

Document details

< Back to results | 1 of 3 Next >

Export Download Print E-mail Save to PDF Add to List More... >

[Full Text](#) View at Publisher

Proceedings of the 2018 7th International Conference on Computer and Communication Engineering, ICCCE 2018
 16 November 2018, Article number 8539247, Pages 313-316
 7th International Conference on Computer and Communication Engineering, ICCCE 2018; Kuala Lumpur; Malaysia; 19 September 2018 through 20 September 2018; Category numberCFP1839D-USB; Code 142740

A Compact Bandpass Filter Using Microstrip Hairpin Resonator for WLAN Applications (Conference Paper)

Kayser Azam, S.M. ✉, Ibrahimy, M.I. ✉, Motakabber, S.M.A. ✉, Zakir Hossain, A.K.M. ✉
 Dept. of Electrical and Computer Engineering, International Islamic University Malaysia, Kuala Lumpur, Malaysia

Abstract

View references (15)

This work represents a microstrip hairpin resonator-based bandpass filter for Wireless Local Area Network (WLAN). Two short-circuited microstrip comb-lines have been coupled at the two sides of a rectangular-loop to construct the hairpin resonator. The Taconic TLX-8 material has been used as the substrate to design the filter at a center frequency of 2.45 GHz. The designed filter exhibits a two-pole Chebyshev response with an insertion loss of -0.37 dB and a minimum return loss of -34.03 dB. This compact filter has a fractional bandwidth of 4.37% which sharply selects the entire bandwidth of WLAN frequencies. © 2018 IEEE.

SciVal Topic Prominence

Topic: Bandpass filters | Resonators | tri-band bandpass

Prominence percentile: 92.579 ⓘ

Author keywords

Bandpass Filter Hairpin resonator ISM band Microstrip WLAN

Indexed keywords

Engineering controlled terms: Bandpass filters Bandwidth Chebyshev filters Microwave filters Resonators
 Wireless local area networks (WLAN)

Engineering uncontrolled terms: Band pass Filter Hairpin resonator ISM bands Microstripes WLAN

Engineering main heading: Microstrip filters

Funding details

Funding sponsor Funding number Acronym

Metrics

0 Citations in Scopus
 0 Field-Weighted Citation Impact



PlumX Metrics Usage, Captures, Mentions, Social Media and Citations beyond Scopus.

Cited by 0 documents

Inform me when this document is cited in Scopus:

[Set citation alert >](#)

[Set citation feed >](#)

Related documents

Hairpin and modified hairpin broad-band micro-strip band-pass filter at X-band
 Wang, L. , Zhang, X. , Li, S. (2015) Gutu Dianzixue Yanjiu Yu Jinzhan/Research and Progress of Solid State Electronics

Compact and high-selectivity microstrip bandpass filter using two-stage twist modified asymmetric split-ring resonators
 Li, J. , Huang, Y. , Wen, G. (2015) Electronics Letters

Compact and highly-selective microstrip bandpass filter and diplexer using two-stage twist modified split-ring resonators
 Huang, Y. , Wen, G. , Li, J. (2015) 2015 IEEE MTT-S International Microwave Symposium, IMS 2015

ISBN: 978-153866991-4

Source Type: Conference Proceeding

Original language: English

DOI: 10.1109/ICCCE.2018.8539247

Document Type: Conference Paper

Publisher: Institute of Electrical and Electronics Engineers Inc.

References (15)

[View in search results format >](#) All [Export](#) [Print](#) [E-mail](#) [Save to PDF](#) [Create bibliography](#)

- 1 Azam, S.M.K., Ibrahimy, M.I., Motakabber, S.M.A., Hossain, A.K.M.Z.
Microstrip coupled line bandpass filter with radial stubs for narrow-band applications
([Open Access](#))

(2017) International Journal of GEOMATE, 13 (40), pp. 183-188. Cited 2 times.
www.gi-j.com/
doi: 10.21660/2017.40.171130

[View at Publisher](#)

- 2 Azam, S.M.K., Ibrahimy, M.I., Motakabber, S.M.A.
Reduction of phase noise for inductor based ultra-wide band voltage controlled oscillator

(2017) Proceedings - 2017 International Conference on Communication, Control, Computing and Electronics Engineering, ICCCEE 2017, art. no. 7866704. Cited 3 times.
ISBN: 978-150901809-3
doi: 10.1109/ICCCEE.2017.7866704

[View at Publisher](#)

- 3 Islam, I., Islam, N., Haque, M.
A miniaturized interdigital hairpin microstrip bandpass filter design

(2013) 2013 International Conference on Informatics, Electronics and Vision, ICIEV 2013, art. no. 6572611. Cited 5 times.
ISBN: 978-147990397-9
doi: 10.1109/ICIEV.2013.6572611

[View at Publisher](#)

- 4 Cheng, F., Lin, X., Zhang, P., Song, K., Fan, Y.
A microstrip bandpass filter based on inductive coupled quarter-wavelength resonators

