

■ ANTENNAS

Aloui, Radhoiné, Zied Houaneb, Ignacio Llamas-Garro and Hassen Zairi
 "Substrate Integrated Waveguide Dual-Band ISM Antenna for Wireless Sensors," No. 9, Online.

Dehghani, Mohammad Reza, Ahmed H. Akgiray, Arshad Mehmood and Onur Hazma Karabey
 "Liquid Crystals: A Power and Cost-Efficient Electronically Steerable Antenna Solution for 5G," No. 5, p. 110.

Fairouz, Mohammad and Mohamad A. Saed
 "Wideband Retrodirective Arrays for Wireless Charging of Portable Devices," No. 7, Online.

Haroun, Mohammad H., Hussam Ayad, Jalal Jomaah, Marta Cabedo-Fabres and Miguel Ferrando-Bataller
 "Dual-Band Antenna Array for Digital Beamforming In LTE-A and 5G," No. 11, p. 76.

Luo, Wei, Hongyuan Zhang, Xiaolong Weng, Haiyan Chen, Wentao He and Kai Li
 "Low RCS Microstrip Patch Antenna Using Artificial Magnetic Conductors and Defected Ground Structure," No. 12, p. 80.

Kumar, Arvind, Sharwan Ram and Mu'ath Al-Hassan
 "A Planar Cavity-Backed Self-Triplexing Slot Antenna for Planar Integration," No. 10, Online.

McNeil, Peter
 "Demystifying Popular Waveguide Antennas for mmWave Applications," No. 10, p. 60.

Menlo Micro
 "MEMS Switch-Based Differential Delay Shifter for a 3.5 GHz Beam Steering Antenna," No. 11, p. 62.

Sanad, Mohamed and Noha Hassan
 "Sub-6 GHz Switched Beam Base Station Antenna with Remote Electric Tilt for Each Beam," No. 11, Online.

Yu, Bin, Kang Yang, Guangli Yang, Zhanyi Qian and Chow-Yen-Desmond Sim
 "A 28 GHz Beam Steering Antenna for 5G Cellular Phones," No. 1, p. 78.

■ COMMERCIAL APPLICATIONS

Baheti, Neha and Avik Santra
 "Interactive Radar Sensors for a Holistic Cabin Experience," No. 8, p. 64.

■ COMPONENTS/SUBSYSTEMS

Brand, Joel
 "Self-Interference Cancellation for Co-Located TDD Radios Sharing the Same Band," No. 1, p. 54.

Menlo Micro
 "Miniaturized High-Power UHF Tunable Filter Using MEMS Switches," No. 8, Online.

Nath, Urmila and Guru Subramanyam
 "Reconfigurable Dual-Band Power Amplifier for Telemetry Applications," No. 12, Online.

Polidi, Danny and Mike Crist
 "Primer on the Use of Digital Control and a Delay Line to Frequency Lock an Oscillator," No. 3, Online.

■ COVER FEATURES

Altair, ANSYS, Cadence/AWR, Keysight and MathWorks
 "Artificial Intelligence and Machine Learning Add New Capabilities to Traditional RF EDA Tools," No. 7, p. 20.

Altair
 "Altair Antenna Design Optimization with Machine Learning," No. 7, p. 20.

ANSYS
 "Machine Learning with ANSYS Physics-Based Simulation," No. 7, p. 22.

Cadence AWR
 "Cadence AWR Uses Machine Learning to Accelerate Designs," No. 7, p. 28.

Keysight Technologies
 "Keysight's AI/Machine Learning Optimizations in Design Software," No. 7, p. 30.

MathWorks
 "MathWorks Seamlessly Integrates AI into Their Tools," No. 7, p. 32.

Belot, Didier, Jose Luis Gonzalez Jimenez, Eric Mercier and Jean-Baptiste Dore
 "Spectrum Above 90 GHz for Wireless Connectivity: Opportunities and Challenges for 6G," No. 9, p. 20.

