

SCT BARREL BASEBOARD: THERMAL PERFORMANCE

The following details relate to the performance of the Barrel Module Baseboard, (substrate is TPG, coating is epoxy, facings are BeO) as presented at the recent meeting at CERN on May 31st 2000:

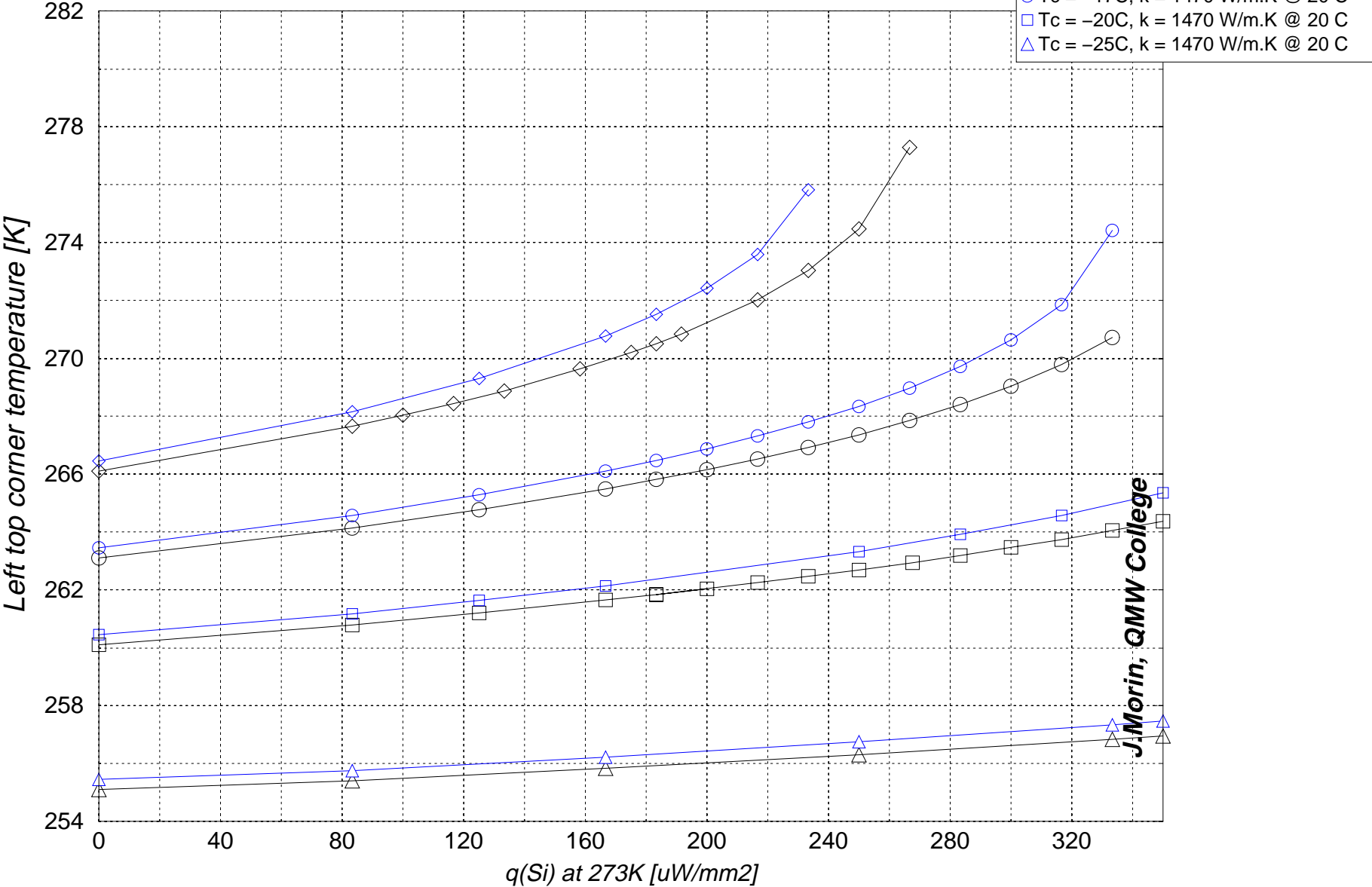
The attachments show

1. the dimensions of the TPG substrate and its through-holes, together with the proposed glue pattern for attaching silicon detectors.
2. The top-left hand temperatures for Thermal Runaway performance for the two types of substrate being procured, under four cooling scenarios.
3. the average wafer temperatures corresponding to two cooling scenarios for each of the substrate types.
4. the overall module temperature contours for the 1700 W/mK @ 20C substrate with a power of $125 \mu\text{W}/\text{mm}^2$
5. the overall module temperature contours for the 1470 W/mK @ 20C substrate with a power of $125 \mu\text{W}/\text{mm}^2$

Tony Carter /Jerome Morin 13th June 2000.

