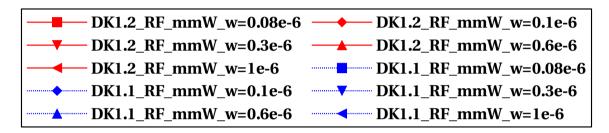


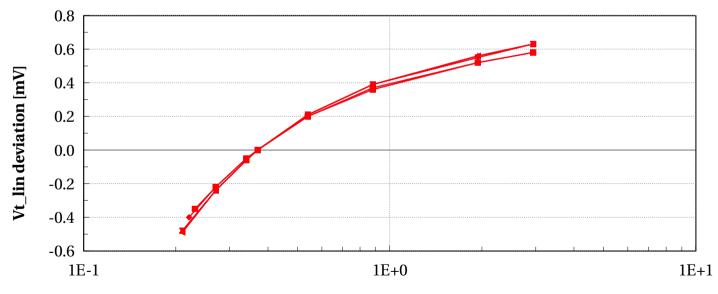
dormieub



#### lvtpfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L=0.09e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

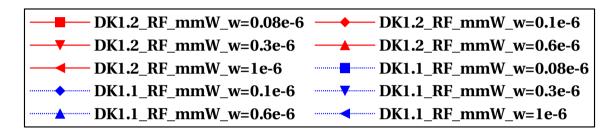


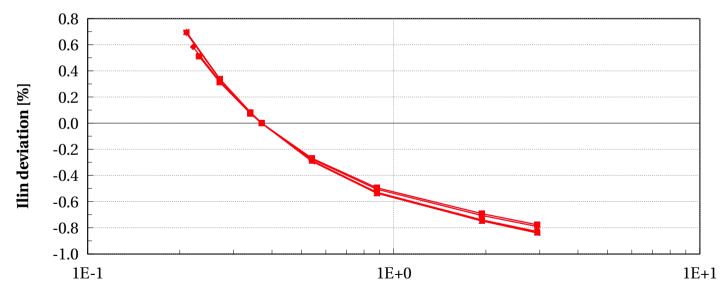




#### lvtpfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.09e-6 and Temp==25 and p\_la==0





"PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

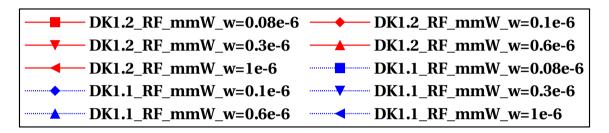


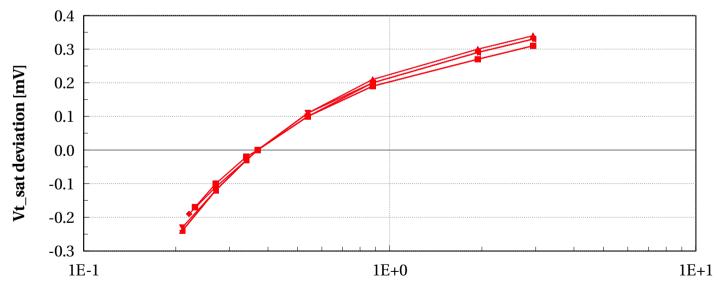




#### lvtpfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.09e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

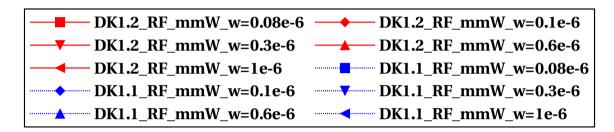


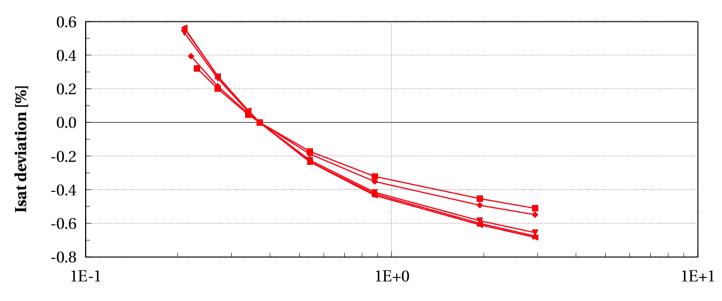




### lvtpfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.09e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

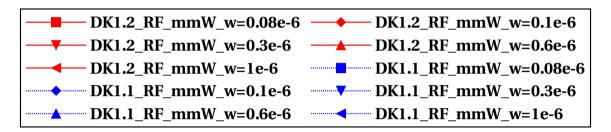


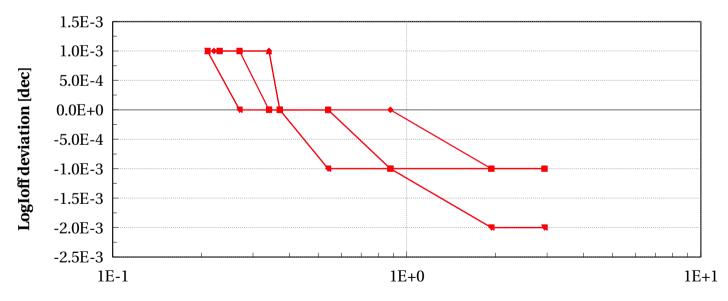




#### lvtpfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.09e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=0.12u

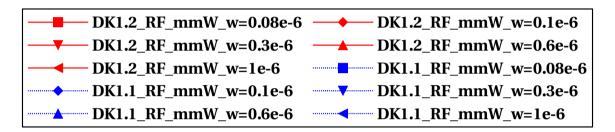


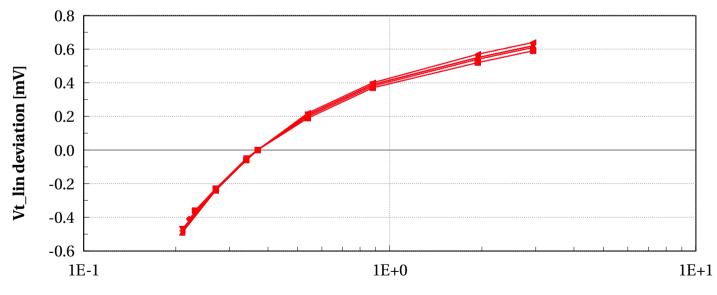




#### lvtpfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.120e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

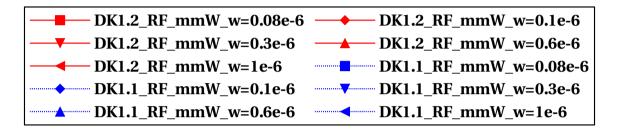


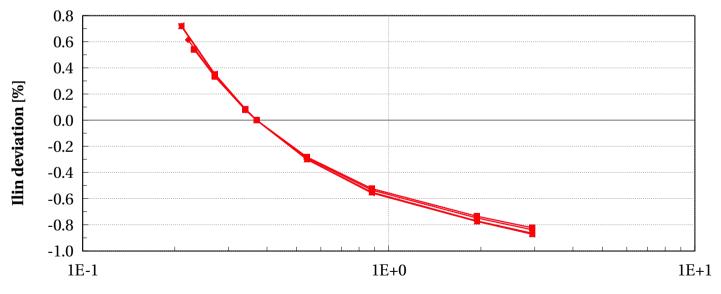




#### lvtpfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.120e-6 and Temp==25 and p\_la==0







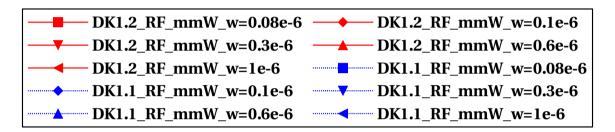


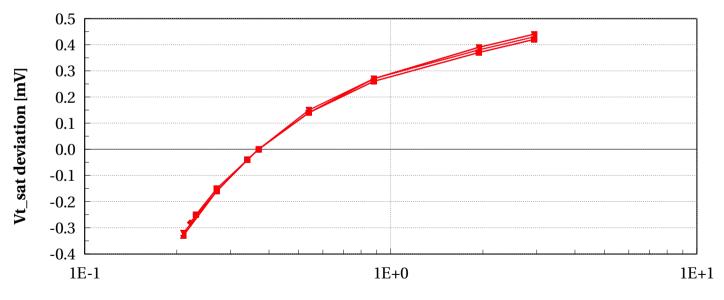




#### lvtpfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.120e-6 and Temp==25 and p\_la==0





"PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

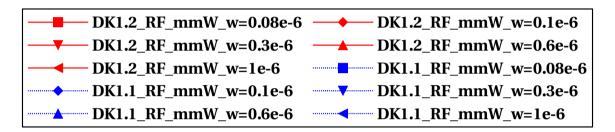


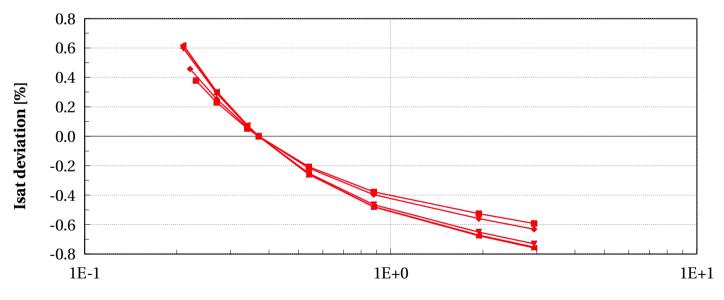




#### lvtpfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.120e-6 and Temp==25 and p\_la==0







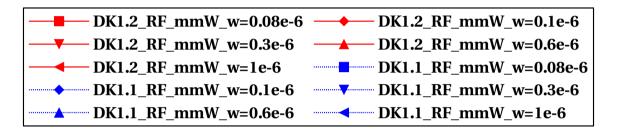


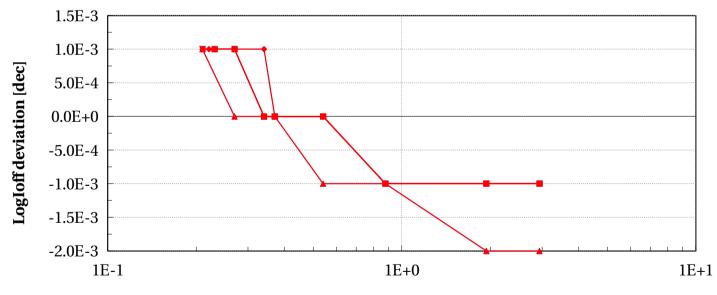




#### lvtpfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.120e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=0.5u

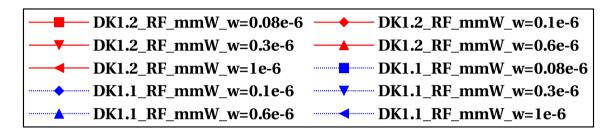


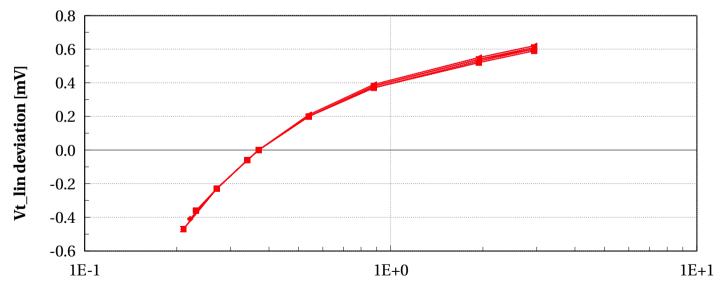




#### lvtpfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.5e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

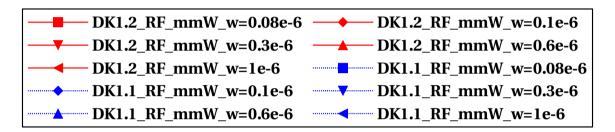


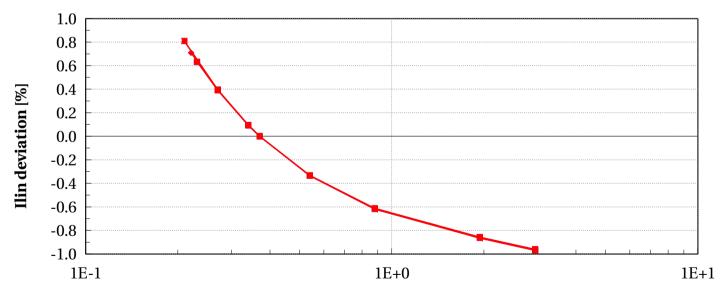




#### lvtpfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.5e-6 and Temp==25 and p\_la==0







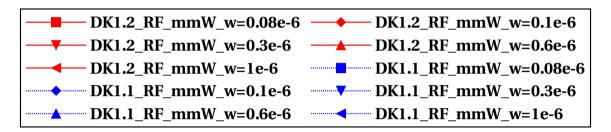


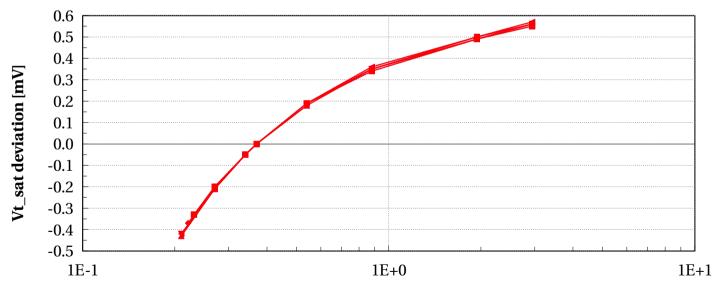




#### lvtpfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.5e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

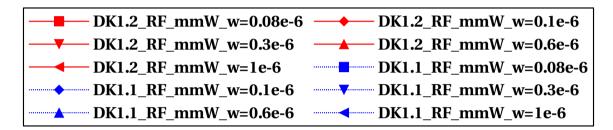


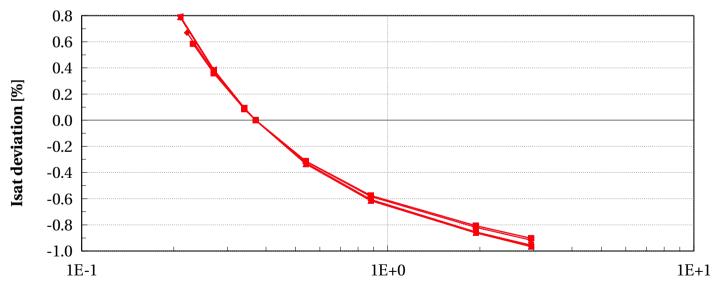




#### lvtpfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.5e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

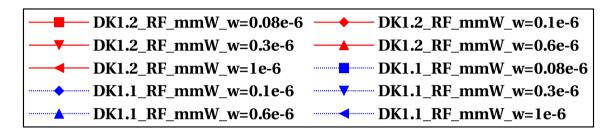


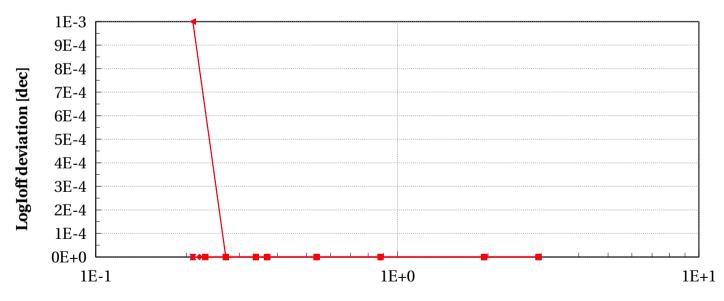




### lvtpfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.5e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=1u

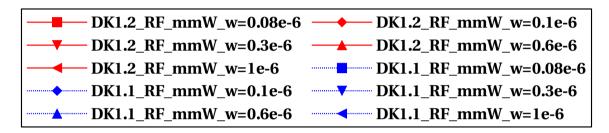


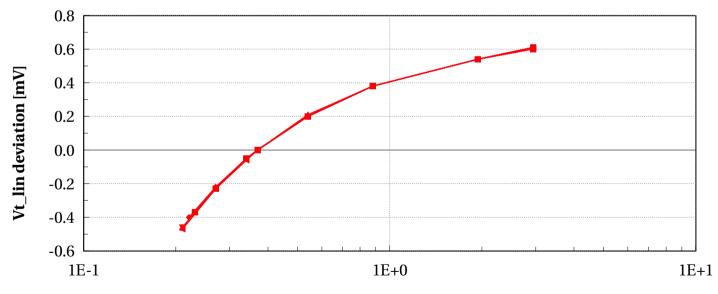




#### lvtpfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

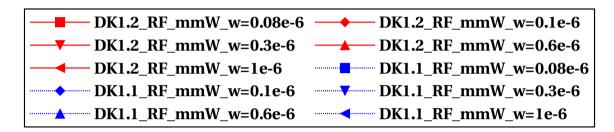


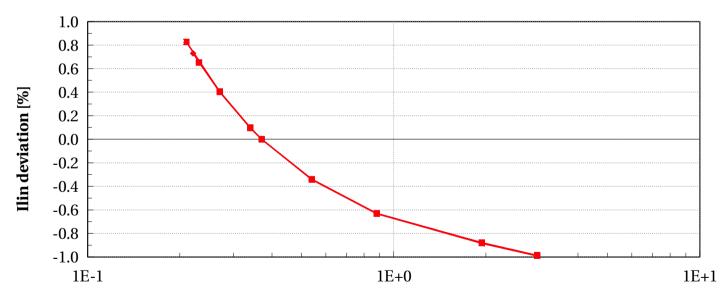




#### lvtpfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

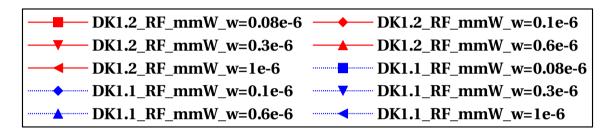


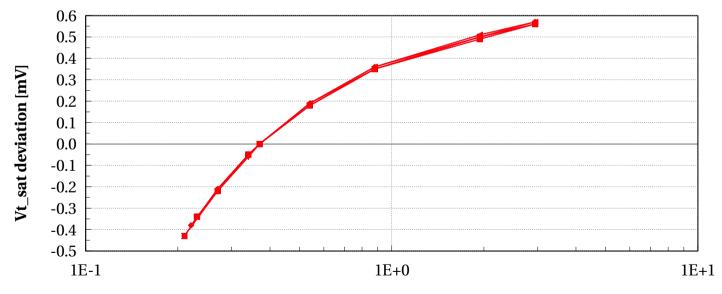




#### lvtpfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

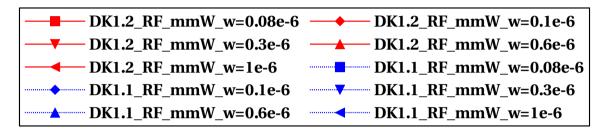


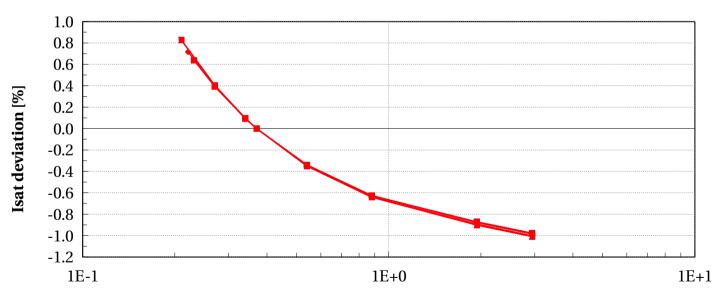




#### lvtpfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

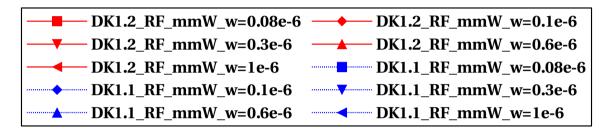


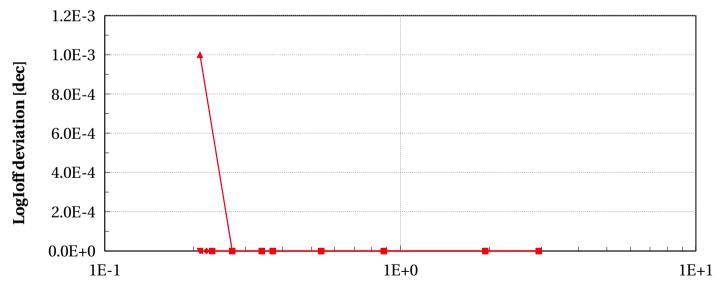




### lvtpfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==1e-6 and Temp==25 and p\_la==0











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# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Lscaling @ W=0.08u

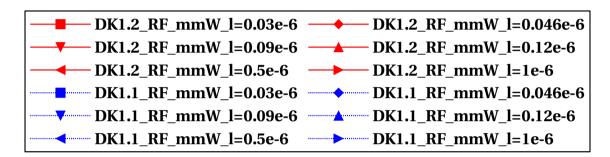


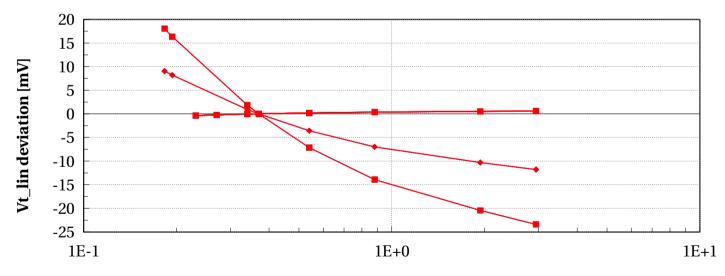


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#### lvtpfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





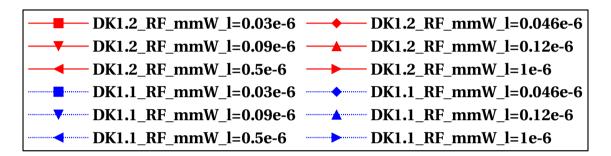
"PCPASTRX TOP+PCPASTRX BOT [um]"

