

A 10ns risetime, 1 μ s wide pulse will be applied to a dipole antenna which will then resonate at its fundamental design frequency of 100 MHz. The necessary bandwidth will be determined by the characteristic bandwidth of the pulse-excited dipole antenna and the losses associated with the circuit and coupling. It is expected that the antenna will emit a damped sinusoidal type waveform of approximately two(2) or more cycles. Performing an FFT on the simulated waveform gives an energy density spectrum with content in the range 50MHz - 200MHz assuming a -20dB threshold criteria.