Substrate Integrated Waveguide (SIW) and its Applications

Message from the Guest Editors

Dear Colleagues,

During the last decade, Substrate Integrated Waveguide (SIW) technology has been largely implemented for the construction of numerous microwave devices and circuits based on innovative solutions or re-proposing, by following a quasi-planar approach, well known functionalities of classical waveguide based components/systems. The possibility to fabricate shielded structures by employing planar geometries has provided an amazing way to fabricate innovative resonators exhibiting very high quality factors, suitable for filter and oscillator applications. Multi-layered print circuit board (PCB) or low-temperature co-fired ceramic (LTCC) technologies and SIW approach allow reaching a high feasibility, planar integration and packaging degree. As a consequence, the possibility of fabricating complex structures at low cost fulfils the increasing demand of highly sophisticated antennas for satellite communication, 5G and new generation wireless systems, Tera-Hertz systems, bio medicine and a number of other applications.

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