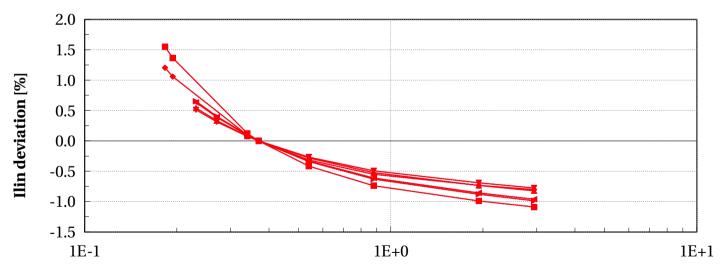






#### lvtpfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





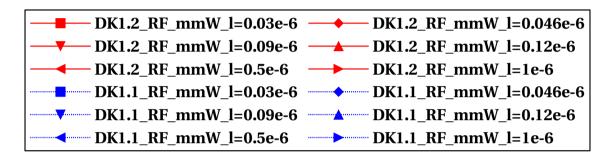
"PCPASTRX TOP+PCPASTRX BOT [um]"

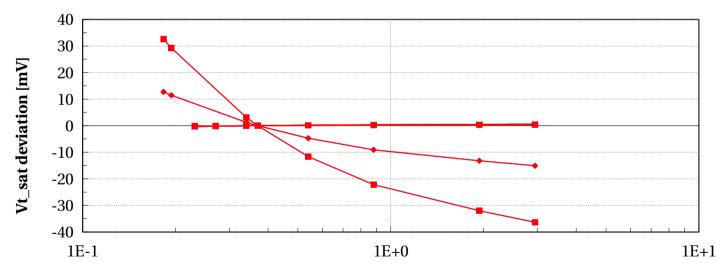






#### lvtpfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





"PCPASTRX TOP+PCPASTRX BOT [um]"

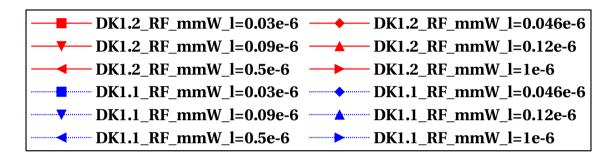


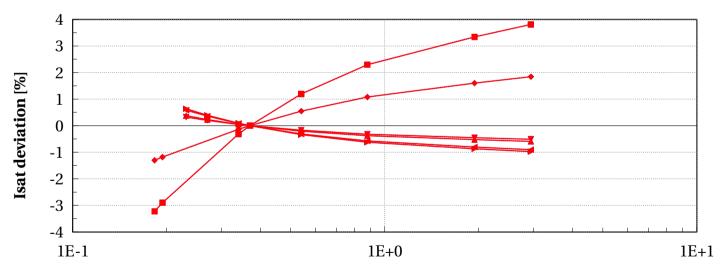




#### lvtpfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.08e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

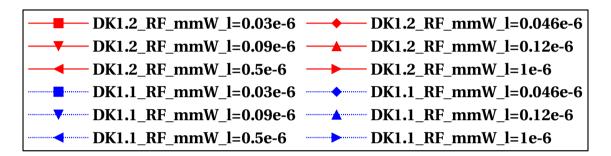


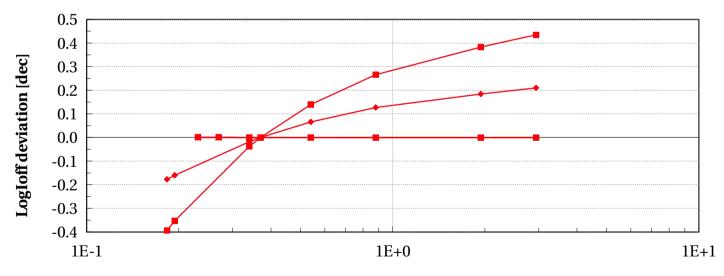
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#### lvtpfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





"PCPASTRX TOP+PCPASTRX BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Lscaling @ W=0.1u

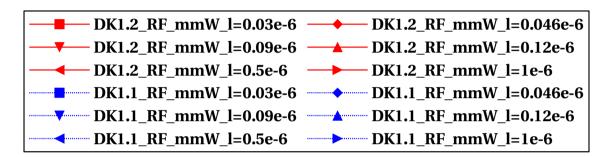


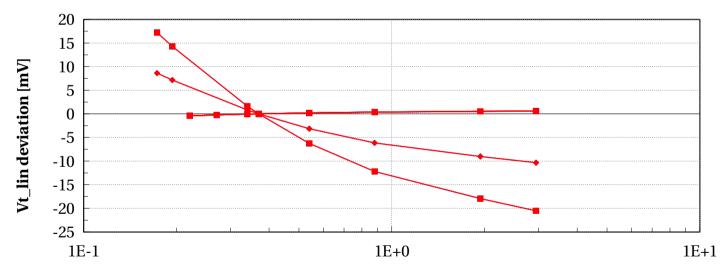
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#### lvtpfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

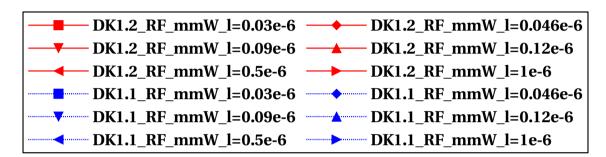


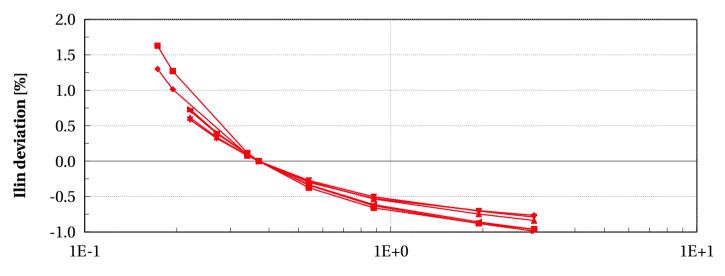




#### lvtpfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

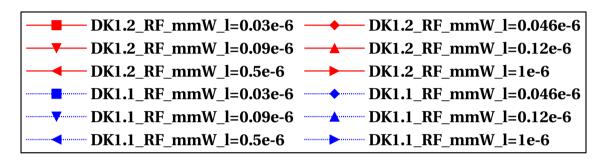


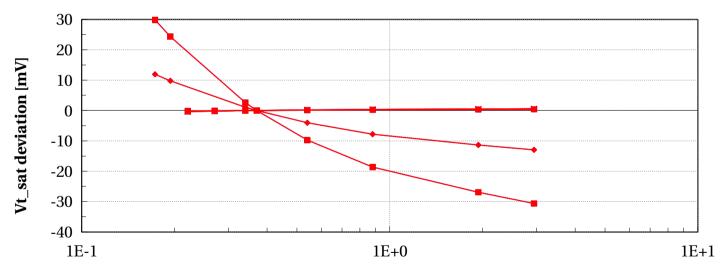




#### lvtpfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.1e-6 and Temp==25 and  $p_la==0$ 







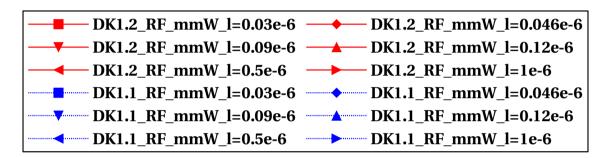


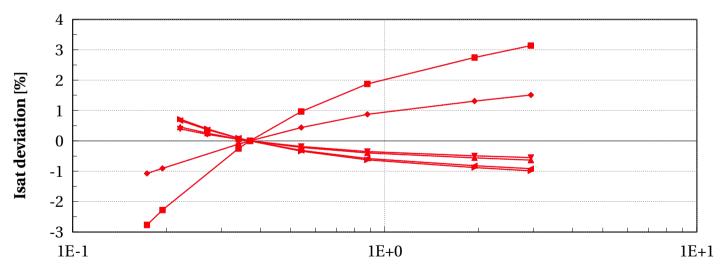




#### lvtpfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

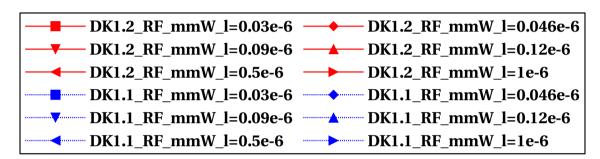


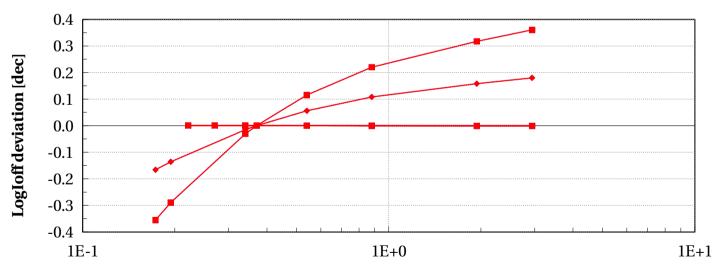




#### lvtpfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"







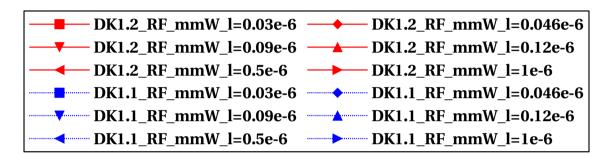
# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Lscaling@W=0.3u

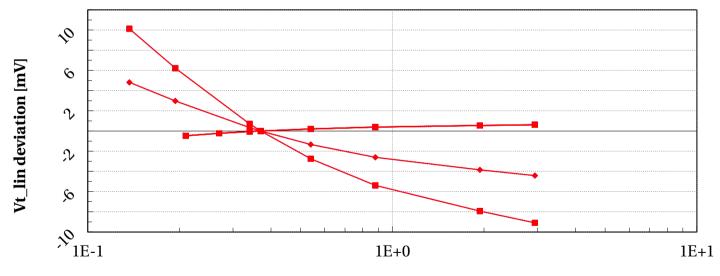


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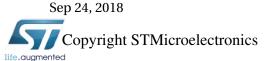


#### lvtpfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





"PCPASTRX TOP+PCPASTRX BOT [um]"

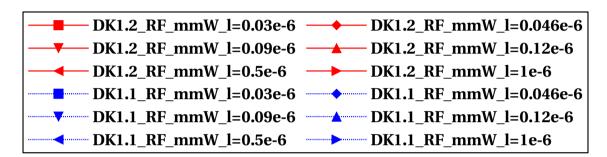


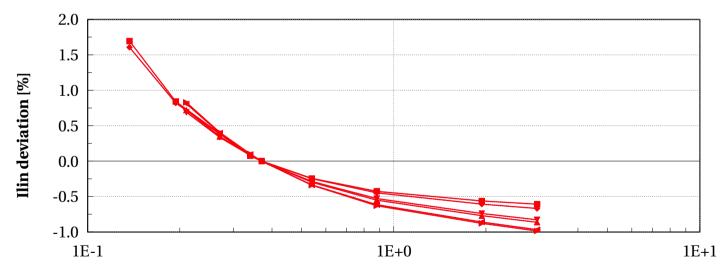




#### lvtpfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.3e-6 and Temp==25 and  $p_la==0$ 





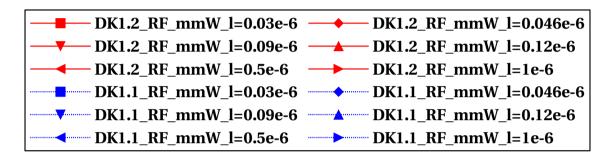
"PCPASTRX TOP+PCPASTRX BOT [um]"

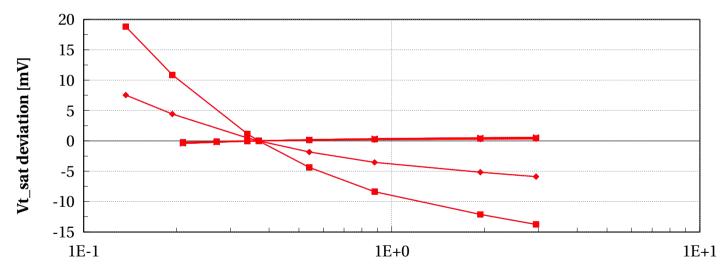






#### lvtpfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





"PCPASTRX TOP+PCPASTRX BOT [um]"

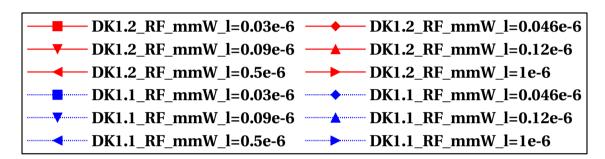


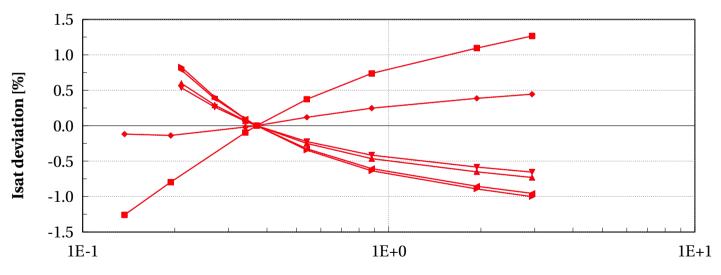




#### lvtpfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.3e-6 and Temp==25 and  $p_la==0$ 





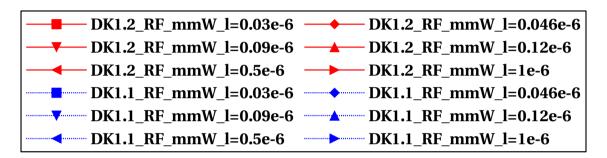
"PCPASTRX TOP+PCPASTRX BOT [um]"

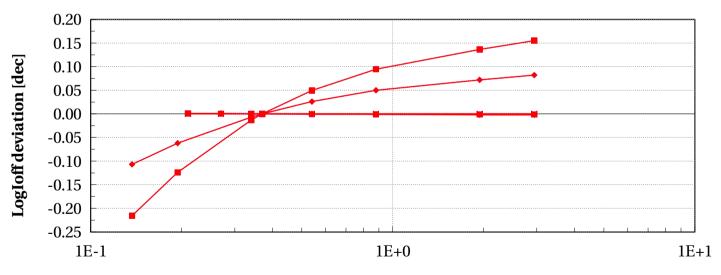






#### lvtpfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





"PCPASTRX TOP+PCPASTRX BOT [um]"





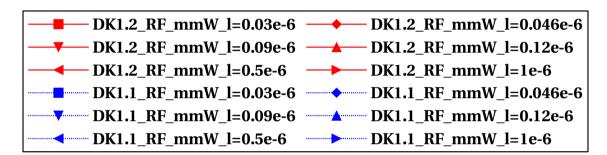


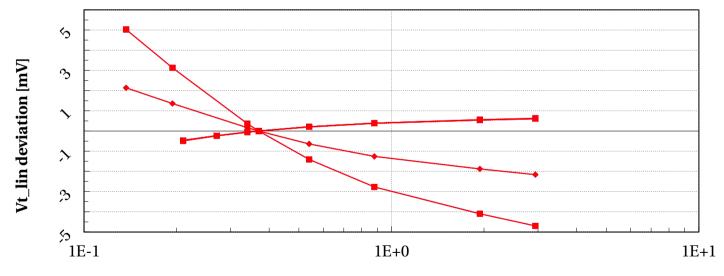
# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Lscaling@W=0.6u





#### lvtpfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





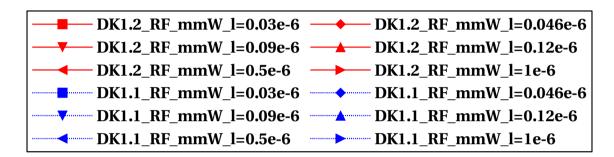
"PCPASTRX TOP+PCPASTRX BOT [um]"

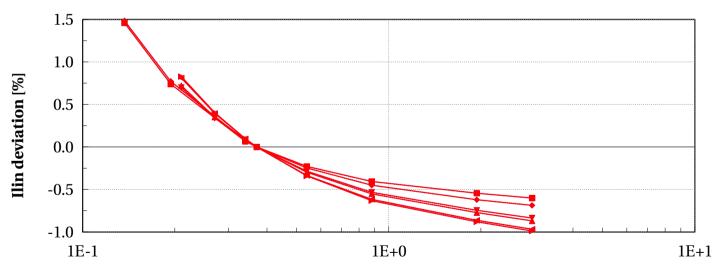






#### lvtpfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





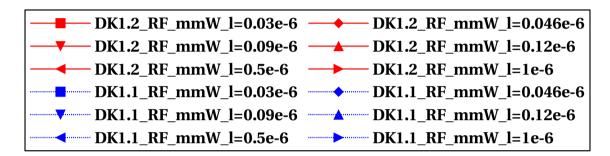
"PCPASTRX TOP+PCPASTRX BOT [um]"

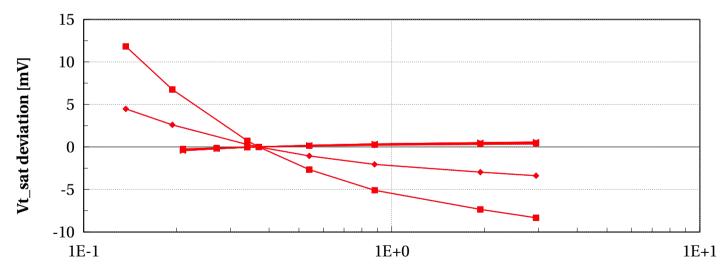






#### lvtpfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





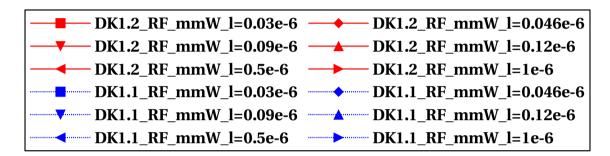
"PCPASTRX TOP+PCPASTRX BOT [um]"

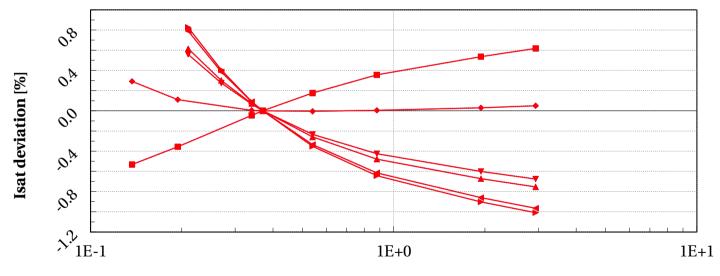






#### lvtpfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





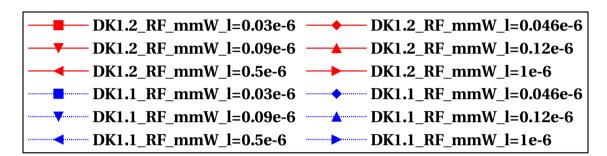
"PCPASTRX TOP+PCPASTRX BOT [um]"

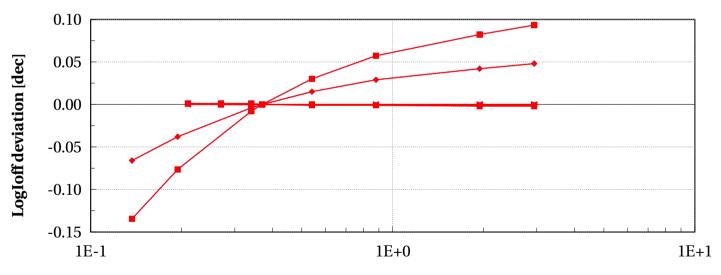






#### lvtpfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





"PCPASTRX TOP+PCPASTRX BOT [um]"







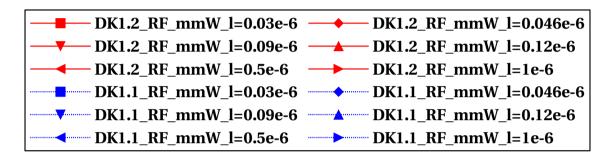
# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Lscaling @ W=1u

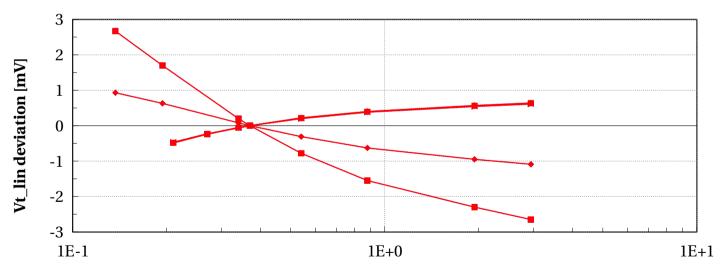


dormieub



### lvtpfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





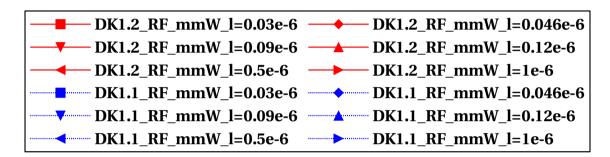
"PCPASTRX TOP+PCPASTRX BOT [um]"

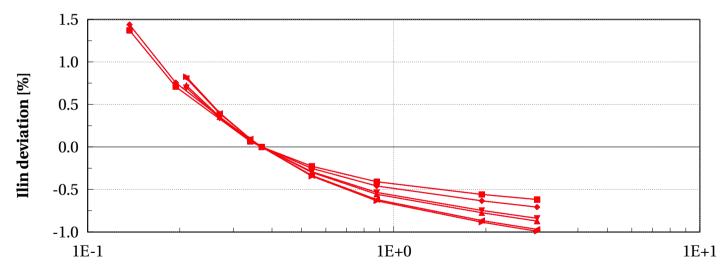






#### lvtpfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





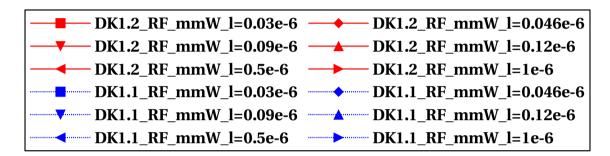
"PCPASTRX TOP+PCPASTRX BOT [um]"

