

Diversified Technologies Introduces 120 MHz Transmitter Development that Supports Future Fusion Plasma Devices

A new solid state amplifier that drives a tetrode final power amplifier (FPA) to achieve 120 MHz for multi-megawatt ICRF (Ion Cyclotron Range of Frequency) plasma heating sources to support future fusion devices has been introduced by Diversified Technologies, Inc. (DTI).

BEDFORD, Mass. ([PRWEB](#)) December 13, 2022 -- Diversified Technologies, Inc.(DTI) has introduced a new solid state amplifier that drives a tetrode final power amplifier (FPA) to achieve 120 MHz for multi-megawatt ICRF (Ion Cyclotron Range of Frequency) plasma heating sources to support future fusion devices.

The DTI 120 MHz Transmitter for Fusion Plasmas is a solid state amplifier that drives the FPA to achieve a 2.3 MW for short pulse (less than 1ms) for ICRF. Multi-megawatt ICRF systems that operate between 60 to 120 MHz support future fusion devices which provide a high magnetic field for plasma confinement and, therefore, have greater plasma resonance frequencies.

Permitting analysis with a network analyzer on the actual FPA stand to explore existing cavity frequency ranges and guides, several design, modify, and measure iterations of the output cavities were performed to operate the transmitter up to 120 MHz. The DTI 120 MHz Transmitter for Fusion Plasmas led to a significantly smaller output cavity design.

The DTI 120 MHz Transmitter for Fusion Plasmas is priced from \$1,000,000 up, depending upon construction.

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