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Design and analysis of 1-to-4 wilkinson power divider for antenna array feeding network (Conference Paper)

Shaikh, F.A.[a], Khan, S.[a], Alam, A.Z.[a], Habaebi, M.H.[a], Khalifa, O.O.[a], Khan, T.A.[b]

[a]Dept. of ECE, Faculty of Eng., International Islamic University, Malaysia (IIUM), Kuala Lumpur, Malaysia
[b]Deparment of Electrical Engineering, Usman Institute of Technology, Universiti KualaLumpur, Malaysia

Abstract

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In this paper, A Novel 1 to 4 modified Wilkinson power divider operating over the frequency range of (3 GHz to 8 GHz) is proposed. The design perception of the proposed divider based on two different stages and printed on FR4 (Epoxy laminate material) with the thickness of 1.57mm and $_r$ =4.3 respectively. The modified design of this power divider including curved corners instead of the sharp edges and some modification in the length of matching stubs. In addition, this paper contain the power divider with equal power split at all ports, reasonable insertion loss, acceptable return loss below -10 dB, good impedance matching at all ports and satisfactory isolation performance has been obtained over the mentioned frequency range. The design concept and optimization development is practicable through CST simulation software. © 2018 IEEE.

Author keywords

1 to 4 Wilkinson Power Divider | CST | Stub Length

Indexed keywords

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Engineering uncontrolled terms: Design and analysis | Different stages | Frequency ranges | Isolation performance | Proposed dividers | Simulation software | Stub Length | Wilkinson power dividers

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