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Qext studies for the 1.5 GHz BESSY VSR couplers (10'+8')

Tuesday 4 February 2020 11:36 (18 minutes)

Abstract:

The 1.5 GHz couplers for the high-current CW variable pulse-length demonstrator in BESSY II, are now out in the process of being manufactured. These couplers are designed to provide variable coupling, with the initial design brief that their Qext range was from 6×10^6 to 6×10^7 . Through the process of design development it was found that a full order of magnitude range could not be reached. In this talk, the reason behind the reduced range is discussed and studies are presented detailing how the final coupling range was chosen. Since the couplers do not exist on their own but as part of a larger system, the external effects on the Qext as a result of mechanical constraints in the module will also be presented, to show how the full system is interlinked.

Provocative topics:

That is an interesting term. Essentially, how mechanical constraints from the overall SRF system, have more effect on the design than the RF, however I am not sure whether that is provocative or new to anyone who designs couplers.

Presenter: SHARPLES, Emmy

Session Classification: Working Group Session