## 2018 IEEE International Power Modulator and High Voltage Conference



Contribution ID: 132

Type: Poster Presentation

## Analysis of Pulsed RF Signals Radiated from a Capacitive NLTL\*

Wednesday 6 June 2018 13:30 (1h 30m)

Nonlinear transmission lines (NLTLs) have been studied for application in aerospace radars, telecommunication, and medical devices. The radiofrequency (RF) pulses generated by the NLTLs can be radiated by antennas connected at the output of the lines. There have been relatively few articles that show experimental results regarding the transmission and receiving of RF signal generated by NLTLs employing dipole antennas, in special with nonlinear lumped capacitive lines. In this paper, the results of simulations and measurements performed on a 30-section capacitive NLTL using low-voltage varactor diodes (BB809) as nonlinear elements are presented. The pulsed RF signal around 40 MHz was generated by a low voltage pulsed DC signal at the input of the line. The NLTL was characterized using time- and frequency-domains' analysis of the pulsed RF signals measured on a resistive load connected at the line output and on transmitting and receiving half-wave dipole antennas.

\*Work Supported by US Air Force Office of Scientific Research under contract no. FA9550-18-1-0111.

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Session Classification: Poster 3 - Power Modulator Systems and Applications