

WAŻNIEJSZE PUBLIKACJE DOKTORANTA

1. R. Smolarz, K. Staszek, K. Wincza and S. Gruszczynski, "A 24 GHz microwave sensor with built-in calibration capability designed in MMIC technology," *IEEE Access*, vol. 9, pp. 31513-31524, February 2021.
2. R. Smolarz, K. Wincza, and S. Gruszczynski "Modal phase velocity compensation in multilayer differentially fed directional couplers," *Microwave and Optical Technology Letters*, vol. 62, no. 5, pp. 1882-1887, May 2020.
3. S. Gruszczynski, R. Smolarz, and K. Wincza, "Differential Bi-Level Microstrip Directional Coupler with Equalized Coupling Coefficients for Directivity Improvement," *Electronics*, vol. 9, no. 4, pp. 547-, March 2020.
4. S. Gruszczynski, R. Smolarz, C. Wu, and K. Wincza, "Monolithic Miniaturized Differentially-Fed Branch-Line Directional Coupler in GaAs Monolithic Technology," *Electronics*, vol. 9, no. 3, pp. 446-, March 2020.
5. S. Gruszczynski, R. Smolarz, and K. Wincza, "Realization of high-performance broadband quadrature directional couplers in UMS PH25 technology," *Electronics*, vol. 8, no. 12, pp. 1520-, December 2019.
6. R. Smolarz, K. Wincza and S. Gruszczynski, "Impedance transforming rat-race couplers with modified Lange section," *Journal of Electromagnetic Waves and Applications*, vol. 32, no. 8, pp. 972–983, May 2018.
7. R. Smolarz, K. Wincza and S. Gruszczynski, "Impedance transforming tandem couplers with increased bandwidth and transformation ratio," *IEEE Microwave and Wireless Components Letters*, vol. 28, no. 4, pp. 299–301, March 2018.
8. R. Smolarz, K. Wincza and S. Gruszczynski, "Design of low-loss directional couplers with compensated coupled-line sections in suspended microstrip technique," *International Journal of RF and Microwave Computer-Aided Engineering*, vol. 27, no. 8, October 2017.
9. R. Smolarz, K. Wincza, and S. Gruszczynski, "Design of 3-dB Differentially-Fed Tandem Directional Couplers," in *Proc. of the IEEE MTT-S International Wireless Symposium (IWS)*, Guangzhou, China, May 2019, pp. 1–3.
10. R. Smolarz, K. Wincza, and S. Gruszczynski, "Broadband low-loss impedance transforming rat-race coupler in suspended microstrip technique," in *Proc. of the 22nd International Microwave and Radar Conference (MIKON)*, Poznan, Poland, May 2018, pp. 291–293.
11. K. Janisz, R. Smolarz, A. Rydosz, K. Wincza, and S. Gruszczynski, "Compensated 3-dB lange directional coupler in suspended microstrip technique," in *Proc. of the 7th IEEE International Symposium on Microwave, Antenna, Propagation, and EMC Technologies (MAPE) 2017*, Xi'an, China, October 2017, pp. 289–291.