(2013) Microwave and Optical Technology Letters, 55 (5), pp. 1031-1033. Cited 6 times.
doi: 10.1002/mop.27469

[View at Publisher](#)

- 5 Zhao, Q., Wang, G., Ding, D.
Compact microstrip bandpass filter with fragment-loaded resonators

(2014) Microwave and Optical Technology Letters, 56 (12), pp. 2896-2899. Cited 9 times.
<http://www.interscience.wiley.com/jpages/0895-2477>
doi: 10.1002/mop.28726

[View at Publisher](#)

- 6 Song, K., Zhang, F., Fan, Y.
Miniaturized dual-band bandpass filter with good frequency selectivity using SIR and DGS
(2014) AEU - International Journal of Electronics and Communications, 68 (5), pp. 384-387. Cited 15 times.
doi: 10.1016/j.aeue.2013.10.005
[View at Publisher](#)
-
- 7 Wang, H., Tam, K.-W., Ho, S.-K., Kang, W., Wu, W.
Short-ended self-coupled ring resonator and its application for balanced filter design
(2014) IEEE Microwave and Wireless Components Letters, 24 (5), art. no. 6774960, pp. 312-314. Cited 19 times.
doi: 10.1109/LMWC.2014.2309081
[View at Publisher](#)
-
- 8 Xu, S., Ma, K., Meng, F., Yeo, K.S.
Novel Defected Ground Structure and Two-Side Loading Scheme for Miniaturized Dual-Band SIW Bandpass Filter Designs
(2015) IEEE Microwave and Wireless Components Letters, 25 (4), art. no. 7047250, pp. 217-219. Cited 45 times.
doi: 10.1109/LMWC.2015.2400916
[View at Publisher](#)
-
- 9 Mora, S., Alonso, Y., Vargas, N., Vera, J., Avendano, J.
Design of a bandpass filter using microstrip Hairpin resonators
(2017) 2017 CHILEAN Conference on Electrical, Electronics Engineering, Information and Communication Technologies, CHILECON 2017 - Proceedings, 2017-January, pp. 1-5.
ISBN: 978-153863123-2
doi: 10.1109/CHILECON.2017.8229581
[View at Publisher](#)
-
- 10 Eun, J.W., Lee, J.-H.
A microstrip dual-band bandpass filter using feed line with SIR ([Open Access](#))
(2017) IEICE Electronics Express, 14 (4). Cited 4 times.
https://www.jstage.jst.go.jp/article/elex/14/4/14_14.20170022/_pdf
doi: 10.1587/elex.14.20170022
[View at Publisher](#)
-
- 11 Kim, C., Hyeon Lee, T., Shrestha, B., Chul Son, K.
Miniaturized dual-band bandpass filter based on stepped impedance resonators
(2017) Microwave and Optical Technology Letters, 59 (5), pp. 1116-1119. Cited 6 times.
<http://www.interscience.wiley.com/jpages/0895-2477>
doi: 10.1002/mop.30481
[View at Publisher](#)
-
- 12 Deng, H.-W., Liu, F., Xu, T., Sun, L., Xue, Y.-F.
Compact and high selectivity dual-mode microstrip BPF with frequency-dependent source-load coupling
(2018) Electronics Letters, 54 (4), pp. 219-221. Cited 2 times.
<http://scitation.aip.org/dbt/dbt.jsp?KEY=ELLEAK>
doi: 10.1049/el.2017.4160

□ 13 Ahmad, A., Othman, A.R.
Design and optimisation of narrow dual bandpass filter using bell-shaped structure for RF receiver system

(2018) International Journal of Wireless and Mobile Computing, 14 (1), pp. 64-69.
<http://www.inderscience.com/ijwmc>
doi: 10.1504/IJWMC.2018.089992

View at Publisher

□ 14 Pozar, D.M.
(2009) Microwave Engineering, pp. 148-298. Cited 13139 times.
John Wiley and Sons

□ 15 Alam, A.H.M.Z., Islam, R., Khan, S., Mohd, N.N.A.B.N., Aziz, N.
Tunable bandpass filter using RF MEMS switches
(2009) IIUM Eng. J, 10 (2), pp. 69-80. Cited 4 times.

© Copyright 2019 Elsevier B.V., All rights reserved.

< Back to results | 1 of 3 Next >

^ Top of page

About Scopus

What is Scopus
Content coverage
Scopus blog
Scopus API
Privacy matters

Language

日本語に切り替える
切换到简体中文
切换到繁體中文
Русский язык

Customer Service

Help
Contact us

ELSEVIER

[Terms and conditions](#) ↗ [Privacy policy](#) ↗

Copyright © 2019 Elsevier B.V. All rights reserved. Scopus® is a registered trademark of Elsevier B.V.
We use cookies to help provide and enhance our service and tailor content. By continuing, you agree to the use of cookies.

 RELX Group™