Abstracts

An ultra-wideband exciter for ground-penetration radar systems

Phuong Phu, E. Adler, J. Speulstra, J. Clark, M. Bartlett and J. Fisher. "An ultra-wideband exciter for ground-penetration radar systems." 1997 MTT-S International Microwave Symposium Digest 3. (1997 Vol. III [MWSYM]): 1135-1138.

Waveform requirements for a ground penetration ultra-wideband exciter (UWBE) include generating a frequency spectrum over a wide bandwidth, with a low-start frequency. A scripted linear-frequency-modulated waveform is used for the frequency coverage, with the added ability of arbitrarily notching-out portions of the transmitting spectrum in which radio frequency interference (RFI) exists. This exciter uses an arbitrary waveform generator (AWG), which scripts waveform packets with notches in the spectrum. The AWG is coupled to a frequency synthesizing architecture (FSA) device for waveform packet placement to create a phase-continuous broad-band response.

❑ Return to main document.