

Envelope Soliton Oscillator for UWB

Gary J. Ballantyne

(Submitted on 10 Dec 2009)

An electronic oscillator is shown to support an envelope soliton pulse. The oscillator comprises a loop, formed by a nonlinear transmission line, an amplifier, a bandpass filter and a saturable absorber. The soliton is suitable for ultra-wideband radio-frequency communication; its existence and stability are demonstrated with simulations.

Comments: 10 pages, 2 figures

Subjects: **Pattern Formation and Solitons (nlin.PS)**; Adaptation and Self-Organizing Systems (nlin.AO)

Cite as: **arXiv:0912.1906v1 [nlin.PS]**

Submission history

From: Gary Ballantyne Dr. [[view email](#)]

[v1] Thu, 10 Dec 2009 02:23:24 GMT (64kb)

Which authors of this paper are endorsers?

Download:

- [PDF only](#)

Current browse context:

nlin.PS

[< prev](#) | [next >](#)

[new](#) | [recent](#) | [0912](#)

Change to browse by:

[nlin](#)

[nlin.AO](#)

References & Citations

- [CiteBase](#)

Bookmark (what is this?)

- [CiteULike logo](#)
- [Connotea logo](#)
- [BibSonomy logo](#)
- [Mendeley logo](#)
- [Facebook logo](#)
- [del.icio.us logo](#)
- [Digg logo](#)
- [Reddit logo](#)