METAMAG

www.metamag.us
261 Cedar Hill St, Suite 130, Marlborough, MA

Gyromagnetic Non-Linear Transmission Lines

Gyromagnetic non-linear transmission lines (GNLTLs) can produce microwave pulses with high instantaneous power levels that, when integrated into an EW system, afford the opportunity to cause irreparable electronic damage in CUAS scenarios. GNLTLs have the potential to play an important role in electronic warfare, especially for Counter-Unmanned Aircraft Systems (CUAS)

Metamag has developed GNLTLs that can produce microwave pulses with instantaneous power levels exceeding 10's of Megawatts. Three models are currently available, differentiated by their operating frequencies: Low Band (800 MHz), Mid Band (2.2 GHz), and High Band (3.5 GHz), with the Low Band GNLTL being the most powerful model. **Figure 1** shows the typical footprint of GNLTL currently available from Metamag. When driven by a 50 kV input pulse, these models generate RF pulse at 800 MHz (Low Band), 2.2 GHz (Mid Band), and 3.5 GHz (High Band).

Figure 1: Rendering of Metamagnetics' GNLTL

GNLTLs, together with a High-Power Microwave antenna and the requisite High-Voltage pulser, can serve as an HPM subsystem, as shown in **Figure 2**, with the complete system including target tracking capability.

Metamag continues to develop GNLTLs at higher frequencies, including X-Band.

Contact Information
Email – sales@metamag.us
Phone – 781-562-0756

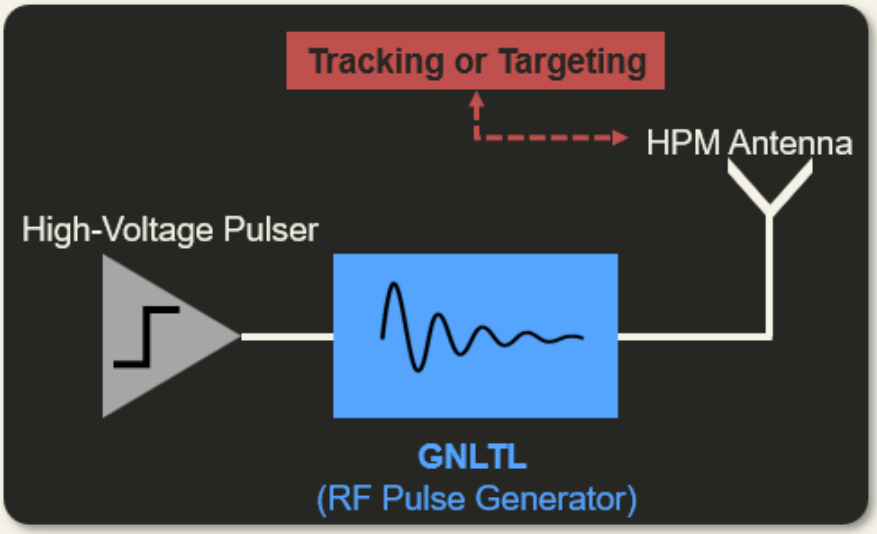

Figure 2: General block diagram of GNLTL integrated into a CUAS System

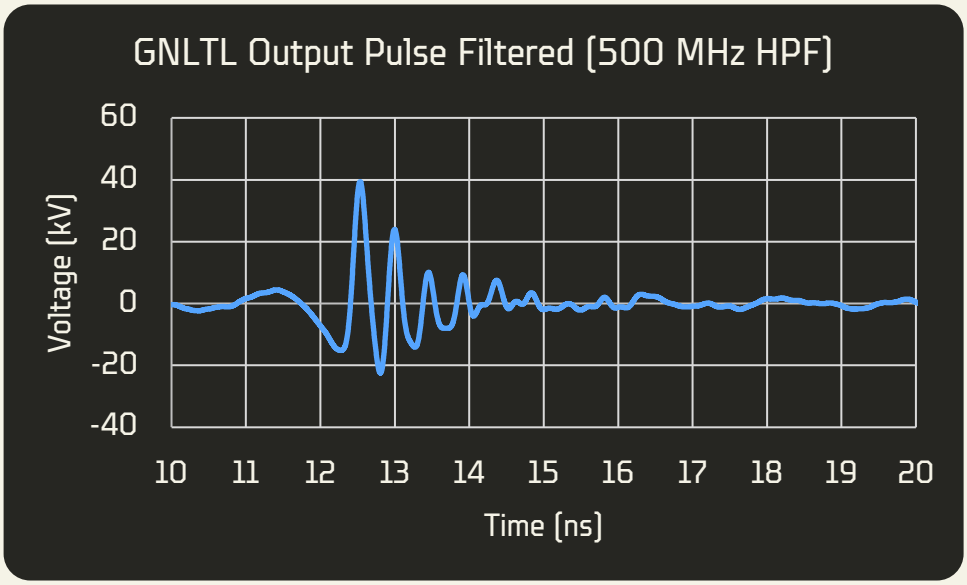

Figure 3: Measured output voltage of a Mid Band GNLTL – *post processed with a 500 MHz High-Pass Filter*

Device Type	**Weight** (pounds)	**Length** (feet)	**Frequency** (GHz)
Low Band	28	3	0.8
Mid Band	26	3	2.2
High Band	23	3	3.5

Figure 4: Table of available GNLTL products

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