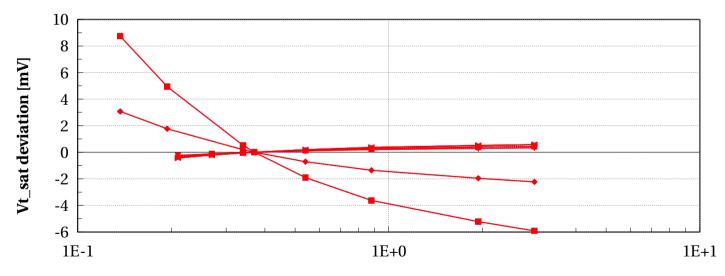






#### lvtpfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





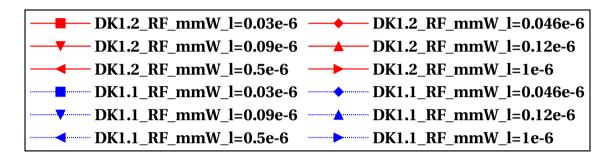
"PCPASTRX TOP+PCPASTRX BOT [um]"

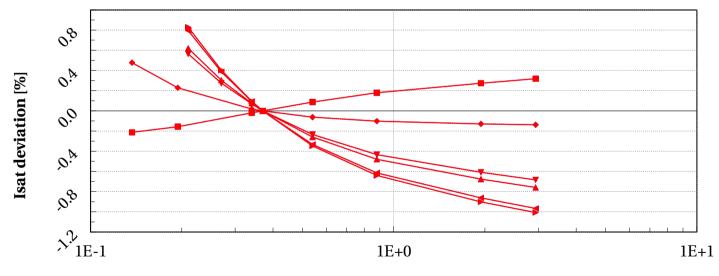






#### lvtpfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





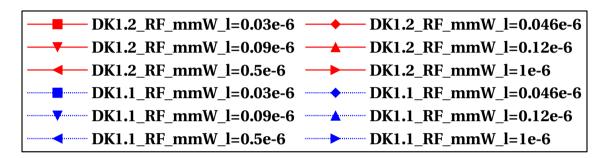
"PCPASTRX TOP+PCPASTRX BOT [um]"

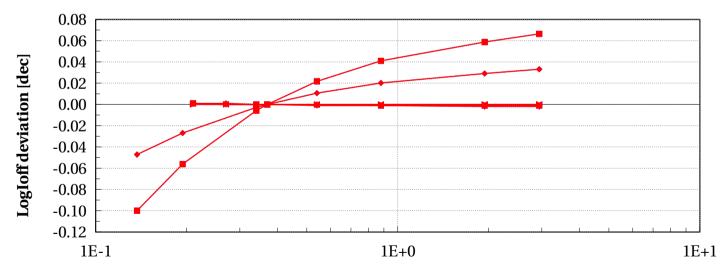






#### lvtpfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





"PCPASTRX TOP+PCPASTRX BOT [um]"







### nfet\_acc Electrical characteristics scaling







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=0.03u



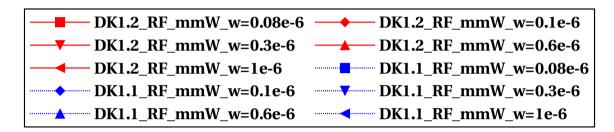


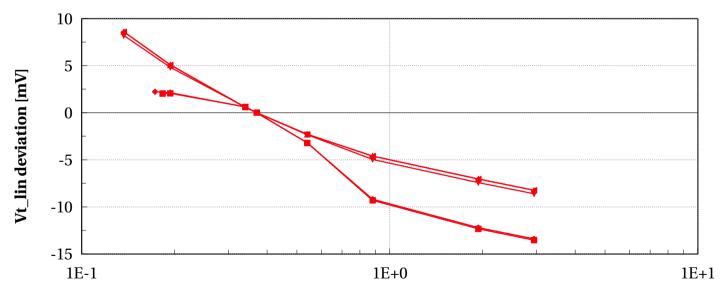
dormieub



#### nfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.03e-6 and Temp==25 and p\_la==0





"PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

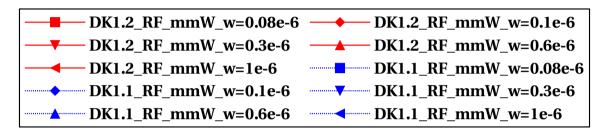


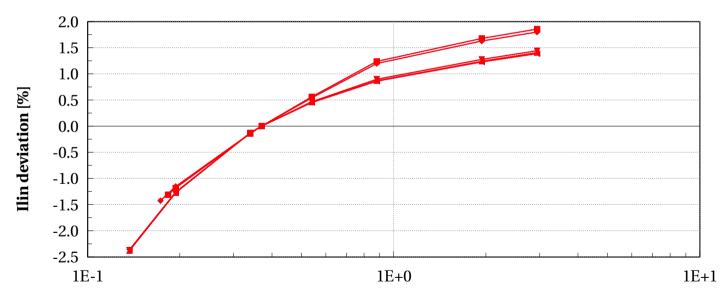




#### nfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.03e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

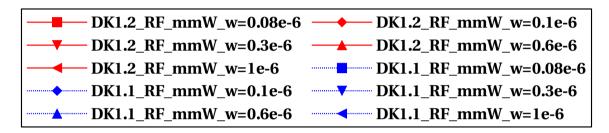


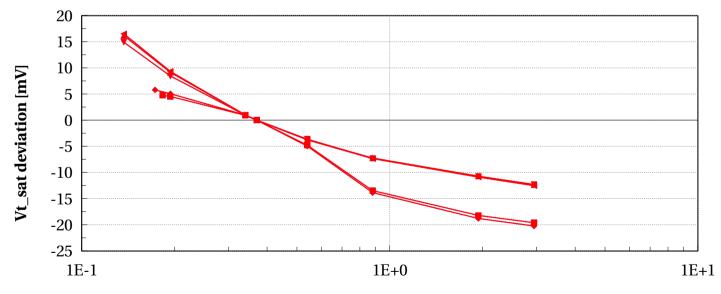




#### nfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.03e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

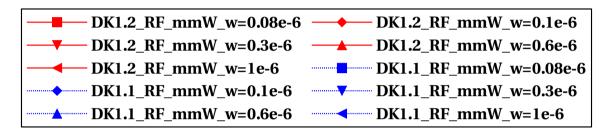


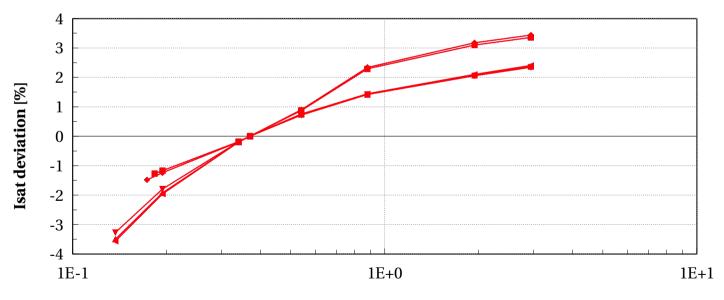




#### nfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.03e-6 and Temp==25 and p\_la==0





"PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

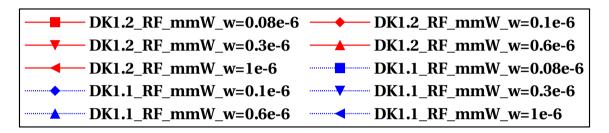


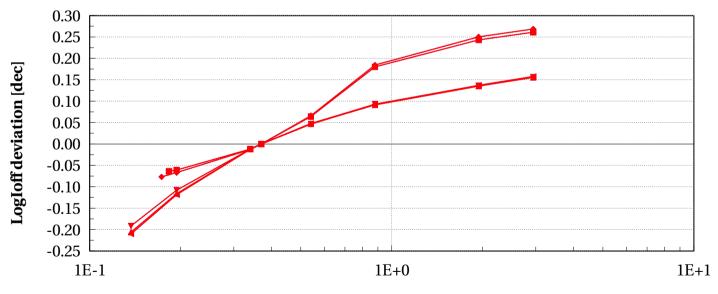




## nfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.03e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=0.046u

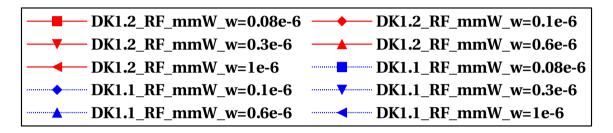


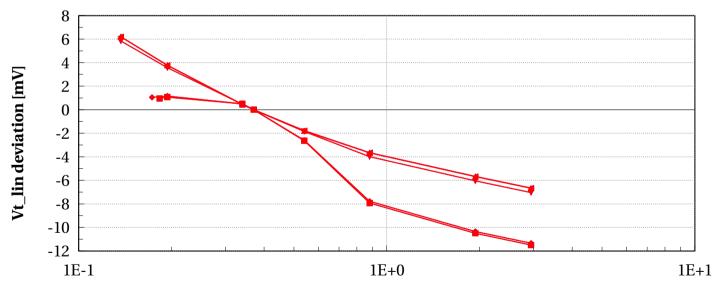
dormieub



### nfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.046e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

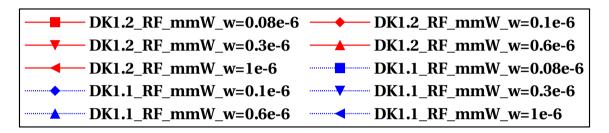


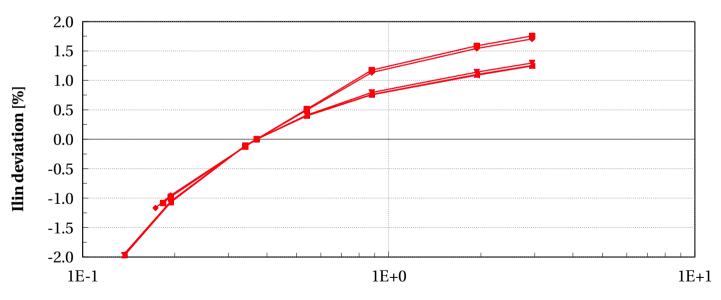




### nfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.046e-6 and Temp==25 and p\_la==0







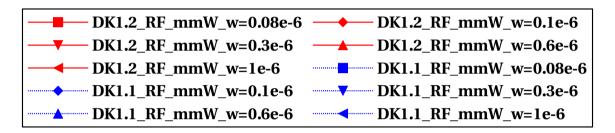


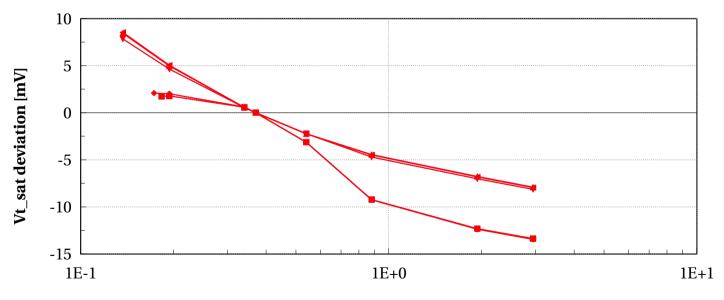




### nfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.046e-6 and Temp==25 and p\_la==0





"PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

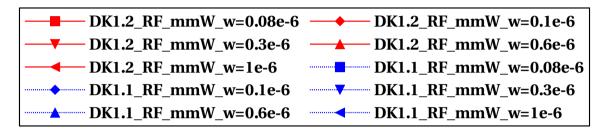


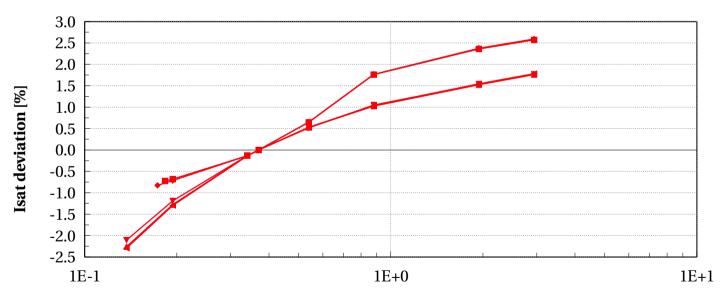




### nfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.046e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

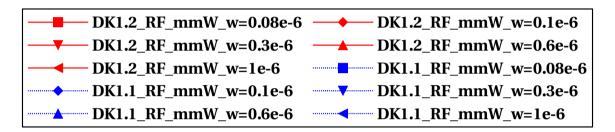


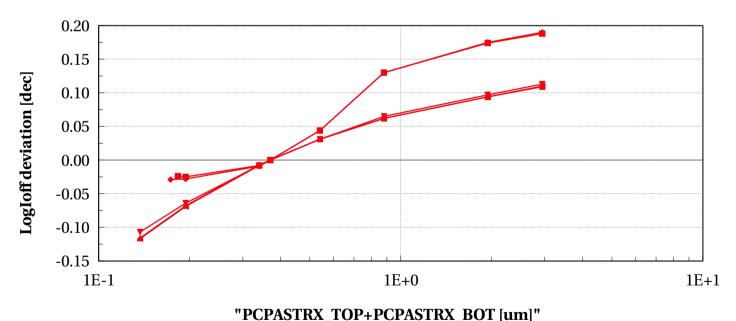


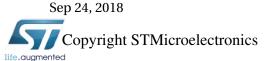


## nfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.046e-6 and Temp==25 and p\_la==0











# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=0.09u



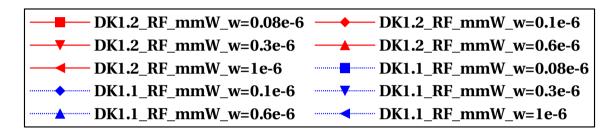


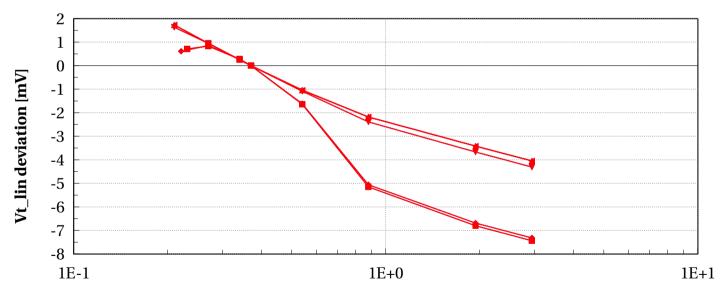
dormieub



### nfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L=0.09e-6 and Temp==25 and  $p_la==0$ 









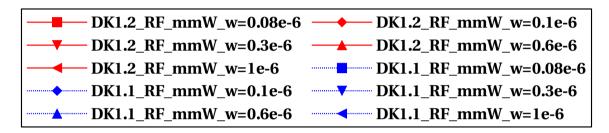


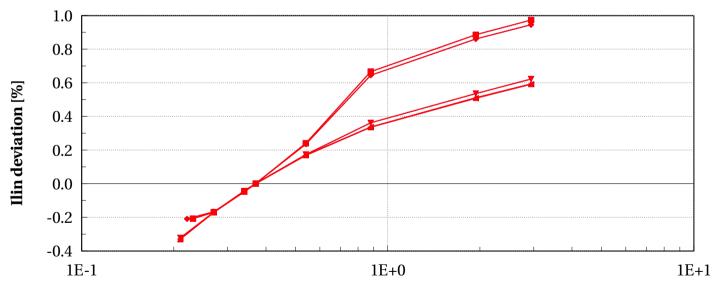
dormieub



### nfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.09e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

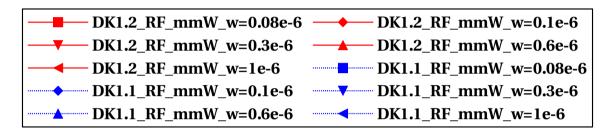


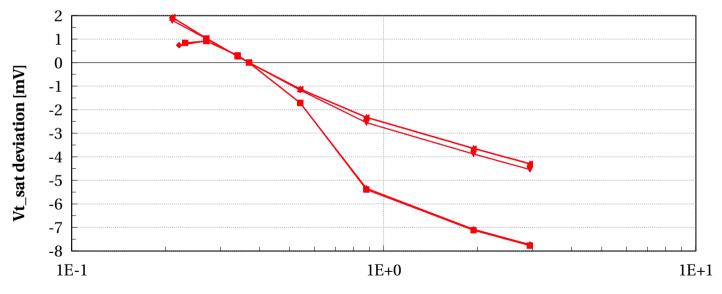




### nfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.09e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

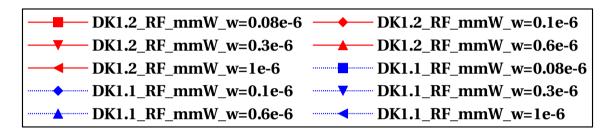


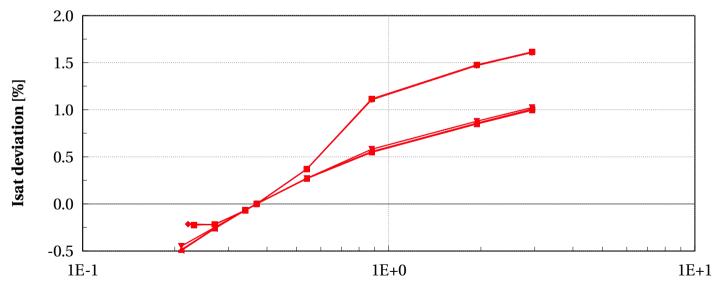




### nfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.09e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

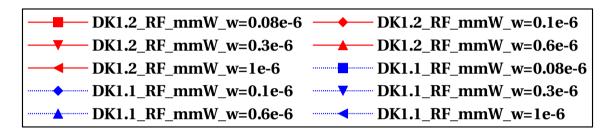


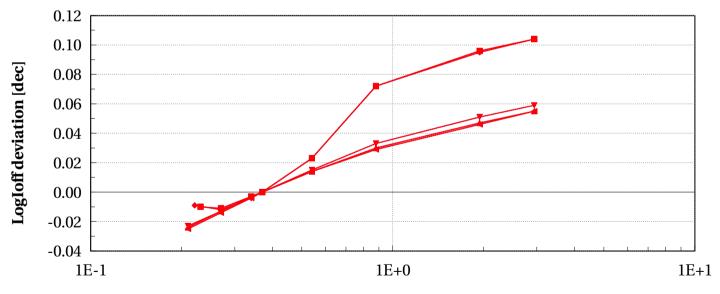




## nfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.09e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=0.12u

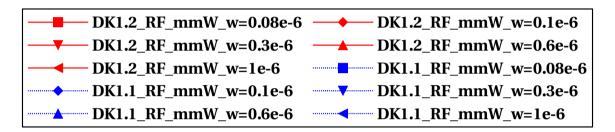


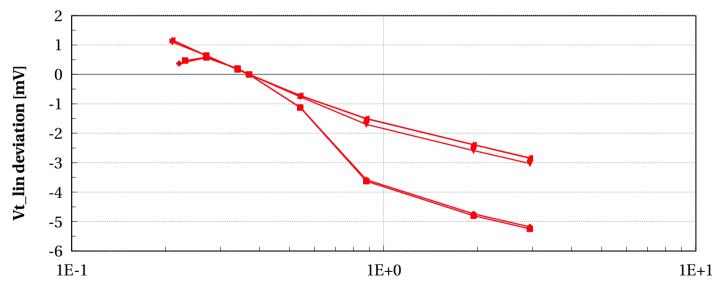
dormieub



### nfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.120e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

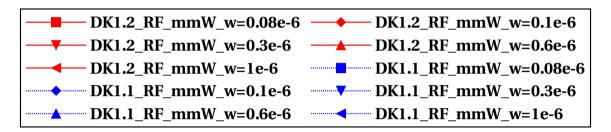


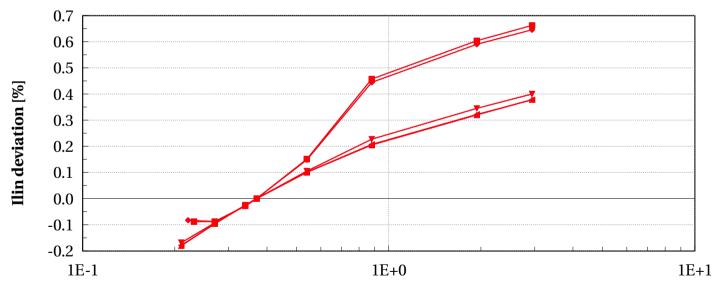




### nfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.120e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

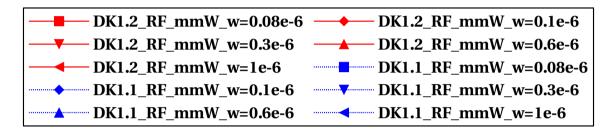


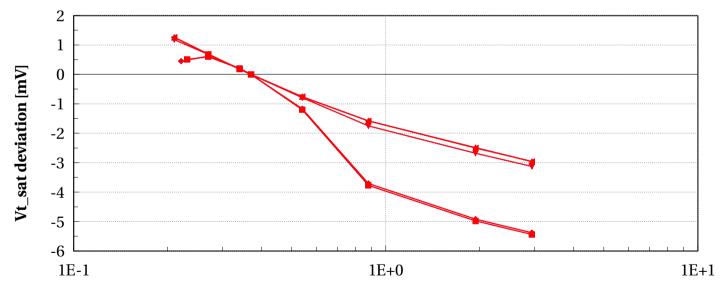




### nfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.120e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

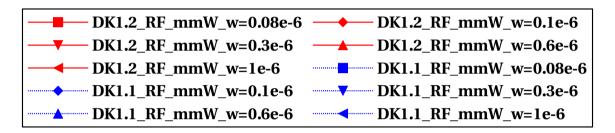


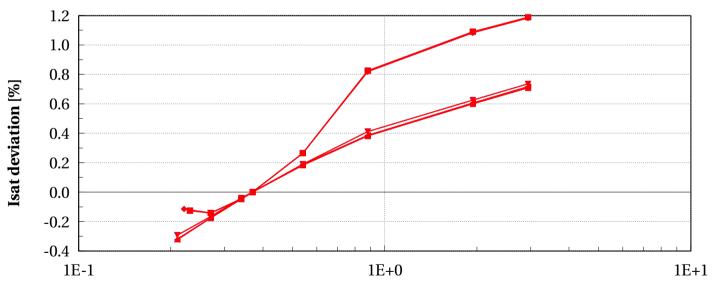




### nfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.120e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

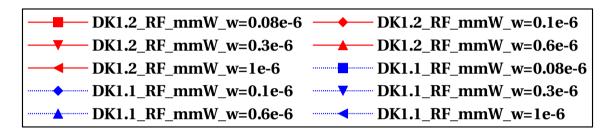


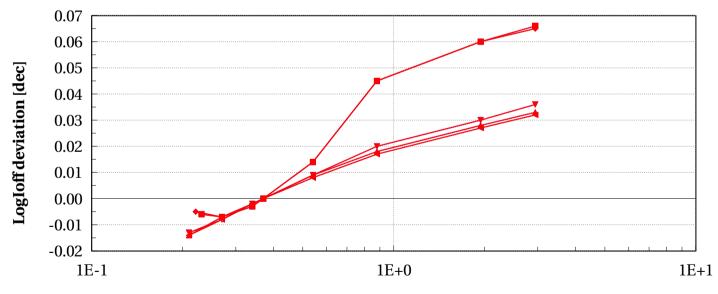




## nfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.120e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=0.5u

