

Minutes for PSMA Semiconductor Committee Meeting 24th April, 2019

Attendees: Joe Horzepa, Ritu Sodhi, Tim McDonald, Tirthajyoti Sarkar, Jaume Roig, Reenu Garg, Dan Kinzer, Philip Zuk

1. Tim has finished and sent the March 2019 meeting minutes from APEC 2019.
2. This was the first meeting after APEC 2019. The preparations for APEC 2020 have not started yet. Therefore, the main agenda item for this meeting, was chosen from one of the discussion points at the APEC meeting viz. supporting Special Research project(s) related to the core activities of the semiconductor committee.
3. Jaume Roig showed a Special Research Project proposal related to real-time measurement and testing of electrical characteristics of low- and high-voltage GaN transistors, to be performed by University of Colorado, Boulder.
4. Committee members discussed this proposal from the point of view of PSMA. Specifically, it was agreed on that the goal and scope of such special projects must be tailored such as to benefit a wide majority of the PSMA member organizations.
5. In that regard, Dan Kinzer mentioned that this type of project would be of interest to his company, Navitas, from a fundamental reliability evaluation point of view.
6. Tirtha, Jaume, and Tim agree that the capability and best practice knowledge, resulting from such real-time, high-frequency measurement of GaN transistor, in an actual application setting, could be a valuable research outcome for companies engaged in GaN device and technology development.
7. There was discussion about possible budgetary restriction and how that can impact the scope of the project. Joe mentioned that the usual range of funding for such project is \$25k-\$100k. Therefore, Semiconductor committee members have to re-scope the original proposal to fit this budgetary limit. Joe also mentioned that once the Semiconductor committee properly vets and scopes a proposal with a reasonable budget, the PSMA board may support it enthusiastically.
8. Tirtha and Tim mentioned that evaluation at a higher power (< 100 mOhm device) will be of great interest to the member companies as many of them are pursuing developments with low $R_{ds(on)}$ GaN transistors. This needs to be discussed with the U. Colorado team to assess their capability.
9. Ritu suggested to circulate the basic proposal document and supporting research paper to all members of the committee so that we can prepare offline and be ready for more focused discussion in the next month's meeting. Jaume mentioned that there is no restriction from the U. Colorado faculties to distribute this material. The distribution was done by Jaume on 25th April.
10. Apart from Jaume, Tirtha, and Tim, more volunteers are needed to be on this team. Dan Kinzer said that Darshan Gandhi from Navitas could volunteer. Philip Zuk from Transphorm also could join.
11. Finally, the date for the May meeting was decided to be 22nd May, 10 AM Central. The main agenda item will be taking up the discussion on this special research project and finalizing the scope and a preliminary list of deliverables so that we can communicate to the U. Colorado team and move forward.