Sensor Design Update



中國科學院為能物現為施 Institute of High Energy Physics Chinese Academy of Sciences

> WU Kewei 2019/06/27

JTE











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Heating Rule





Schedule

June 24th - June 30th : Wang Wanli correct process

July 1st - June 7th : Wan Xin and me TCAD Simulation

July 8th – July 14th : Mei or me draw right layout.

40~60 days later (early than September 15th) sensor back



Summary Report

1. Our JTE width is over optimized for fill factor (10 um is too small compared with their 100 um width). After discussion with Wanli and Wan Xin, they think our sensor will breakdown early than 400 V (around 200 V) according to their rich experience on design and fabrication. They suggest us enlarge our JTE to 100 um. Good news is JTE width is the last thing that they are worried about on design.

2. We can trust our simulation on TCAD. Wanli promising that their foundry has good consistency with TCAD simulation.

3. Mei need modify her layout according to Foundry's design rule for lithography. If Mei is too busy, I can draw a new one by myself.

4. For settling all the issue (some technical details are skipped but I am capable to handle those), I will need three more week. One week for Wanli correct process according to their foundry. One week for Wan Xin and me to make sure process will work by TCAD simulation. One week for Mei or me drawing right layout.

5. After settle all the issue before fabrication, we will get our wonderful sensor 40~60 days later. We are still able to get our sensor before September 15th that means we will still able to add some test result in that proceeding paper.

Thanks for your listening!



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