Thermal Runaway Modeling

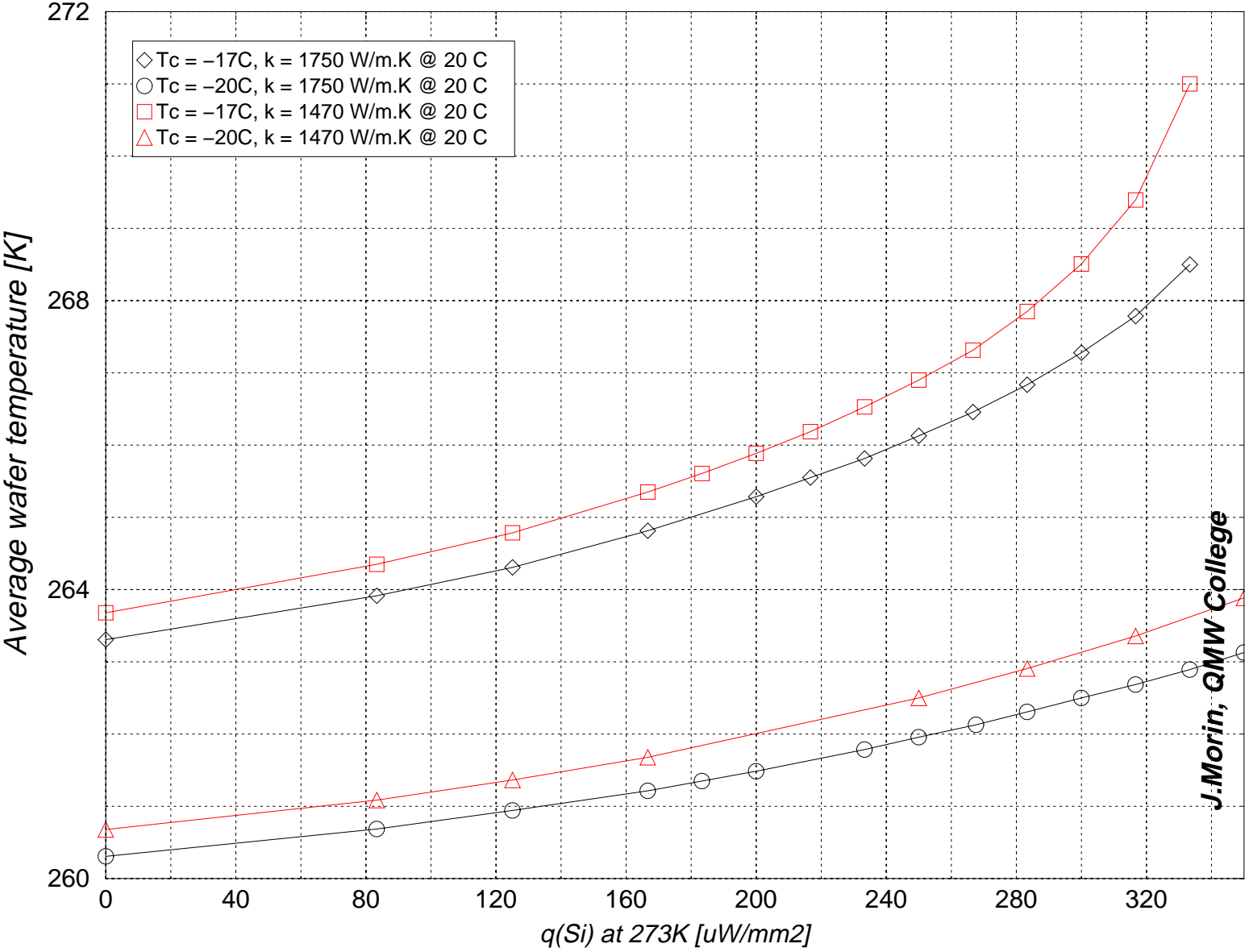
HCPG



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