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Optimisation of the BC2 RF structures for the CLIC RTML

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The previous designs of the CLIC RTML BC2 RF accelerating structures are found to be either not optimal in terms of consumption powers and costs, or problematic in the structure performance test or in the BBA test. Threfore, we optimised the structures for a minimum cost and a successful BBA test, based on an existing X-band structure design that was designed for the CLIC klystron-based main linac. The matching sections are also re-optimised for the structures. The short-range and long-range wakefield effects, as well as the bunch phase shift effect from the DR, are also studied.

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