

Advanced Chip Manufacturing Application and Review Processes

Revision Date: 2021.12.27

- The processing time for advanced chip applications, from the deadline (Monday) to tape-out, is approximately five weeks.
- The description of time below, as of the application deadline week, is referred to as the first week.

Step 1. Preparation before applying for chip manufacturing (prepared by the applicant)

1. Download it from the TSRI website, read the application guidelines and descriptions carefully.
2. Confirm that the advisor and applicant have joined the TSRI website as members.
3. Confirm that the advisor has applied for the process and has authorized use by the applicant.
4. Confirm that the advisor has submitted the Intellectual Property Rights Affidavit.
5. Verify that the technical file version (DRC, LVS) matches the content published on the TSRI website.
6. The layout is complete, the Tape-out Review Form verification has been approved, and the allowable DRC error status has been met.
7. Check if the test report submission is missing.

Step 2. Applying for chip manufacturing (prepared by the applicant)

1. Fill out the application form on the website for the tape-out application.
2. Upload technical data via the website for the tape-out application.
3. Upload electronic files containing design content and the Tape Out Review Form via the tape-out application website.
(Please use the word document format.)
4. Visit the website for the tape-out application to verify that the GDS files are accurate.

Annotation:

- Application cases submitted after the deadline will not be accepted.
- Application case renewal requests submitted after the application deadline will not be accepted.

Step 3. Review and archiving of application case data (performed by TSRI and will be completed by the first Friday of the first week.)

1. Check if uploaded e-files are complete.
2. Check whether the design's content has been fully written (those without regulated chapters are incomplete contents).
3. Check if the content in the Tape Out Review Form is correct.
4. Verify whether the GDS File and the Design Content Layout Diagram are consistent.
5. Verify DRC to ensure that the layout diagram conforms to the foundry's manufacturing practices.
6. The website releases and emails applicant information (including a list of accepted and rejected applicants).

Annotation:

- If design rules or allowable errors are not met, mark the item as unacceptable.

Step 4. Schedule the tape-out of chips (handled by TSRI for about 2 to 5 weeks).

1. Conduct chip review operations (including written reviews and review meeting reviews).
2. The website releases and emails review result reports (the applicant must respond to reviewer comments).

3. Rank and schedule into a tape-out based on professor ratings and total credit score until all usable areas are used up.
4. The website releases and emails applicant tape-out chip data (including a list of those unable to tape-out).
5. Upload to the foundry for IC production.

Step 5. Chip measurement and test report writing (prepared by the applicant).

1. After completing chip manufacturing, email to the advisor.
2. The applicant should submit the test report within two months after receiving chips.
3. Reports that are incomplete or contain errors will be asked to be submitted again; those that do not comply will be treated as missing test reports.
4. If extended measurement time is needed, submit a measurement time extension application within two weeks after receiving chips.