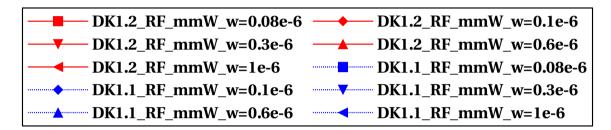


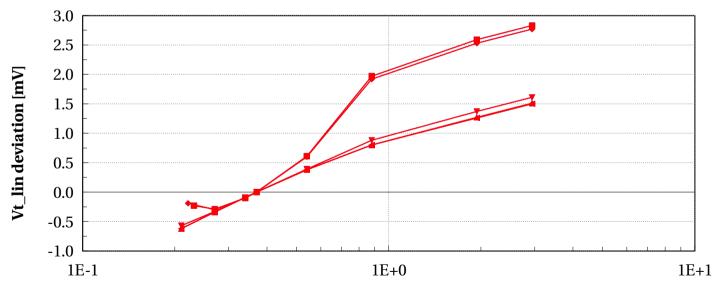




### nfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.5e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

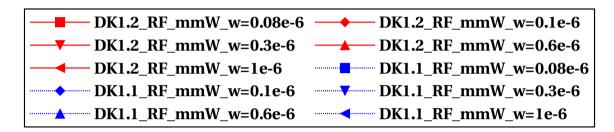


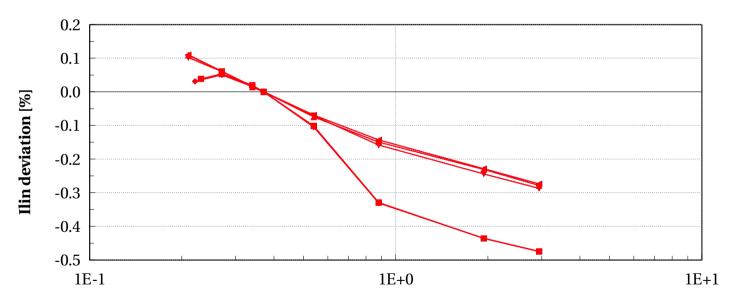




### nfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.5e-6 and Temp==25 and p\_la==0







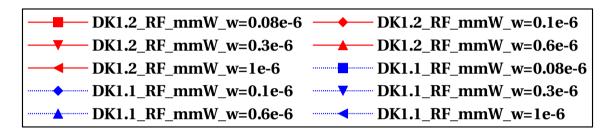


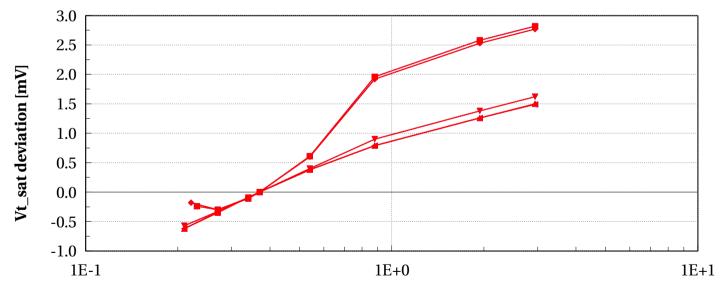




### nfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.5e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

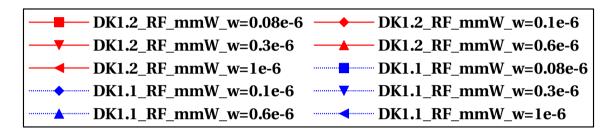


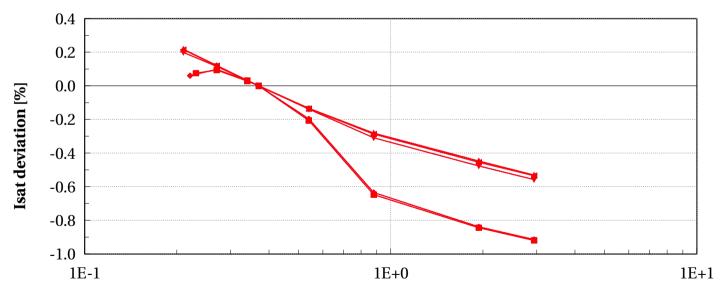




### nfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.5e-6 and Temp==25 and p\_la==0





"PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

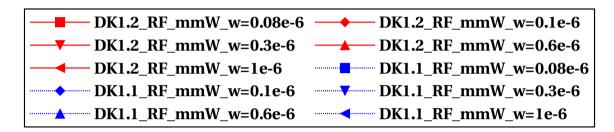


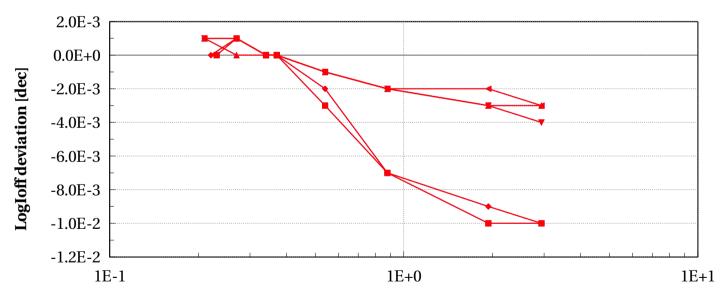




## nfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.5e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=1u

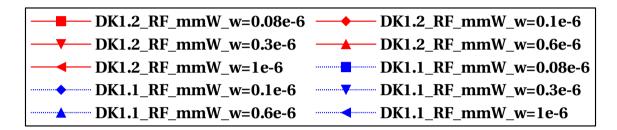


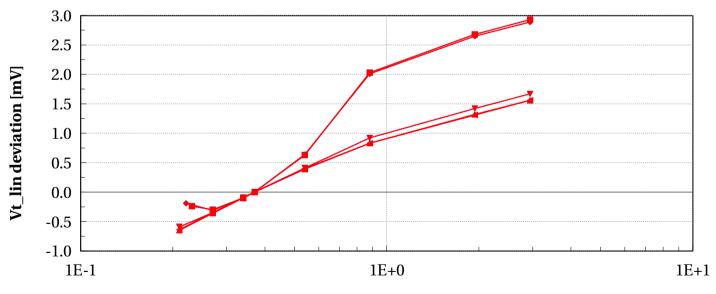
dormieub



### nfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L=1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

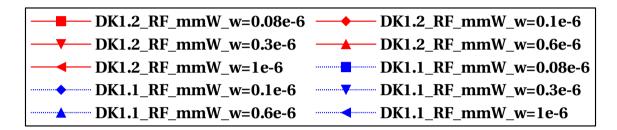


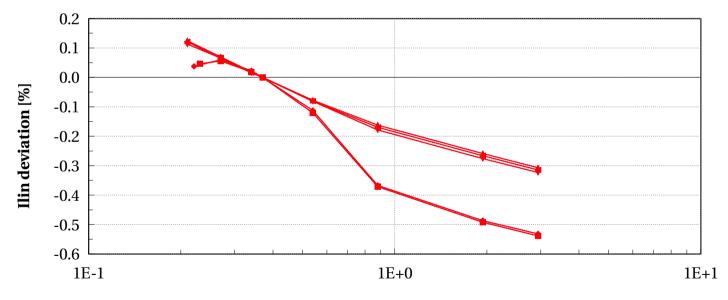




### nfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L=1e-6 and Temp==25 and  $p_la==0$ 







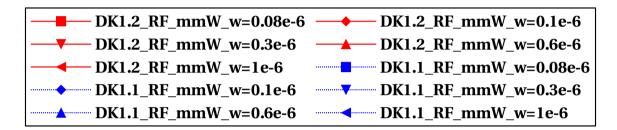


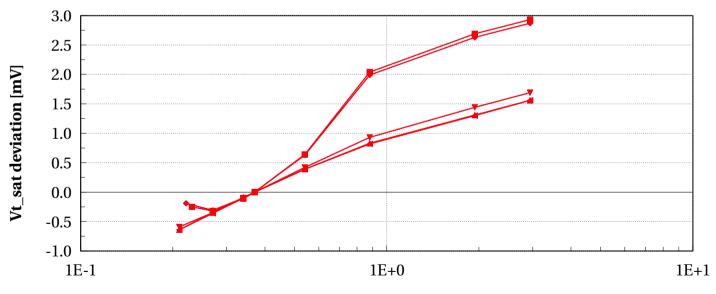




### nfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L=1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

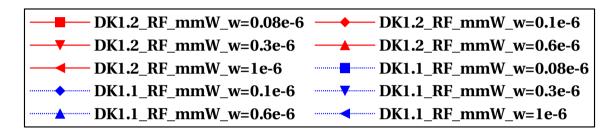


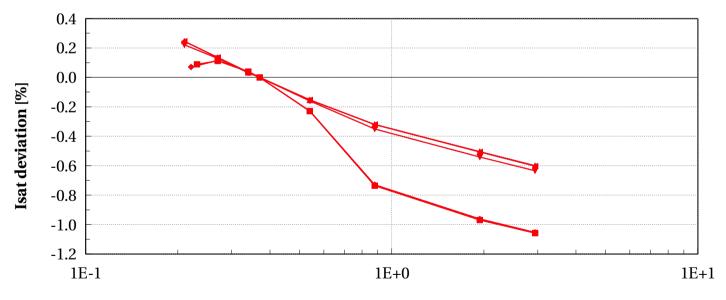




### nfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L=1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

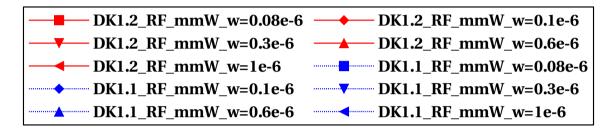


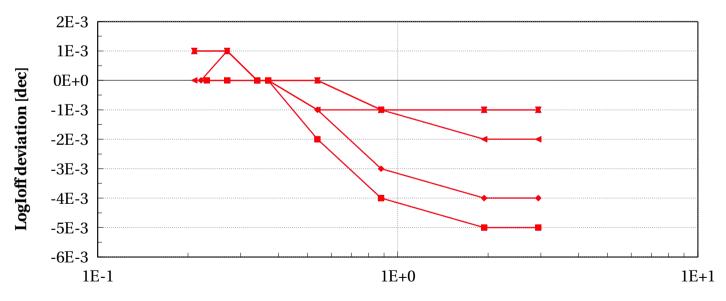




## nfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L=1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Lscaling @ W=0.08u



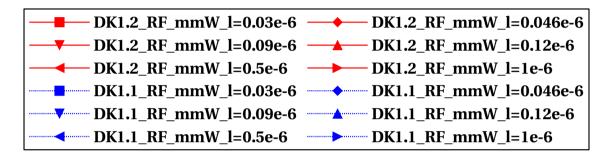


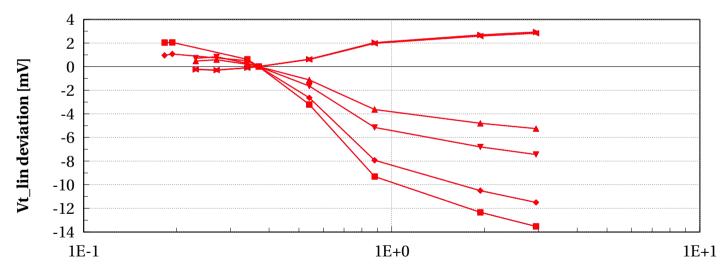
dormieub



### nfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.08e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

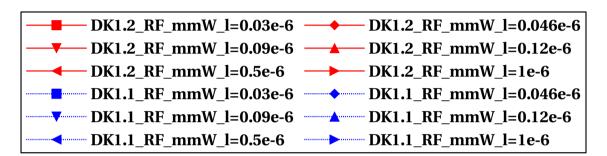


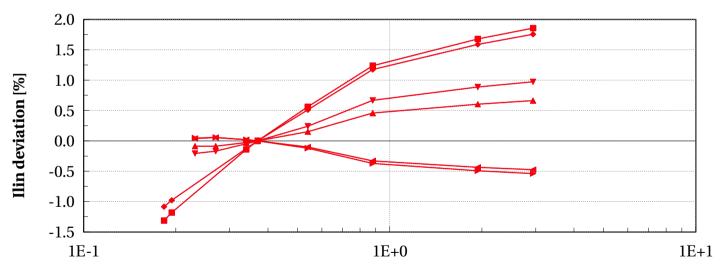
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### nfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.08e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"



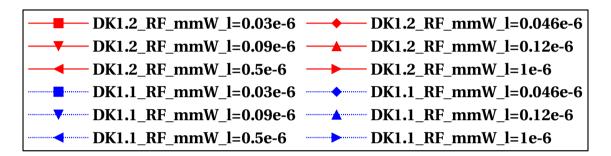


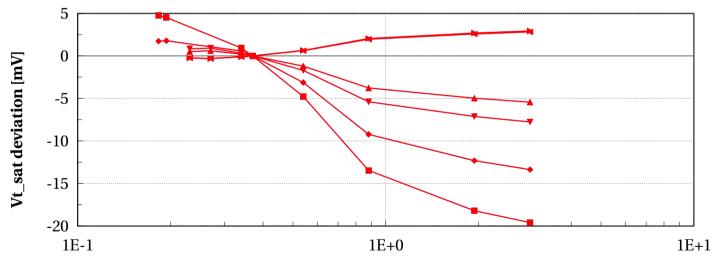
dormieub



### nfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.08e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

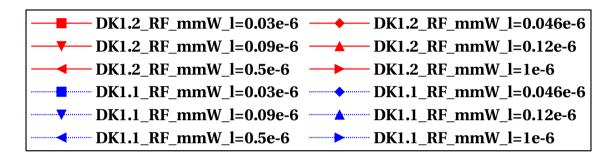


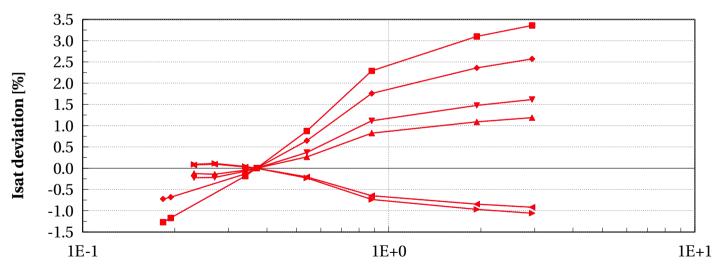




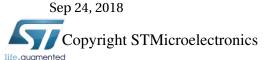
### nfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.08e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

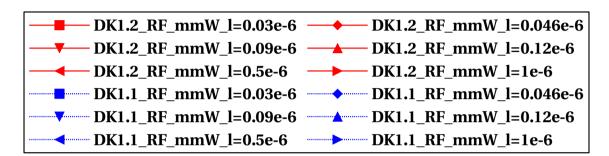


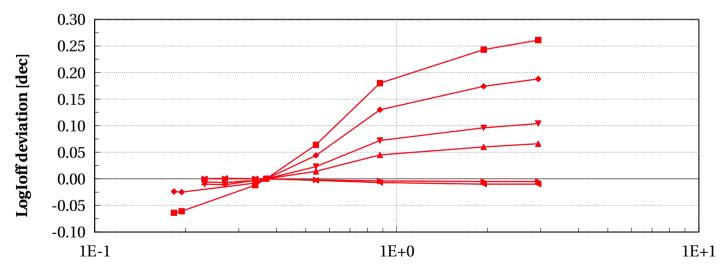




#### nfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.08e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Lscaling @ W=0.1u



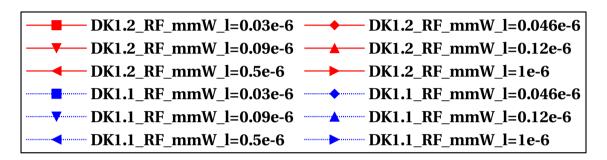


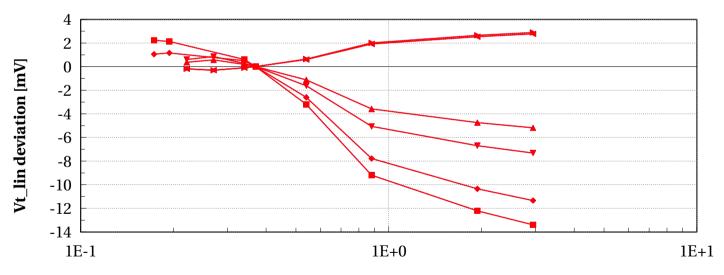
dormieub



### nfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

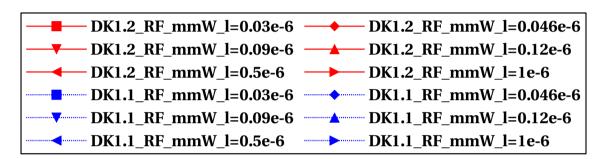


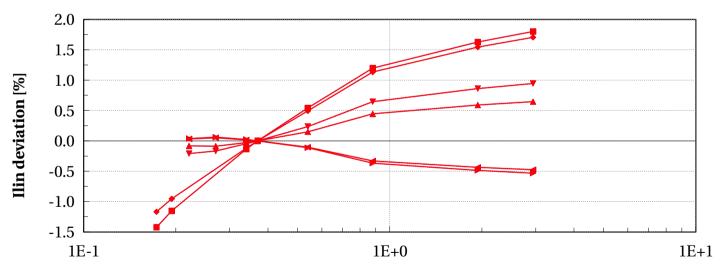




### nfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

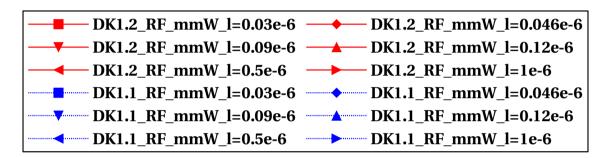


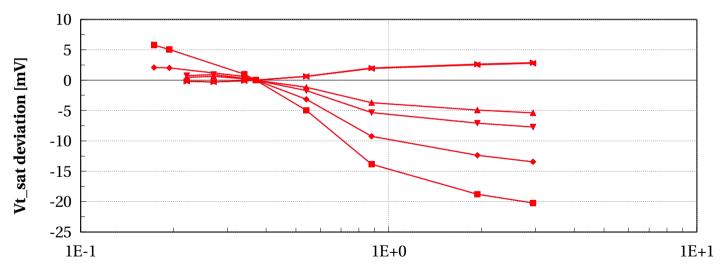




## nfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

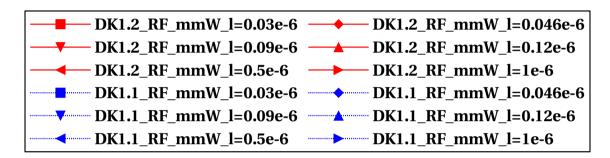


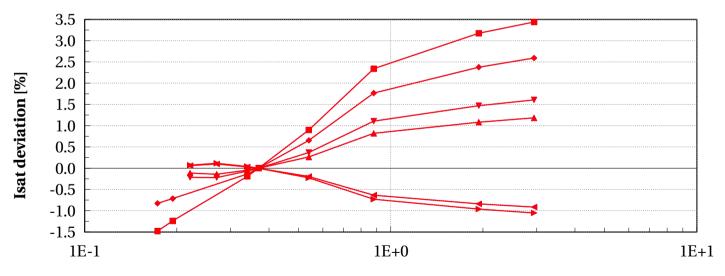




### nfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

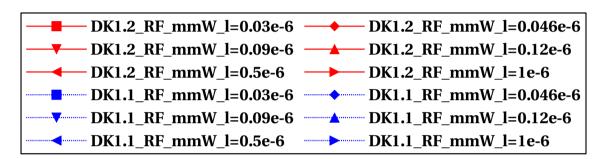


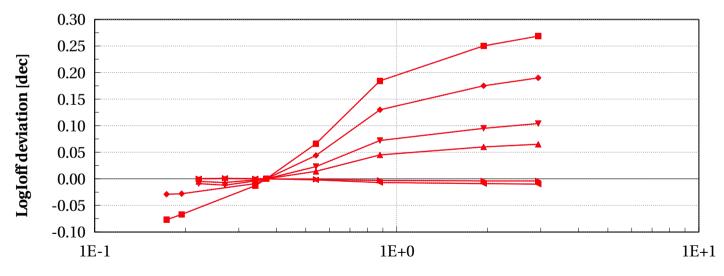




### nfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Lscaling@W=0.3u

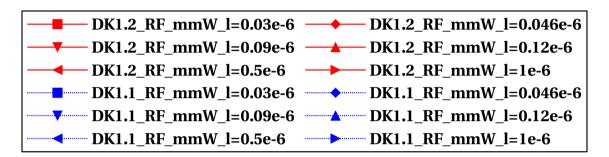


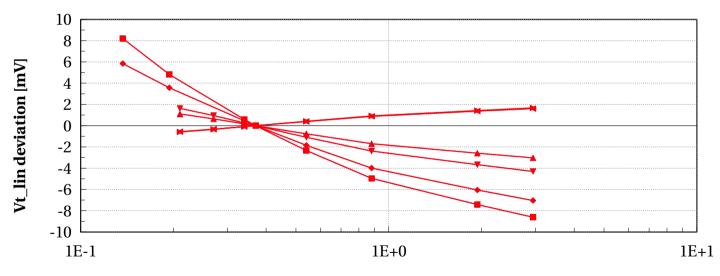
dormieub



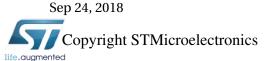
## nfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.3e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

