Abstract

In this paper a novel compact Substrate Integrated Waveguide (SIW) filter is proposed. A wideband band pass filter for microwave and millimeter-wave systems is investigated at 80 GHz center frequency with 10.5% fractional bandwidth. A Conductor backed coplanar waveguide is inserted in Substrate Integrated Waveguide (SIW) structure as transition to achieve sharper skirt characteristics. Simulated results show good passband characteristics over a frequency range 75.9 GHz to 84.3 GHz depicting 0.1 dB insertion loss and minimum of 56 dB return loss.

References

20. Peng Chu, Wei Hong, Linlin Dai, Hongjun Tan, Jixin Chen, Zhangcheng Hao, Xicheng


Index Terms

Computer Science
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Keywords

Millimeter-wave, Substrate Integrated Waveguide (SIW), Bandpass filter, Coplanar waveguide, W-Band.