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| **Title:** | Design and Evaluation of a Miniaturized SWB Patch Antenna | | | |
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| **Published Journal Name:** | AIUB Journal of Science and Engineering (AJSE) | | | |
| **Type of Publication:** | Journal | | | |
| **Volume:** | 15 | | Issue | 1 |
| **Publisher:** | AIUB Office of Research and Publication | | | |
| **Publication Date:** | August 2016 | | | |
| **ISSN:** | | 1608-3679 (Print) | | |
| **DOI:** |  | | | |
| **URL:** | https://orp.aiub.edu/ajse-vol-15-no-1-august-2016 | | | |
| **Other Related Info.:** |  | | | |
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| **Abstract:** |  |
| In this paper, a miniaturized super wide band patch antenna is design and evaluated for super wide band applications. The proposed antenna is made from iterations of a hexagonal slot inside a circular patch with a transmission line. A partial ground plane and patch toward the substrate are used for designing the antenna to achieve a super wide bandwidth ranging from 3.1 GHz to 63.5 GHz with a bandwidth ratio of 20*.5*: 1. The bandwidth and gain of the proposed antenna are much better than the recently reported super wideband antennas which make it appropriate for many wireless communications systems such as WLAN, WPAN and UWB. Moreover, the proposed antenna has a compact volume of 45 mm × 31 mm × 1.58 mm on a Roger RT 5870 substrate with a relative dielectric constant of 2.3. Antenna design and the simulation results of radiation pattern, and gain are presented and discussed in detail. | |