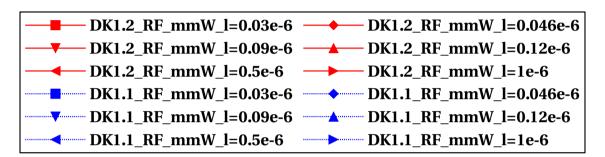


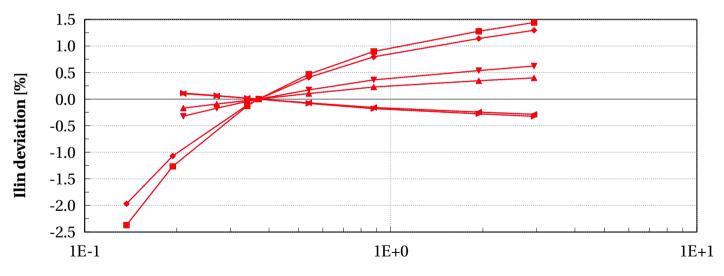




### nfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.3e-6 and Temp==25 and p la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"



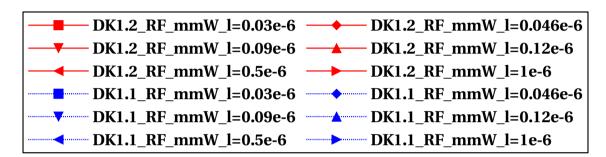
**ST Confidential** 

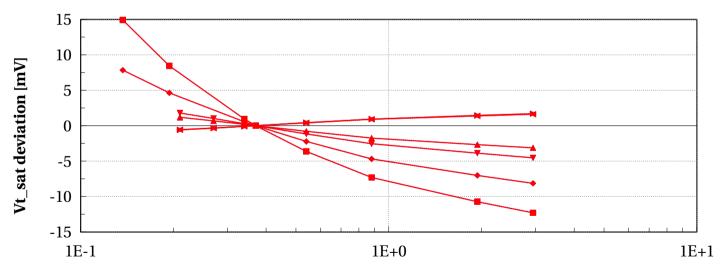
dormieub



## nfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.3e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

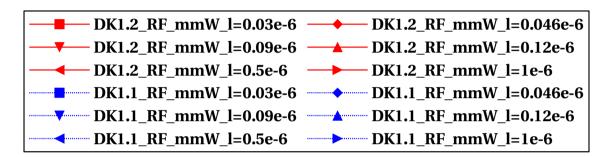


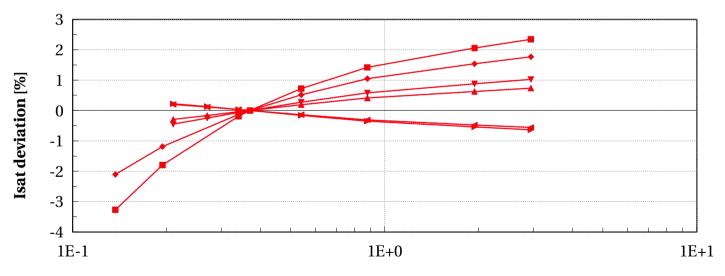




## nfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.3e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

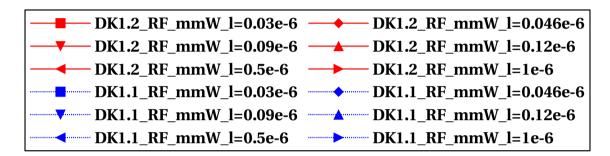


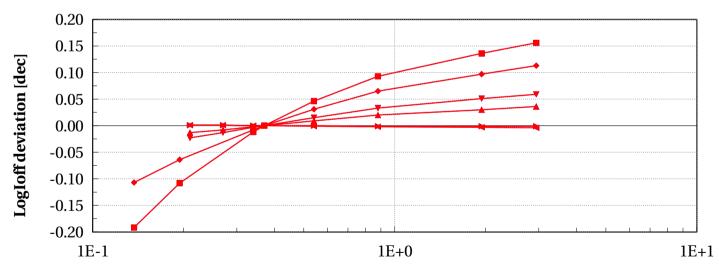




#### nfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.3e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Lscaling@W=0.6u

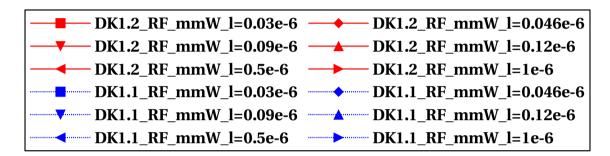


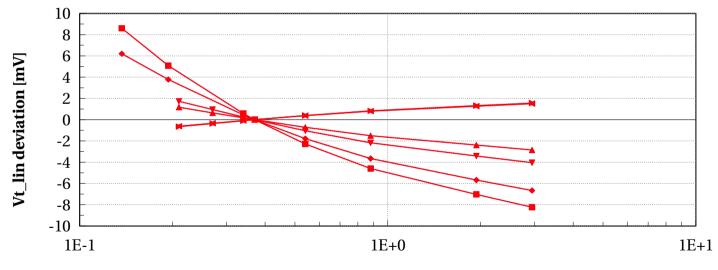
dormieub



## nfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.6e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

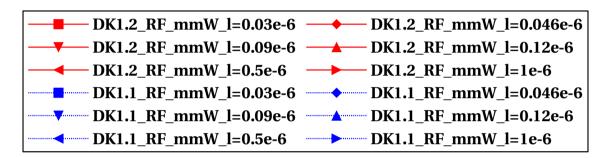


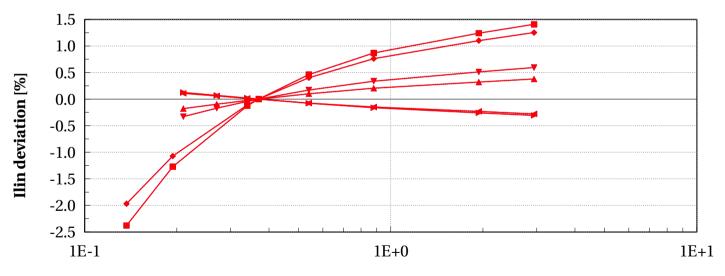




### nfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.6e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

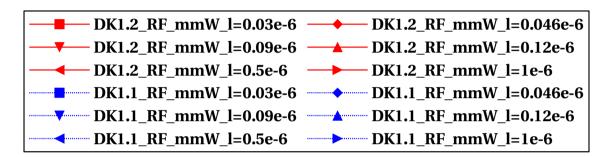


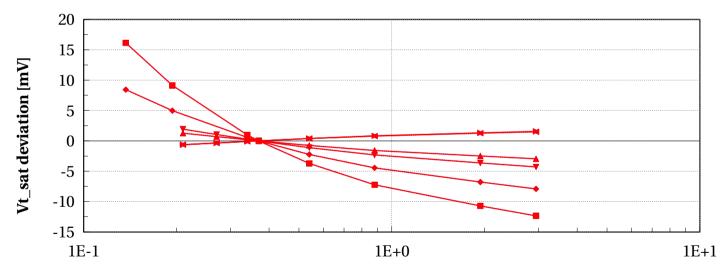
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#### nfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.6e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

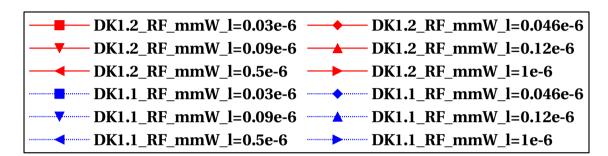


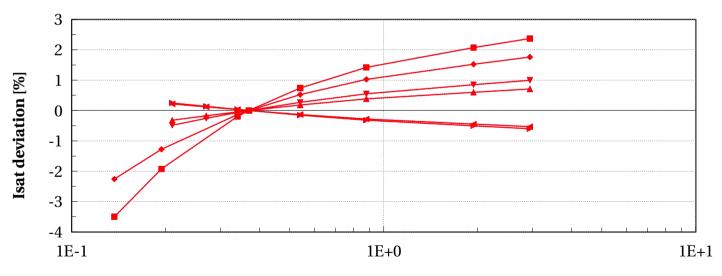




### nfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.6e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

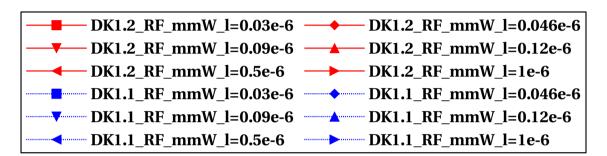


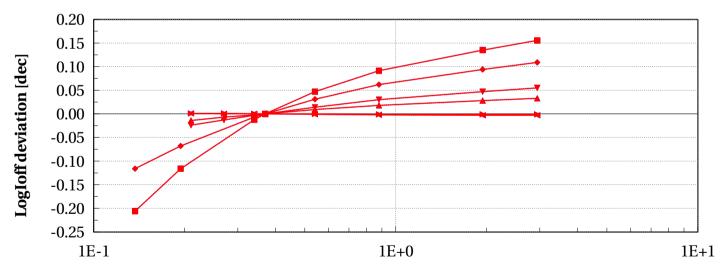




### nfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.6e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Lscaling @ W=1u



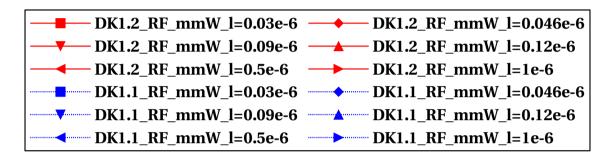


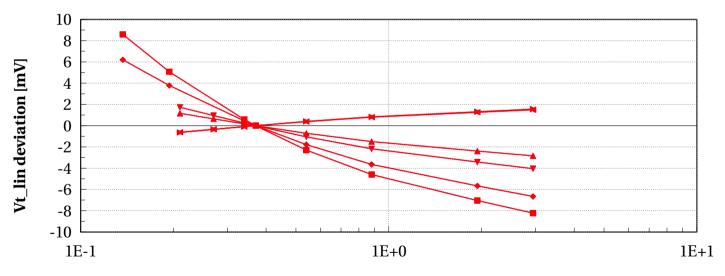
dormieub



## nfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

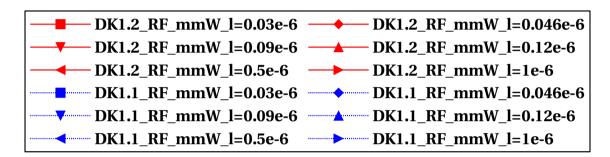


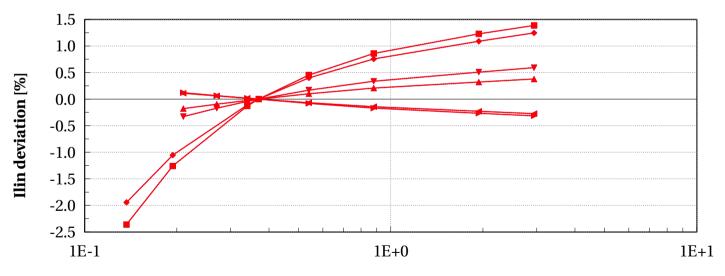




### nfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

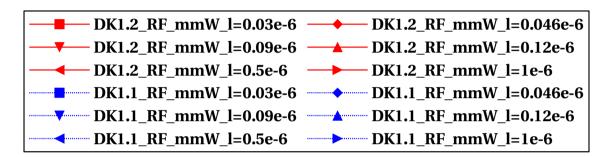


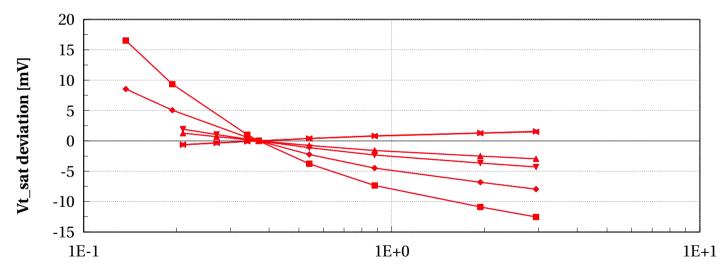




## nfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

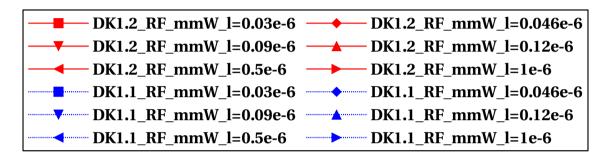


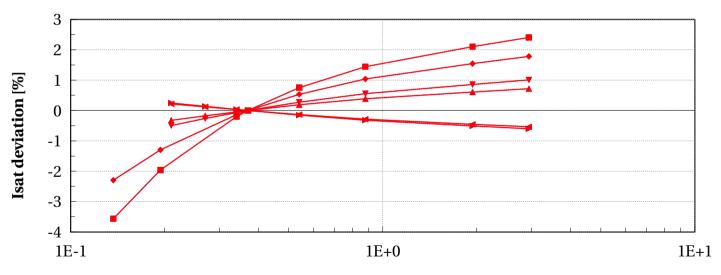




#### nfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

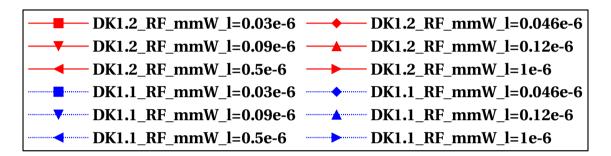


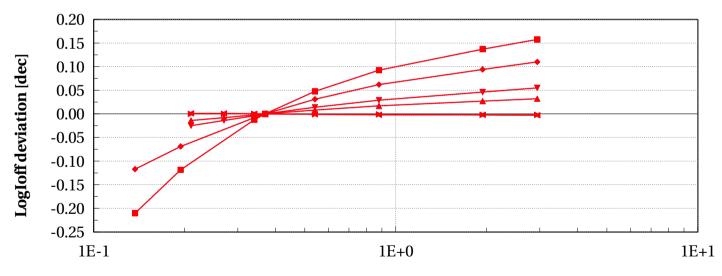
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### nfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"







# pfet\_acc Electrical characteristics scaling







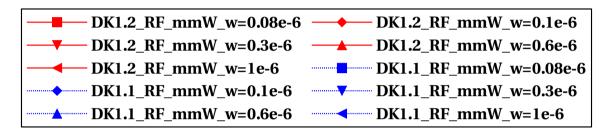
# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=0.03u

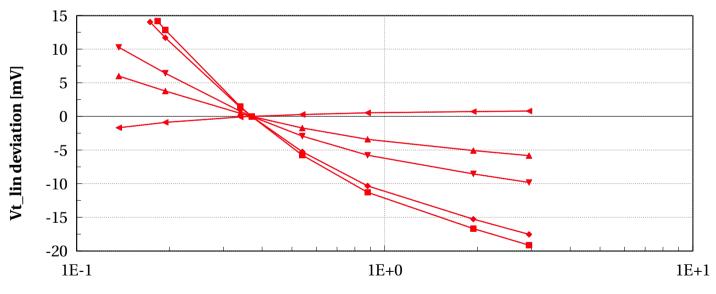




### pfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.03e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

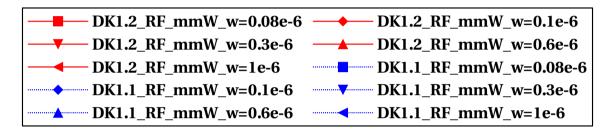


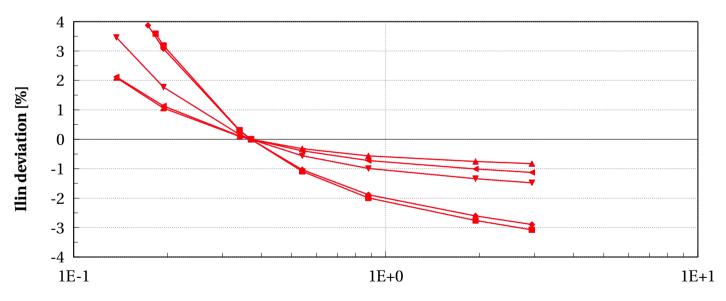




### pfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.03e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

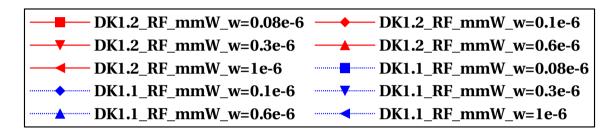


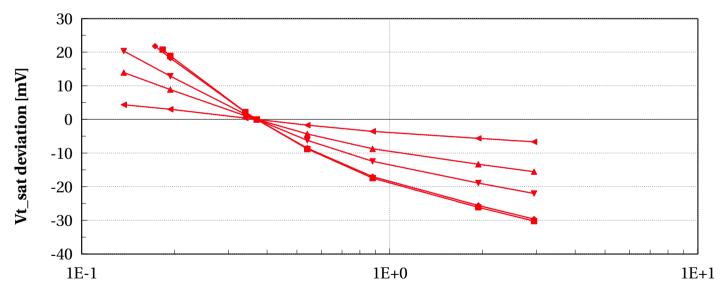




### pfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.03e-6 and Temp==25 and p\_la==0







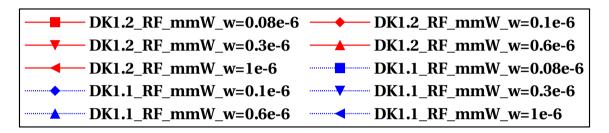


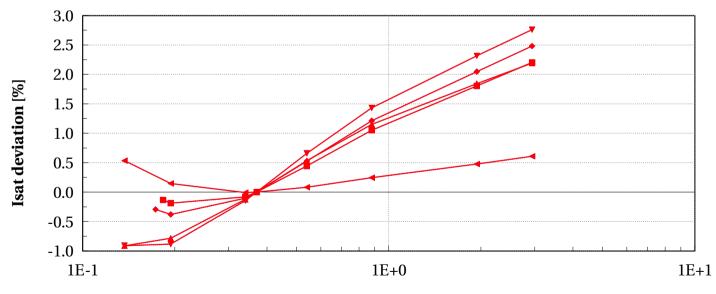




## pfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.03e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

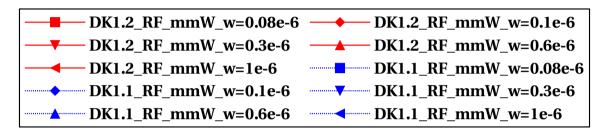


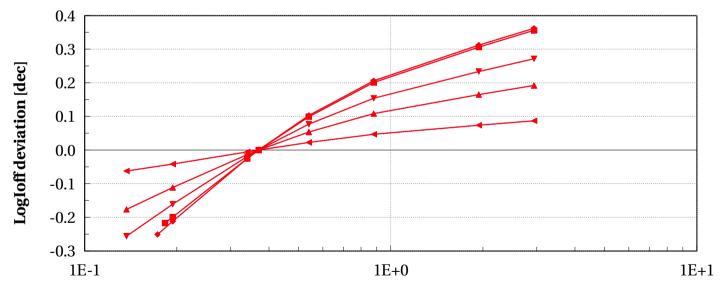




# pfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.03e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=0.046u



