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## **C2Po1D-02 [08]: Experimental study on a 20W/80K high frequency pulse tube cryocooler**

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The cryocoolers working around the liquid nitrogen temperature have important applications in high temperature superconducting, infrared detectors and gas liquefaction. Meanwhile, high frequency pulse tube cryocoolers have attracted the attention of scholars due to low vibration, compactness and high reliability. This paper developed an 20W/80K high frequency pulse tube cryocooler with inertance tube and gas reservoir as the phase shifter. The effects of operating parameters, such as working frequency and charging pressure, on the cooling performance will be presented. Some improvement measures will be explored by numerical simulation to further enhance the cooling performance.

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