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Multiband antenna using stacked series array for ka-band application

(Article)

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Abstract

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In this paper, a multiband stack series array antenna is designed in order to attain solutions for the future 28 GHz Ka-band application. Double layer substrate Technology is utilized to accomplish multiple resonant frequencies with higher data transfer capacities due to high bandwidth. The designed antenna is dependent on twofold layer consisting patches and resonators in different layers stacked together. The designed multiband antennas can resonate at single band of (28 GHz), dual band of (28 and 30 GHz) and triple band of (24.18, 26 and 28.453). The results achieved in the simulation are later fabricated and tested. The test result illustrates that the antennas have wide bandwidth, high gain and even higher efficiencies. All the proposed antenna configurations have demonstrated a decent possibility for 5G millimeter wave (mmwave) application. © 2019 Institute of Advanced Engineering and Science. All rights reserved.

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Dual-layer substrate Multiband antenna Stack series array

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