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Design and Performance of a 2 m EUT MIL STD 461 (RS-105) Test System

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Applied Physical Electronics, L.C. (APELC) has built a moderate scaled test system to meet MIL STD 461, under the RS-105 test configuration. The system is designed to test objects of up to 2 m x 2 m x 2m, with peak electric fields of up to 60 kV/m. This system uniquely uses a coaxial Marx generator, coupled with a planer peaking circuit to produce the MIL STD waveform, which is characterized by a 1.8 –2.8 ns rise time, and a pulse width of approximately 23 ns. This paper will describe the pulsed power source, as well as the nuances of driving a guided wave structure.

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