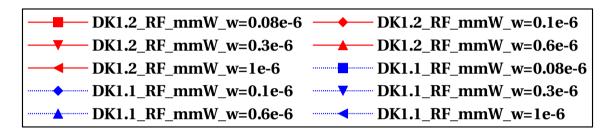


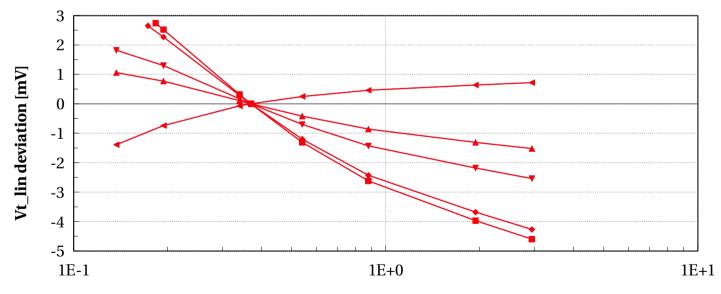
dormieub



### pfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.046e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

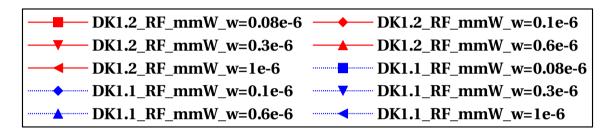


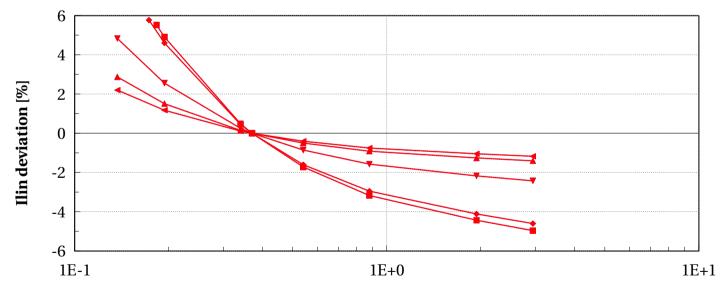




## pfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.046e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

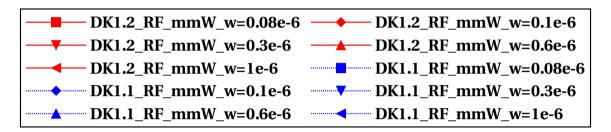


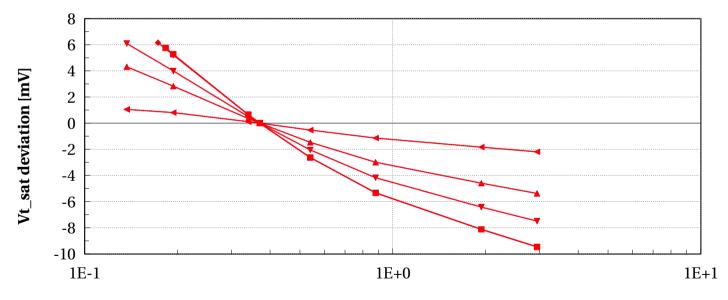




## pfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.046e-6 and Temp==25 and  $p_la==0$ 







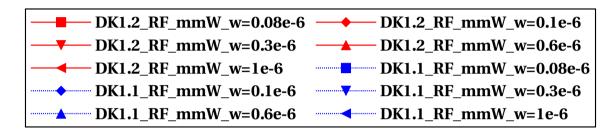


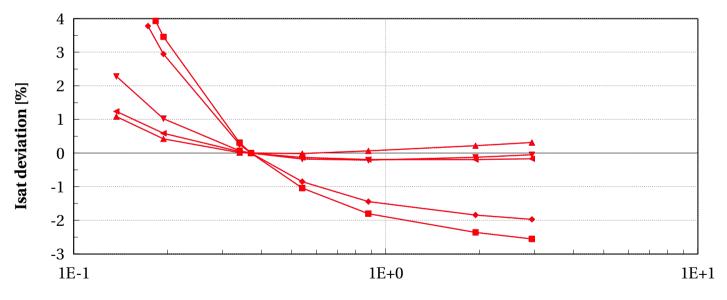




### pfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.046e-6 and Temp==25 and p\_la==0





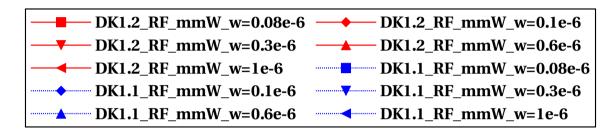


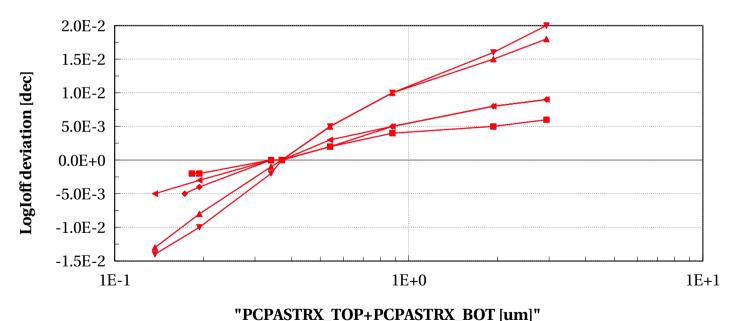


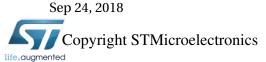




### pfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"











# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=0.09u



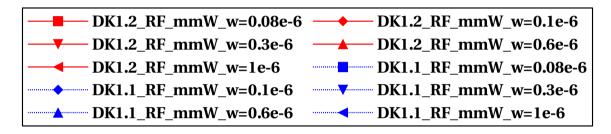


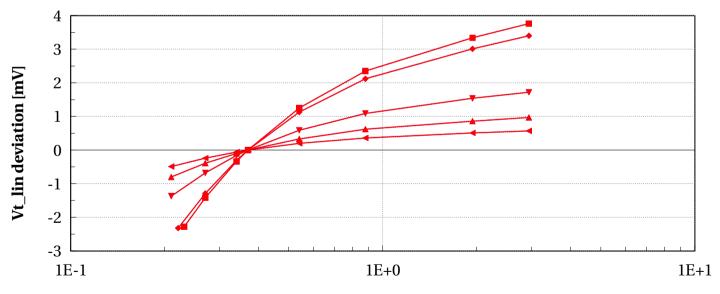
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### pfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.09e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

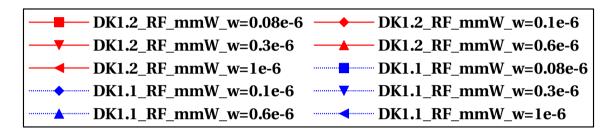


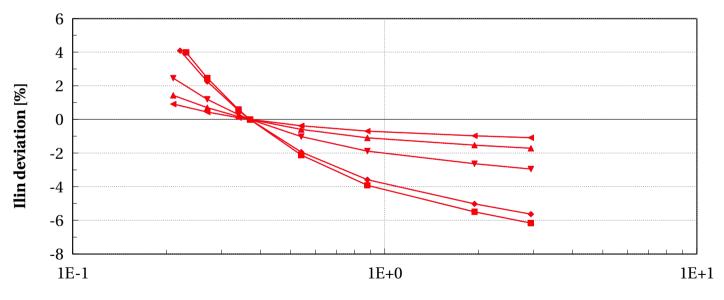




### pfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.09e-6 and Temp==25 and p\_la==0





"PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

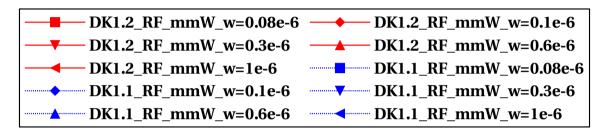


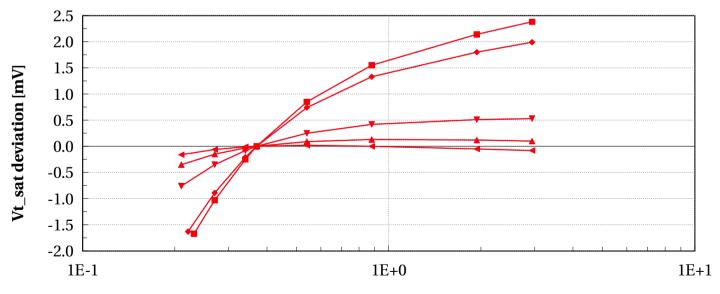




## pfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.09e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

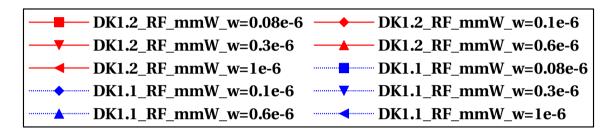


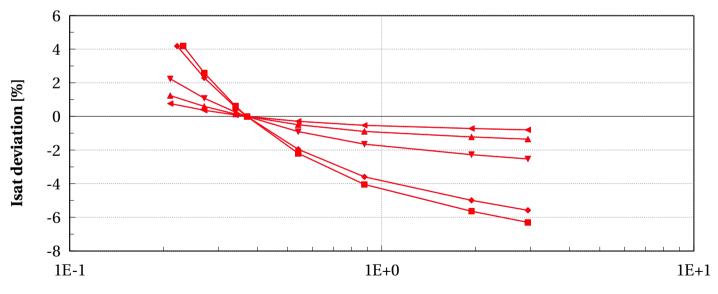




### pfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.09e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

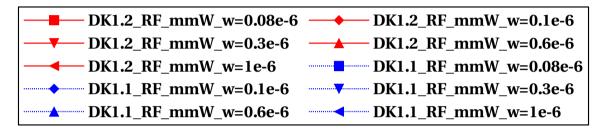


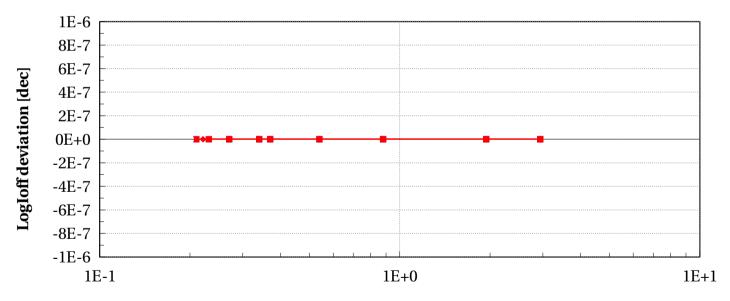




## pfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.09e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=0.12u

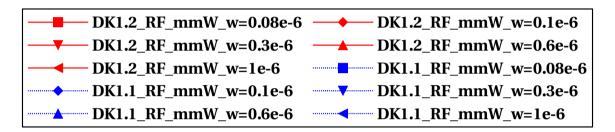


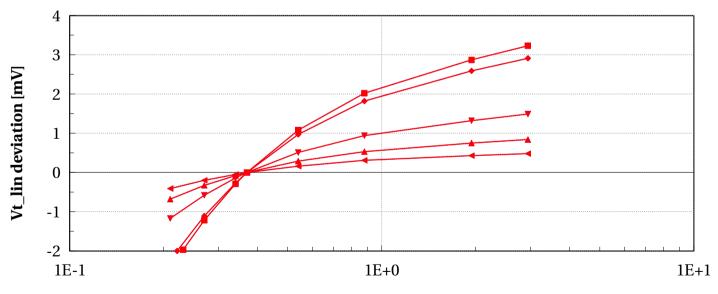
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## pfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.120e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

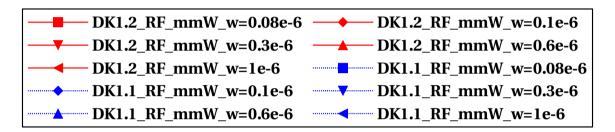


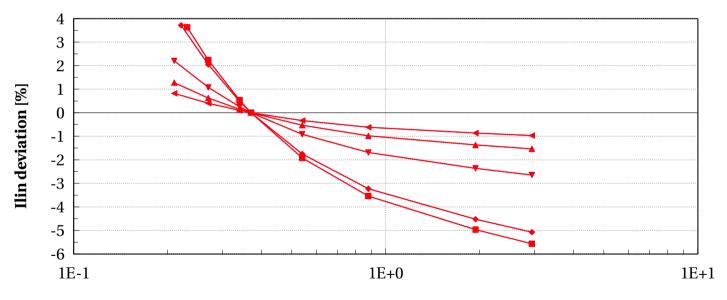




### pfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.120e-6 and Temp==25 and p\_la==0







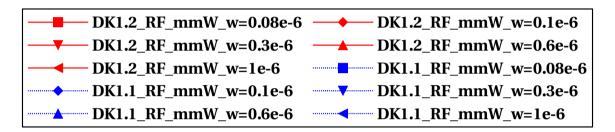


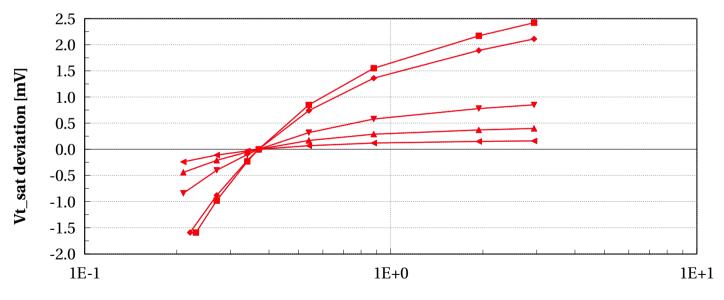




## pfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.120e-6 and Temp==25 and p\_la==0







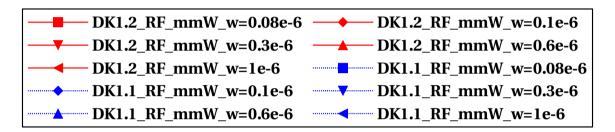


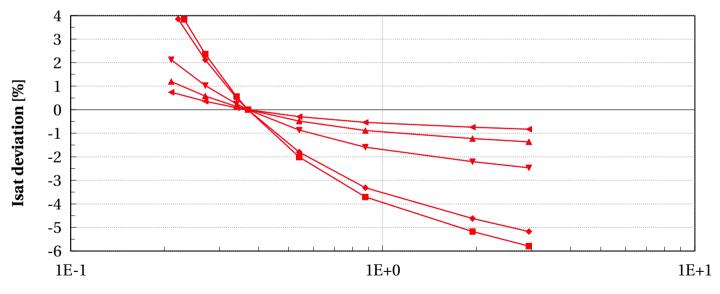




### pfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.120e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

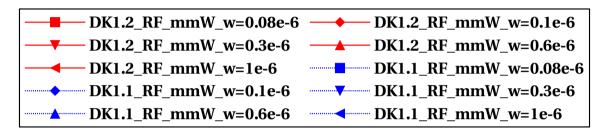


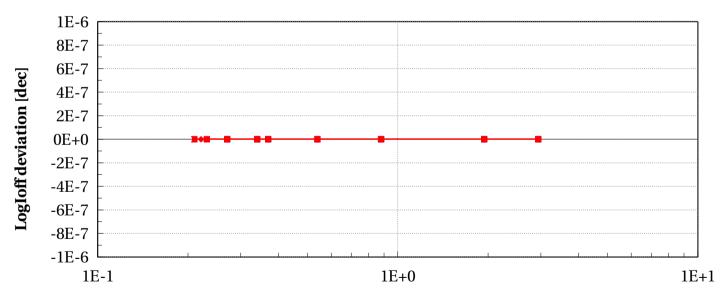




#### pfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.120e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"







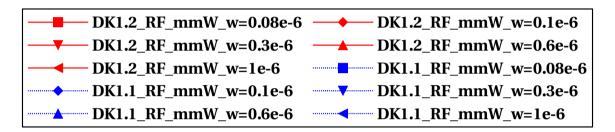
# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=0.5u

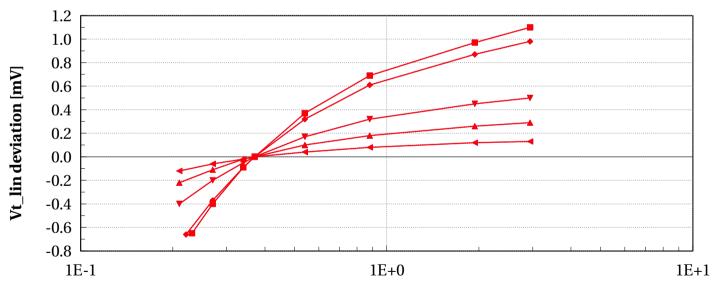




### pfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.5e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

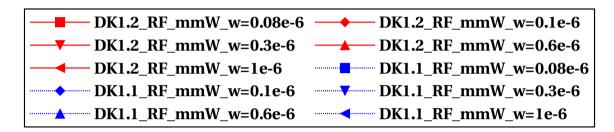


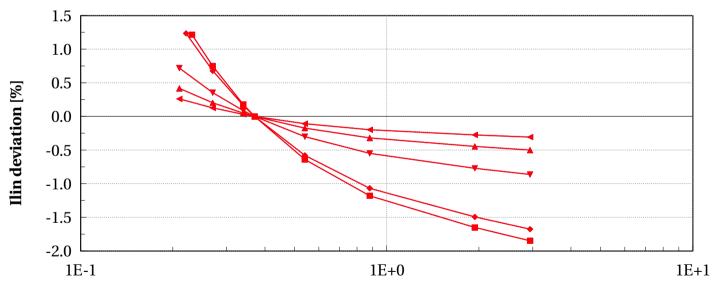




### pfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.5e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

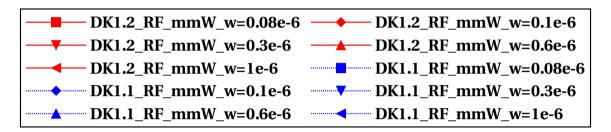


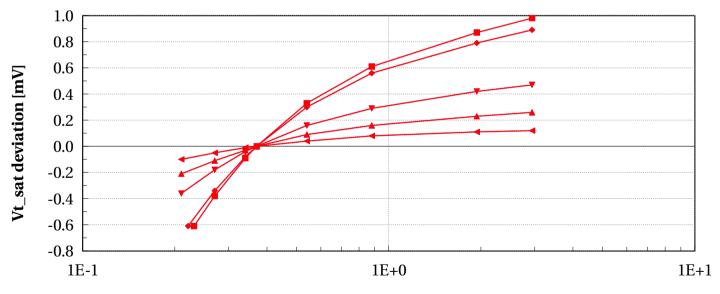




## pfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.5e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

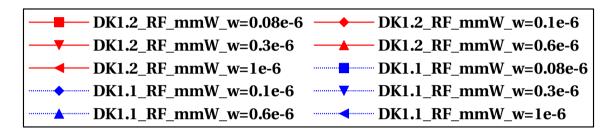


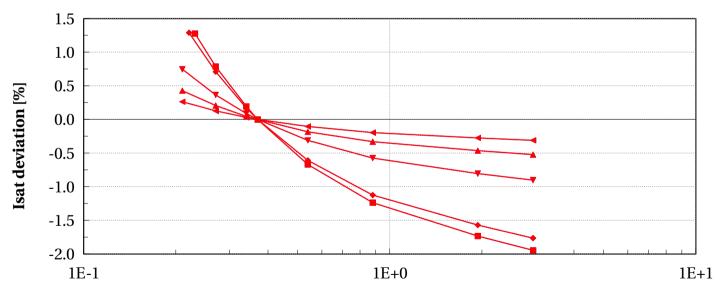




### pfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.5e-6 and Temp==25 and p\_la==0





"PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

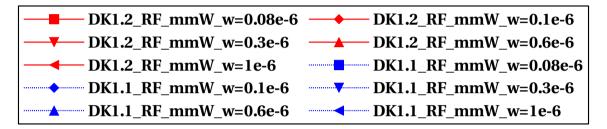


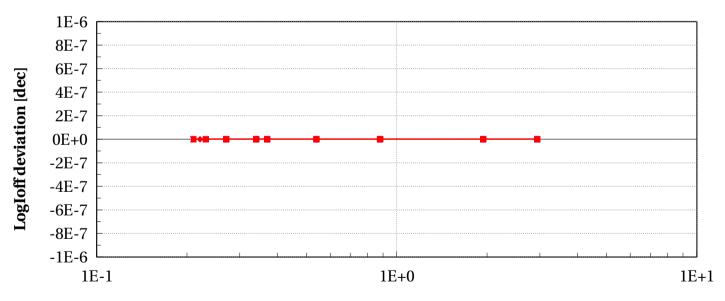




### pfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

L==0.5e-6 and Temp==25 and p la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"





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# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Wscaling @ L=1u

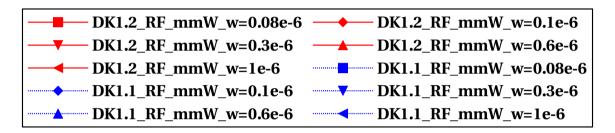


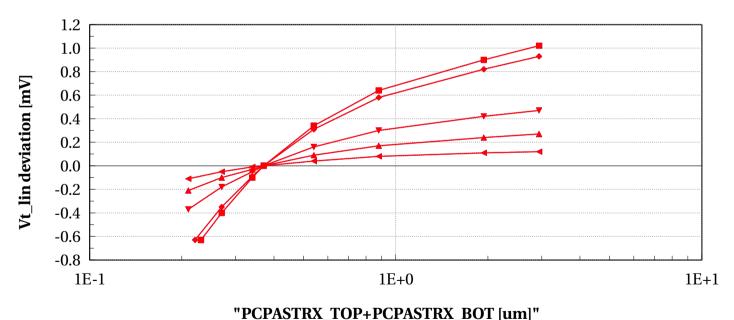


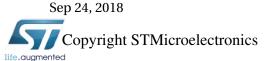


## pfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

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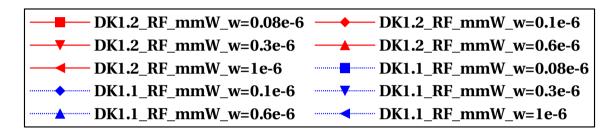


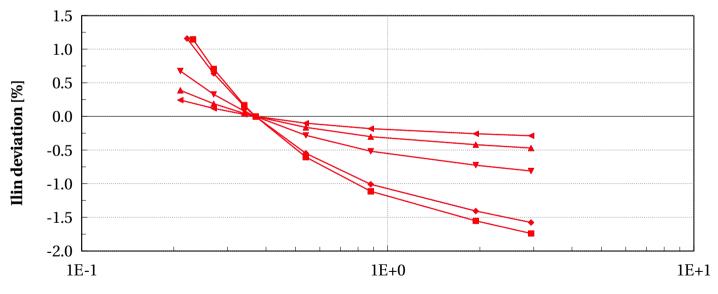


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### pfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





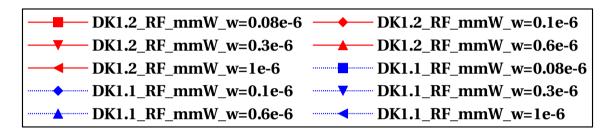
"PCPASTRX TOP+PCPASTRX BOT [um]"

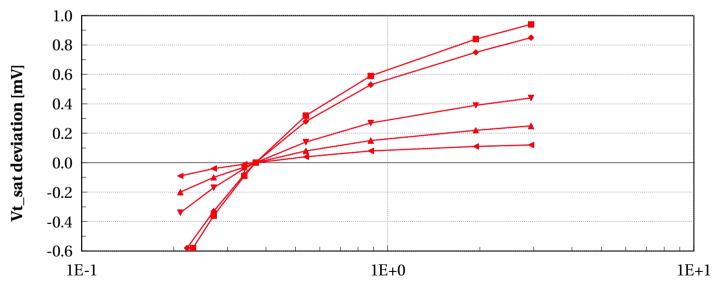






## pfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





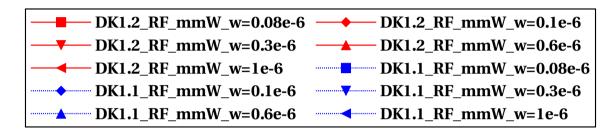
"PCPASTRX TOP+PCPASTRX BOT [um]"

