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Design of a Wide Band Test system with Interchangeable Antenna Modules

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Applied Physical Electronics, L.C. (APELC) has built a suite of wide band antennas, using a fat dipole geometry with an integrated resonator. Each antenna uniquely radiates a damped sinusoid, resulting in several cycles of energy at the predetermined center frequency, and with a wide band of frequency content. The unique aspect to this technology is the capability of using a single pulsed power source to drive different antennas. This paper describes a system consisting of a single Marx generator sourcing five unique wide band antennas, with center frequencies of 60, 100, 250, 400 and 500 MHz. The system design and results are discussed.

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