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Testing and characterization of Solid-State Amplifiers for PolFEL Accelerator

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PolFEL stands for Polish Free Electron Laser, the first FEL research infrastructure in Poland. It will be based on a superconducting linear accelerator using Tesla-type resonant cavities with fundamental RF frequency of 1.3 GHz. Each superconducting cavity will operate in closed loop driven by individual Solid-State Amplifier (SSA) in single cavity regulation mode. The amplifiers have been specially designed for PolFEL by Kubara Lamina S.A. company. They are designed for providing 7kW peak power in pulsed regime and 5kW of continuous wave power at 1.3 GHz. This contribution presents the test stand for the SSA, the results of long-term stability tests and characterization of the power amplifier static and dynamic behaviour.

Footnotes

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