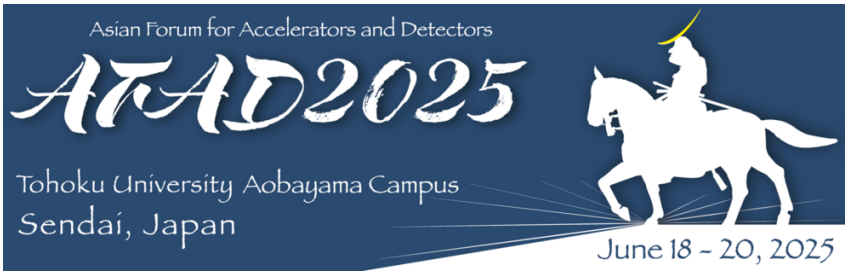

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Transitional Solid-State Power Amplifier Design Based on Existing Architecture at NSRRC

Wednesday, 18 June 2025 16:20 (20 minutes)

The Taiwan Photon Source (TPS), operated by the National Synchrotron Radiation Research Center (NSRRC) in Taiwan, has been using Solid-State Power Amplifiers (SSPA) as part of its regular operations since 2023, maintaining a stored beam current of 500 mA. Due to the discontinuation of Ampleon's BLF578 transistors and the rising need for improved energy efficiency, a new SSPA was developed using the successor transistor, BLF978P. This updated design follows the existing module architecture. To support flexibility and future scalability, both SSPA configurations—with and without circulators—were examined throughout the development process. This study details the performance of these new prototypes.

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