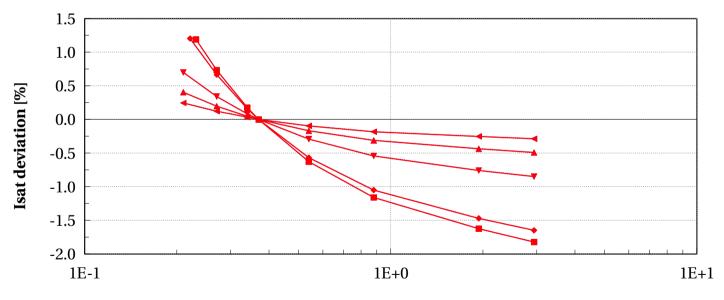






## pfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





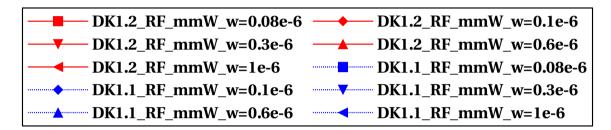


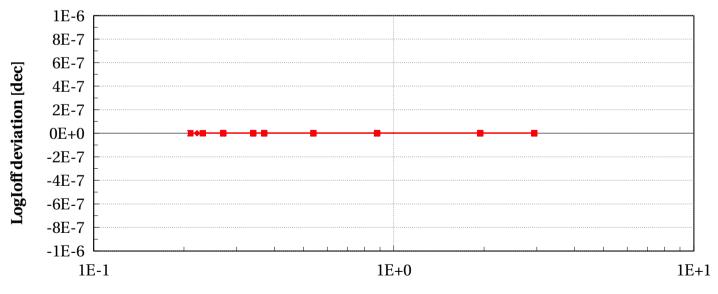






### pfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





"PCPASTRX TOP+PCPASTRX BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Lscaling @ W=0.08u

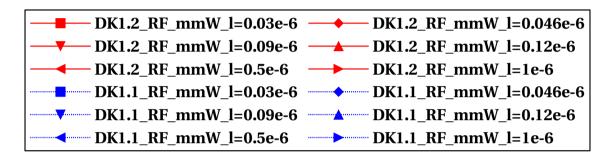


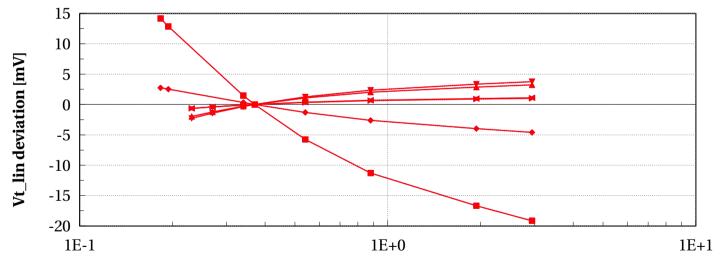




### pfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.08e-6 and Temp==25 and p\_la==0





"PCPASTRX TOP+PCPASTRX BOT [um]"

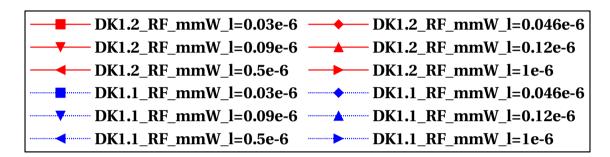


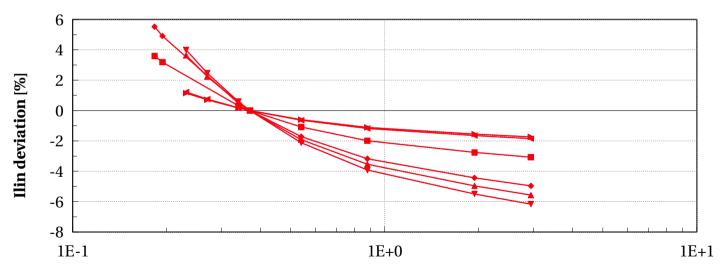
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### pfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





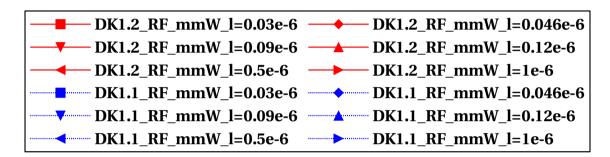
"PCPASTRX TOP+PCPASTRX BOT [um]"

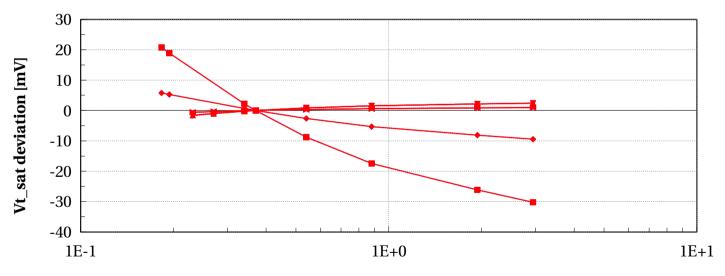






### pfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





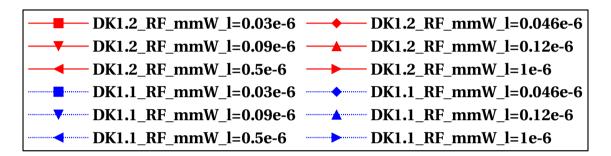
"PCPASTRX TOP+PCPASTRX BOT [um]"

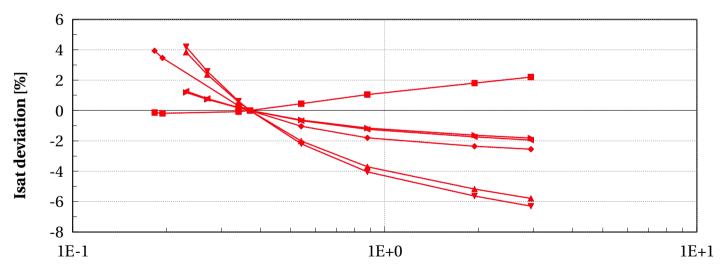






### pfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





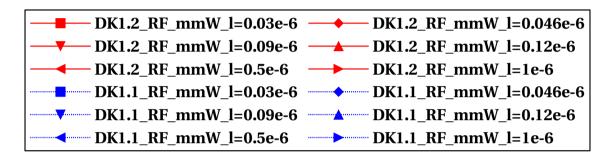
"PCPASTRX TOP+PCPASTRX BOT [um]"

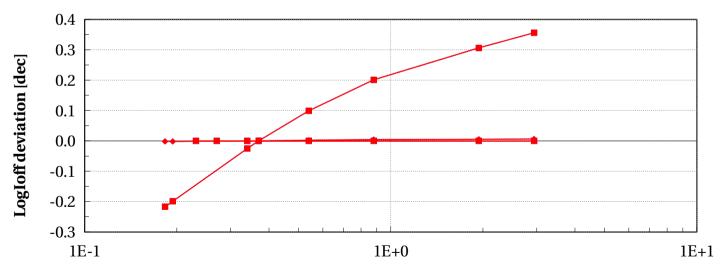






#### pfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





"PCPASTRX TOP+PCPASTRX BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Lscaling @ W=0.1u



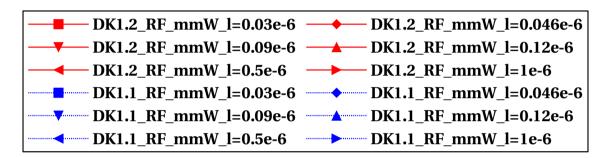


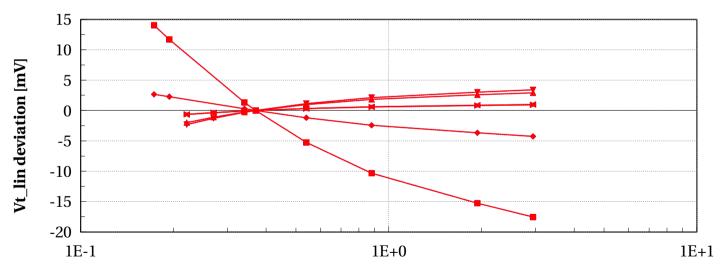
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### pfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

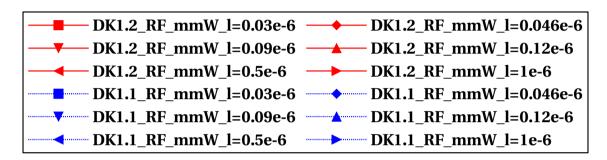


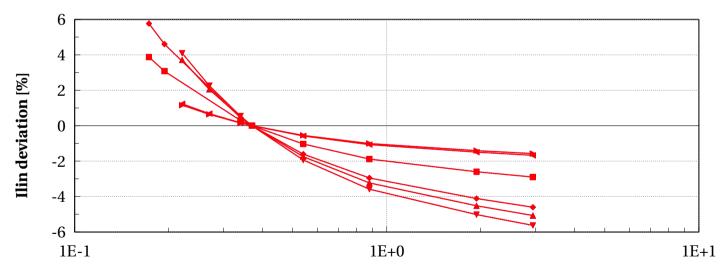




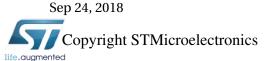
### pfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

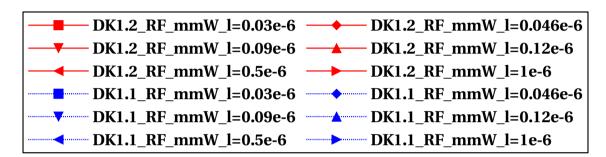


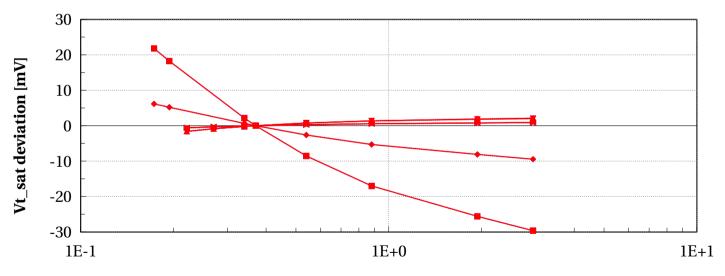




### pfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

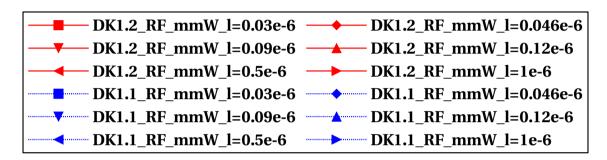


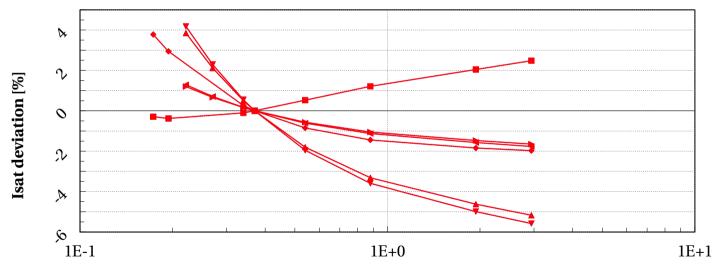




#### pfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"

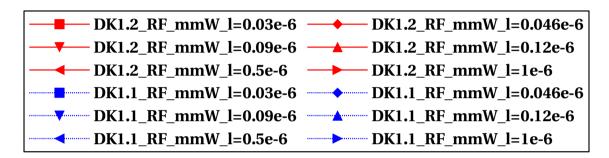


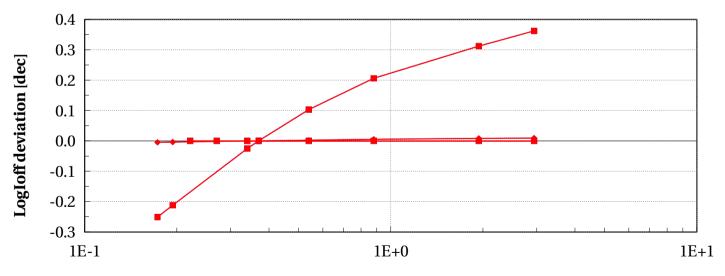




#### pfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.1e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"







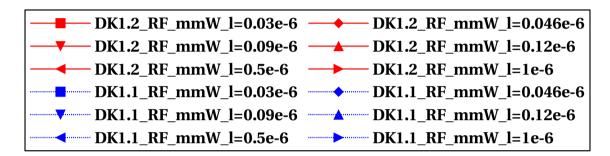
# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Lscaling@W=0.3u

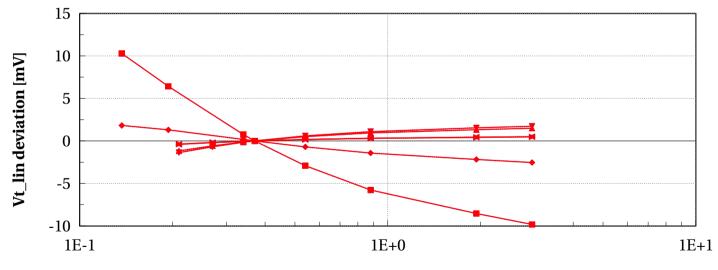


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#### pfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





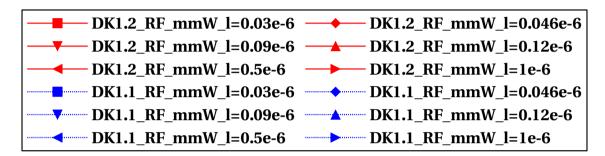
"PCPASTRX TOP+PCPASTRX BOT [um]"

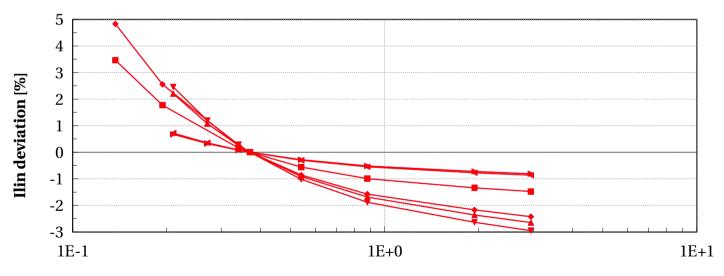






#### pfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





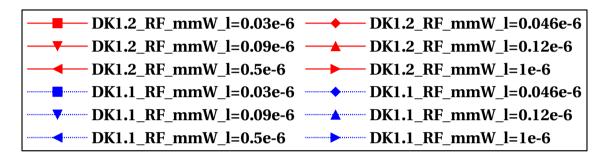
"PCPASTRX TOP+PCPASTRX BOT [um]"

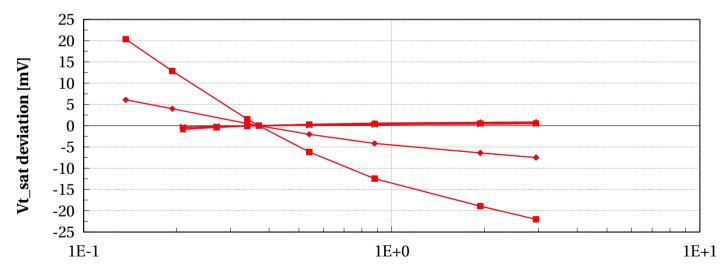






#### pfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





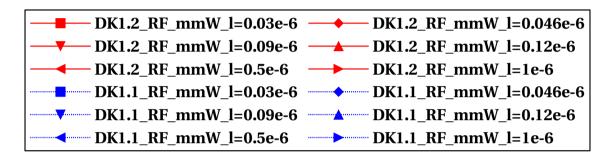
"PCPASTRX TOP+PCPASTRX BOT [um]"

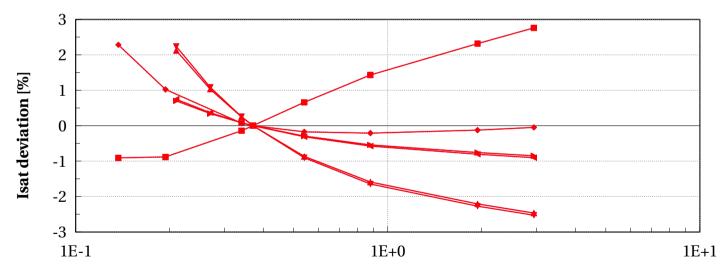






#### pfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





"PCPASTRX TOP+PCPASTRX BOT [um]"

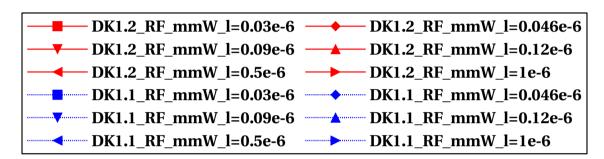


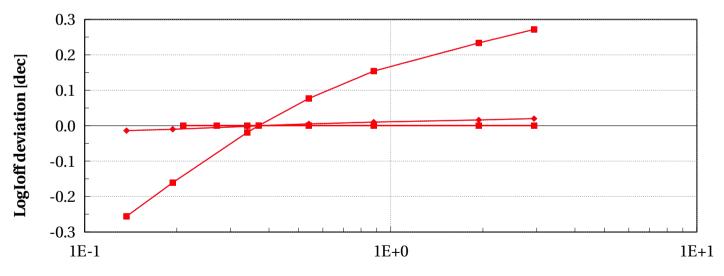




#### pfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"

W==0.3e-6 and Temp==25 and  $p_la==0$ 





"PCPASTRX TOP+PCPASTRX BOT [um]"







# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Lscaling@W=0.6u

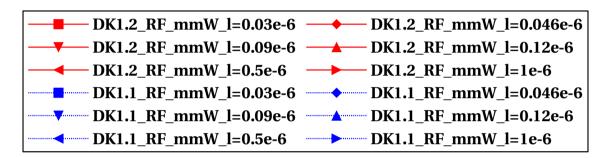


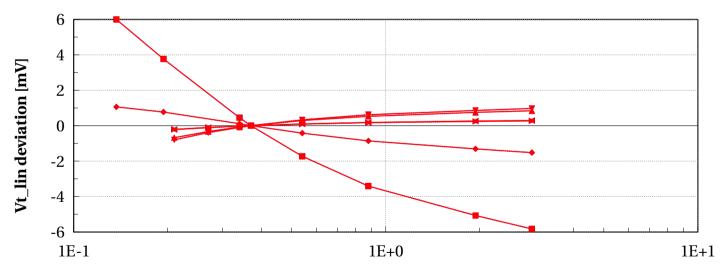


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### pfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





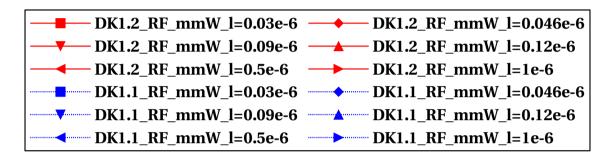
"PCPASTRX TOP+PCPASTRX BOT [um]"

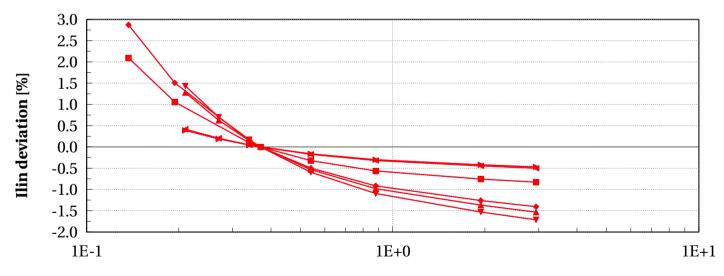






#### pfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





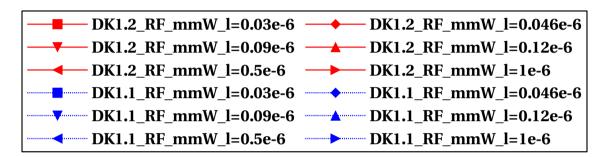
"PCPASTRX TOP+PCPASTRX BOT [um]"

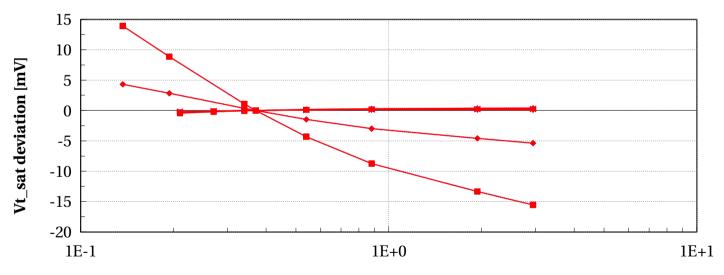






#### pfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





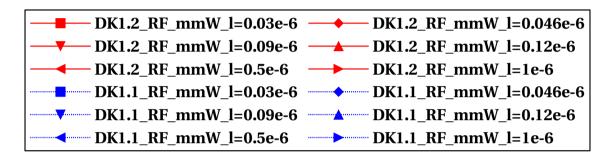
"PCPASTRX TOP+PCPASTRX BOT [um]"

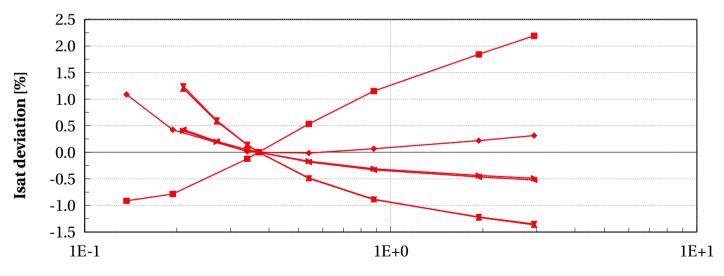






#### pfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





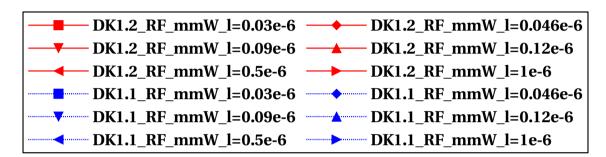
"PCPASTRX TOP+PCPASTRX BOT [um]"

