FCC Experimental License Application for Wafer Electronically Steered Phased Array Antenna

December 29, 2022

Wafer LLC is developing a new small portable flat panel electronically steered phased array antenna for satellite communications. Wafer has completed transmit and receive antenna beam pattern testing in its shielded RF test chambers with satisfactory performance that matched its expected antenna design simulation results.

Wafer is applying for a Conventional Experimental License to test the transmit performance of this antenna in the commercial Ku band from 14.0 – 14.5 GHz to a commercial Ku band satellite located over the continental United States. These tests will be conducted using a single channel per carrier (SCPC) point to point satellite link with the other end of the link at a standard commercial Ku band teleport in the continental United States. Because the Wafer antenna is small and the main lobe beam width is 3 degrees, Wafer will be transmitting using spread spectrum techniques to maintain its signal gain below the side lobe mask specified by FCC Section 25.209. These transmissions are being coordinated with a satellite operator and are under the control of the satellite operator.

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