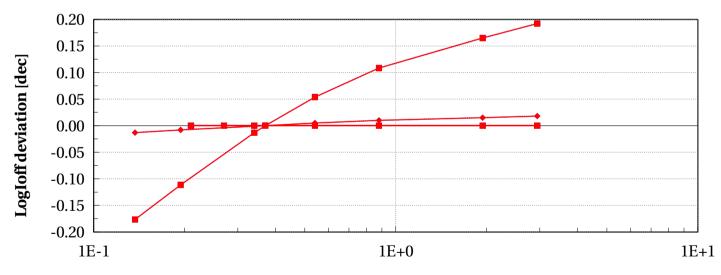






#### pfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





"PCPASTRX TOP+PCPASTRX BOT [um]"







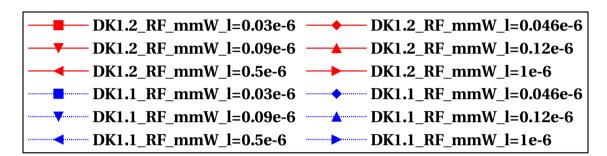
# Normalized plots wrt.(PCPASTRX\_TOP+PCPASTRX\_BOT)=0.37u - Lscaling @ W=1u

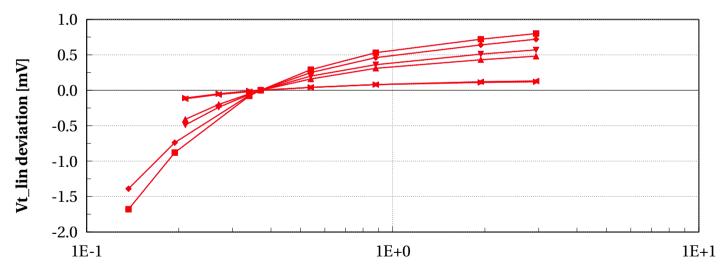


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#### pfet\_acc, Vt\_lin deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





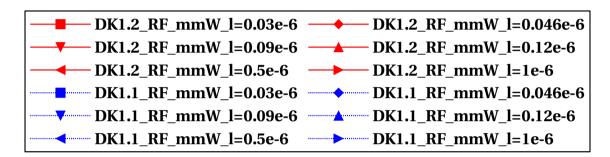
"PCPASTRX TOP+PCPASTRX BOT [um]"

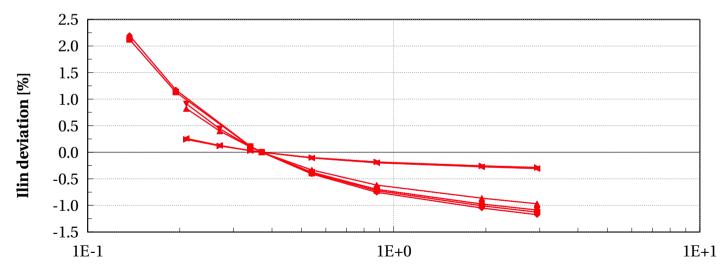






#### pfet\_acc, Ilin deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





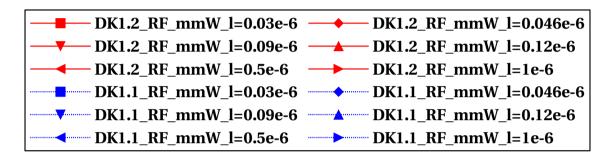
"PCPASTRX TOP+PCPASTRX BOT [um]"

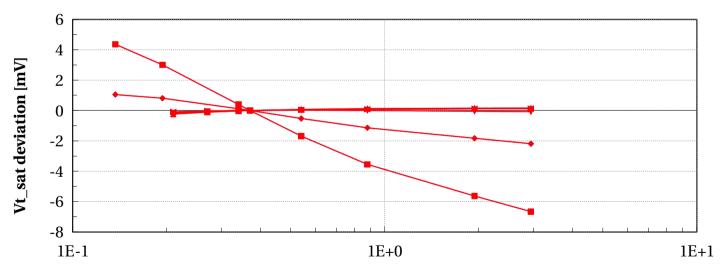






#### pfet\_acc, Vt\_sat deviation [mV] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





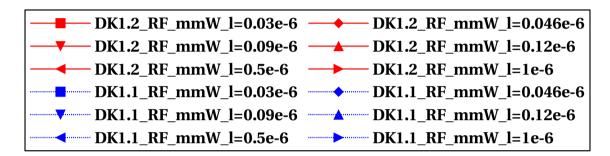
"PCPASTRX TOP+PCPASTRX BOT [um]"

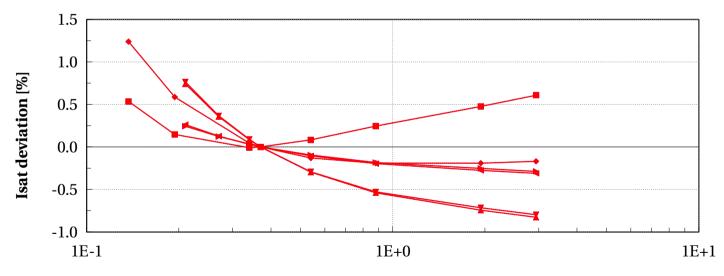






#### pfet\_acc, Isat deviation [%] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





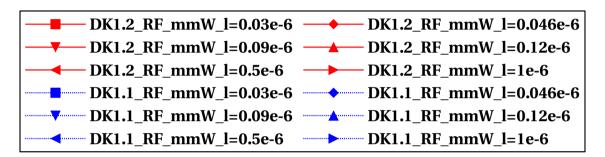
"PCPASTRX TOP+PCPASTRX BOT [um]"

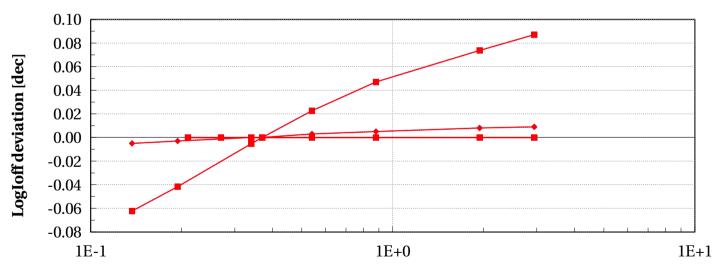






#### pfet\_acc, LogIoff deviation [dec] vs "PCPASTRX\_TOP+PCPASTRX\_BOT [um]"





"PCPASTRX TOP+PCPASTRX BOT [um]"

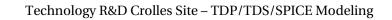






### **Annex**



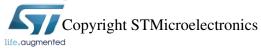




#### **Conditions of simulations**

The simulations were done with SBenchLSF Alpha using Eldo simulator 2018.3.

- Model lvtnfet\_acc (DK1.2\_RF\_mmW)
  - ✓ Input Parameters
    - **x** vds\_off = vds\_sat V
    - $\times$  vds\_cgd = 0 V
    - $\times$  vds\_cgg = 0 V
    - $\times$  mc\_sens = 0
    - $\times$  vds\_lin = 0.05 V
    - $\times$  ivt = 300e-9 A
    - **x** model\_version = 1.3.e
    - $\mathbf{X}$  ams\_release = 2018.3
    - $\times$  vgs\_stop = vdd V
    - **✗** dlshrink\_ivt = 0
    - **✗** sbenchlsf\_release = Alpha
    - $\times$  vds\_sat = Vdd V
    - **x** mc\_nsigma = 3
    - **x** shrink\_ivt = 1



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- $\mathbf{X}$  dlshrink tinv = 3e-9
- $\times$  vgs\_start = -0.5 V
- **✗** plashrink\_ivt = 1
- $\star$  ithslwi = 10e-9 A
- $\times$  vds\_cbd = 0 V
- $\mathbf{x}$  vddmax = vdd
- $\times$  voffset = 0.2 V
- $\times$  mc runs = 1000
- $\mathbf{X}$  vstep\_ivt = 0.005 V
- $\mathbf{x}$  vgs\_off = 0 V
- $\times$  temp = 25 °C
- x f ext = 100k Hz
- $\mathbf{x}$  vbs = 0 V
- $\times$  vdd = 1 V
- $\star$  shrink tinv = 0.9
- $\times$  vds\_gmgd = Vdd/2 V
- ✓ Sweep Parameters
- ✓ Extra parameters
  - $\mathbf{X}$  lvt dev = 0
  - **x** gflag\_noisedev\_rvt\_cmos028fdsoi = 0
  - **✗** gflag\_\_noisedev\_\_lvt\_\_cmos028fdsoi = 0
  - $\mathbf{x}$  rvt dev = 0
- Model lvtpfet\_acc (DK1.2\_RF\_mmW)
  - ✓ Input Parameters
    - **x** vds\_off = vds\_sat V



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- $\times$  vds\_cgd = 0 V
- $\times$  vds\_cgg = 0 V
- $\mathbf{x}$  mc sens = 0
- $\times$  vds\_lin = 0.05 V
- **x** ivt = 70e-9 A
- **✗** model\_version = 1.3.e
- $\mathbf{x}$  ams\_release = 2018.3
- $\mathbf{x}$  vgs\_stop = vdd V
- **✗** dlshrink\_ivt = 0
- **x** sbenchlsf\_release = Alpha
- $\times$  vds sat = Vdd V
- **x** mc\_nsigma = 3
- **x** shrink\_ivt = 1
- **✗** dlshrink\_tinv = 3e-9
- $\times$  vgs\_start = -0.5 V
- **✗** plashrink\_ivt = 1
- $\star$  ithslwi = 10e-9 A
- $\times$  vds\_cbd = 0 V
- $\mathbf{X}$  vddmax = vdd
- $\times$  voffset = 0.2 V
- **x** mc\_runs = 1000
- $\times$  vstep\_ivt = 0.005 V
- $\mathbf{x}$  vgs\_off = 0 V
- $\times$  temp = 25 °C
- $\star$  f\_ext = 100k Hz





- $\mathbf{x}$  vbs = 1 V
- $\times$  vdd = 1 V
- $\star$  shrink\_tinv = 0.9
- $\times$  vds\_gmgd = Vdd/2 V
- ✓ Sweep Parameters
- ✓ Extra parameters
  - $\mathsf{X}$  lvt\_dev = 0
  - **x** gflag\_\_noisedev\_\_rvt\_\_cmos028fdsoi = 0
  - **✗** gflag\_\_noisedev\_\_lvt\_\_cmos028fdsoi = 0
  - $\mathbf{x}$  rvt\_dev = 0
- Model nfet\_acc (DK1.2\_RF\_mmW)
  - ✓ Input Parameters
    - **x** vds\_off = vds\_sat V
    - $\times$  vds\_cgd = 0 V
    - $\times$  vds\_cgg = 0 V
    - $\mathbf{x}$  mc sens = 0
    - $\times$  vds\_lin = 0.05 V
    - **x** ivt = 300e-9 A
    - **✗** model\_version = 1.2.d
    - $\mathbf{x}$  ams\_release = 2018.3
    - $\times$  vgs\_stop = vdd V
    - **✗** dlshrink\_ivt = 0
    - **✗** sbenchlsf\_release = Alpha
    - $\times$  vds sat = Vdd V
    - **x** mc\_nsigma = 3





- **x** shrink\_ivt = 1
- $\mathbf{X}$  dlshrink tinv = 3e-9
- $\times$  vgs\_start = -0.5 V
- **✗** plashrink\_ivt = 1
- $\star$  ithslwi = 10e-9 A
- $\times$  vds cbd = 0 V
- $\times$  vddmax = vdd
- $\times$  voffset = 0.2 V
- $\times$  mc runs = 1000
- $\times$  vstep\_ivt = 0.005 V
- $\mathbf{x}$  vgs\_off = 0 V
- $\times$  temp = 25 °C
- x f ext = 100k Hz
- $\mathbf{x}$  vbs = 0 V
- $\times$  vdd = 1 V
- $\star$  shrink tinv = 0.9
- $\times$  vds\_gmgd = Vdd/2 V
- ✓ Sweep Parameters
- ✓ Extra parameters
  - $\mathbf{X}$  lvt dev = 0
  - **✗** gflag\_\_noisedev\_\_rvt\_\_cmos028fdsoi = 0
  - **✗** gflag\_\_noisedev\_\_lvt\_\_cmos028fdsoi = 0
  - $\mathbf{x}$  rvt dev = 0
- Model pfet\_acc (DK1.2\_RF\_mmW)
  - ✓ Input Parameters



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- **x** vds\_off = vds\_sat V
- $\times$  vds\_cgd = 0 V
- $\times$  vds\_cgg = 0 V
- $\mathbf{x}$  mc\_sens = 0
- $\times$  vds\_lin = 0.05 V
- **x** ivt = 70e-9 A
- **✗** model\_version = 1.2.d
- **x** ams\_release = 2018.3
- $\times$  vgs\_stop = vdd V
- **✗** dlshrink\_ivt = 0
- **✗** sbenchlsf\_release = Alpha
- **x** vds\_sat = Vdd V
- **x** mc\_nsigma = 3
- **x** shrink\_ivt = 1
- **✗** dlshrink\_tinv = 3e-9
- $\times$  vgs\_start = -0.5 V
- **✗** plashrink\_ivt = 1
- $\star$  ithslwi = 10e-9 A
- $\times$  vds cbd = 0 V
- $\times$  vddmax = vdd
- $\times$  voffset = 0.2 V
- **x** mc\_runs = 1000
- $\times$  vstep\_ivt = 0.005 V
- $\mathbf{x}$  vgs\_off = 0 V
- $\times$  temp = 25 °C





- $\star$  f\_ext = 100k Hz
- $\mathbf{x}$  vbs = 0 V
- $\times$  vdd = 1 V
- $\star$  shrink tinv = 0.9
- $\times$  vds\_gmgd = Vdd/2 V
- ✓ Sweep Parameters
- ✓ Extra parameters
  - $\mathsf{X}$  lvt\_dev = 0
  - **✗** gflag\_\_noisedev\_\_rvt\_\_cmos028fdsoi = 0
  - **✗** gflag\_\_noisedev\_\_lvt\_\_cmos028fdsoi = 0
  - $\mathbf{x}$  rvt\_dev = 0
- Model lvtnfet\_acc (DK1.1\_RF\_mmW)
  - ✓ Input Parameters
    - **x** vds\_off = vds\_sat V
    - $\times$  vds\_cgd = 0 V
    - $\times$  vds\_cgg = 0 V
    - $\mathbf{x}$  mc\_sens = 0
    - $\times$  vds\_lin = 0.05 V
    - $\times$  ivt = 300e-9 A
    - **✗** model\_version = 1.3.d
    - $\times$  ams\_release = 2018.3
    - $\times$  vgs\_stop = vdd V
    - $\mathsf{X}$  dlshrink ivt = 0
    - **✗** sbenchlsf\_release = Alpha
    - $\times$  vds\_sat = Vdd V



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- **x** mc\_nsigma = 3
- $\times$  shrink ivt = 1
- $\mathbf{X}$  dlshrink tinv = 3e-9
- $\times$  vgs\_start = -0.5 V
- **✗** plashrink\_ivt = 1
- $\star$  ithslwi = 10e-9 A
- $\times$  vds\_cbd = 0 V
- $\mathbf{X}$  vddmax = vdd
- $\times$  voffset = 0.2 V
- **x** mc\_runs = 1000
- $\mathbf{X}$  vstep\_ivt = 0.005 V
- $\mathbf{x}$  vgs\_off = 0 V
- $\times$  temp = 25 °C
- $\star$  f\_ext = 100k Hz
- $\mathbf{x}$  vbs = 0 V
- $\times$  vdd = 1 V
- $\star$  shrink\_tinv = 0.9
- $\times$  vds\_gmgd = Vdd/2 V
- ✓ Sweep Parameters
- ✓ Extra parameters
  - $\mathsf{X}$  lvt\_dev = 0
  - **x** gflag\_noisedev\_rvt\_cmos028fdsoi = 0
  - **✗** gflag\_\_noisedev\_\_lvt\_\_cmos028fdsoi = 0
  - $\mathbf{x}$  rvt dev = 0
- Model lvtpfet\_acc (DK1.1\_RF\_mmW)





#### ✓ Input Parameters

- $\times$  vds\_off = vds\_sat V
- $\times$  vds\_cgd = 0 V
- $\times$  vds\_cgg = 0 V
- $\mathbf{x}$  mc\_sens = 0
- $\times$  vds\_lin = 0.05 V
- **x** ivt = 70e-9 A
- **x** model\_version = 1.3.d
- $\times$  ams\_release = 2018.3
- $\times$  vgs\_stop = vdd V
- $\mathsf{X}$  dlshrink ivt = 0
- **x** sbenchlsf\_release = Alpha
- $\times$  vds\_sat = Vdd V
- **x** mc\_nsigma = 3
- $\times$  shrink ivt = 1
- **✗** dlshrink\_tinv = 3e-9
- $\times$  vgs\_start = -0.5 V
- **✗** plashrink\_ivt = 1
- $\star$  ithslwi = 10e-9 A
- $\times$  vds\_cbd = 0 V
- $\mathbf{x}$  vddmax = vdd
- $\times$  voffset = 0.2 V
- **x** mc\_runs = 1000
- $\times$  vstep\_ivt = 0.005 V
- $\times$  vgs\_off = 0 V





- $\times$  temp = 25 °C
- x f ext = 100k Hz
- $\star$  vbs = 1 V
- $\times$  vdd = 1 V
- $\star$  shrink\_tinv = 0.9
- $\times$  vds\_gmgd = Vdd/2 V
- ✓ Sweep Parameters
- ✓ Extra parameters
  - $\mathsf{X}$  lvt\_dev = 0
  - **x** gflag\_\_noisedev\_\_rvt\_\_cmos028fdsoi = 0
  - **✗** gflag\_\_noisedev\_\_lvt\_\_cmos028fdsoi = 0
  - $\mathbf{x}$  rvt dev = 0
- Model nfet\_acc (DK1.1\_RF\_mmW)
  - ✓ Input Parameters
    - **x** vds\_off = vds\_sat V
    - $\times$  vds\_cgd = 0 V
    - $\times$  vds\_cgg = 0 V
    - $\mathbf{x}$  mc\_sens = 0
    - $\times$  vds\_lin = 0.05 V
    - $\times$  ivt = 300e-9 A
    - **✗** model\_version = 1.2.c
    - $\mathbf{x}$  ams\_release = 2018.3
    - $\mathsf{x}$  vgs\_stop = vdd V
    - $\mathsf{X}$  dlshrink ivt = 0
    - **x** sbenchlsf\_release = Alpha





- $\times$  vds\_sat = Vdd V
- **x** mc\_nsigma = 3
- $\times$  shrink ivt = 1
- **✗** dlshrink\_tinv = 3e-9
- $\times$  vgs\_start = -0.5 V
- **✗** plashrink\_ivt = 1
- $\star$  ithslwi = 10e-9 A
- $\times$  vds\_cbd = 0 V
- $\times$  vddmax = vdd
- $\times$  voffset = 0.2 V
- $\times$  mc runs = 1000
- $\mathbf{X}$  vstep\_ivt = 0.005 V
- $\mathbf{x}$  vgs\_off = 0 V
- $\times$  temp = 25 °C
- x f ext = 100k Hz
- $\mathbf{x}$  vbs = 0 V
- $\times$  vdd = 1 V
- $\star$  shrink\_tinv = 0.9
- $\times$  vds\_gmgd = Vdd/2 V
- ✓ Sweep Parameters
- ✓ Extra parameters
  - $\mathbf{X}$  lvt dev = 0
  - **x** gflag\_noisedev\_rvt\_cmos028fdsoi = 0
  - **✗** gflag\_\_noisedev\_\_lvt\_\_cmos028fdsoi = 0
  - $\mathbf{x}$  rvt\_dev = 0



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- Model pfet\_acc (DK1.1\_RF\_mmW)
  - ✓ Input Parameters
    - **x** vds\_off = vds\_sat V
    - $\times$  vds\_cgd = 0 V
    - $\times$  vds\_cgg = 0 V
    - $\mathbf{x}$  mc\_sens = 0
    - $\times$  vds\_lin = 0.05 V
    - **x** ivt = 70e-9 A
    - **✗** model\_version = 1.2.c
    - $\mathbf{x}$  ams\_release = 2018.3
    - $\mathsf{x}$  vgs\_stop = vdd V
    - **✗** dlshrink\_ivt = 0
    - **✗** sbenchlsf\_release = Alpha
    - $\times$  vds\_sat = Vdd V
    - **x** mc\_nsigma = 3
    - **x** shrink\_ivt = 1
    - **✗** dlshrink\_tinv = 3e-9
    - $\times$  vgs\_start = -0.5 V
    - **✗** plashrink\_ivt = 1
    - $\star$  ithslwi = 10e-9 A
    - $\times$  vds\_cbd = 0 V
    - **✗** vddmax = vdd
    - $\times$  voffset = 0.2 V
    - **x** mc\_runs = 1000
    - $\times$  vstep\_ivt = 0.005 V





- $\mathbf{x}$  vgs\_off = 0 V
- **x** temp =  $25 \, ^{\circ}$ C
- $\star$  f\_ext = 100k Hz
- $\mathbf{x}$  vbs = 0 V
- $\times$  vdd = 1 V
- $\star$  shrink\_tinv = 0.9
- $\times$  vds\_gmgd = Vdd/2 V
- ✓ Sweep Parameters
- ✓ Extra parameters
  - $\mathsf{x}$  lvt\_dev = 0
  - **x** gflag\_noisedev\_rvt\_cmos028fdsoi = 0
  - **✗** gflag\_noisedev\_lvt\_cmos028fdsoi = 0
  - $\mathbf{x}$  rvt\_dev = 0

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