Black, Eric, Alex Katko and Andjela Ilic-Savoia
 "Breaking Down mmWave Barriers with Holographic Beam Forming@," No. 2, p. 22.

Caratelli, Diego, Ali Al-Rawi, James Song and David Favreau
 "Dielectric Resonator Antenna Arrays for 5G Wireless Communications," No. 2, p. 36.

Duncan, Helen
 "Benelux--At the Heart of Europe's Microwave Design Community and the EU Government Research Framework," No. 12, p. 22.

Elisabeth, Stephane and Cedric Malaquin
 "Intensifying Technology Competition in the Acoustic Wave Filter Market," No. 10, p. 20.

Espeland, Joakim and Andrian Buchi
 "How Drone Technology Will Revolutionize Satellite Antenna Testing," No. 8, p. 20.

Fulton, C., R. Palmer, M. Yeary, J. Salazar, H. Sigmarrson, M. Weber and A. Hedden
 "Horus: A Testbed for Fully Digital Phased Array Radars," No. 1, p. 20.

Higham, Eric
 "Semiconductor Trends in Sub-6 GHz 5G Networks," No. 6, p. 22.

Koul, Shiban K., Karthikeya G. S., Ajay K. Poddar and Ulrich L. Rohde
 "Compact Antenna Designs for Future mmWave 5G Smart Phones," No. 11, p. 22.

Laumann, Sascha
 "Significant Test Time Reduction and Equipment Utilization In 5G RF Production Testing," No. 3, p. 22.

Lerude, Gary
 "The Evolution of Cellular Technology: The Long Road to 5G," No. 5, p. 26.

Madden, Joe, Anirban Bandhyopadhyay, Ned Cahoon and Harish Krishnaswamy
 "RF SOI can Save \$Billions In 5G mmWave Network Costs with Efficient PAs," No. 4, p. 20.

■ DESIGN

Koul, Shiban K., Chaitanya Mahajan, Ajay K. Poddar and Ulrich L. Rohde
 "A Microelectromechanical Switch with Metamaterial Contacts: Concepts and Technology Part I," No. 5, p. 82.

Koul, Shiban K., Chaitanya Mahajan, Ajay K. Poddar and Ulrich L. Rohde
 "A Microelectromechanical Switch with Metamaterial Contacts: Concepts and Technology Part II," No. 6, p. 64.

Koul, Shiban K., Chaitanya Mahajan, Ajay K. Poddar and Ulrich L. Rohde
 "A Microelectromechanical Switch with Metamaterial Contacts: Reducing Stiction Part III," No. 7, p. 52.

Lee, Changhyeong, HeeJun Park and Sungtek Kahng
 "Bent Balun Combined and AMC Backed Dipole Array Less Vulnerable to Nearby Metal Planes," No. 3, p. 100.

Liu, Diamond, Yan Liang and David Shin
 "Ceramic Waveguide Filter Design Using Computer-Aided Tuning," No. 9, p. 86.

Lloyd, Gareth
 "The Maximally Efficient Amplifier," No. 4, p. 50.

Turner, Paul
 "Insights into Digital Predistortion System Design," No. 4, p. 64.

Walker, John, James Custer and Malcolm Edwards
 "Analyzing the VSWR Withstand Capability of a Balanced Amplifier," No. 10, p. 48.

■ DEVICES

Gevorgyan, Vladimir M. and Yuri A. Kazantsev
 "Low Noise Oscillator Based on a Conventional Dielectric Resonator," No. 10, p. 86.

Kotyukov, A., A. Nikonov, A. Zaslavskiy and Yu Ivanov
 "Selecting Quartz Oscillators with High Frequency Stability vs. Temperature," No. 5, p. 136.

Pasternack
 "The Growing Importance of Oscillators With 5G," No. 8, p. 64.

Schindler, Fred, Dennis Rosenauer, John Nielsen, Tom Raschko and Rich Nichols
 "Super-Nyquist Direct Digital Synthesis Enables Next Generation Radio Systems," No. 9, p. 74.

Wang, Xi, Zhihang Tong, Zhi Jin, Hongfei Yao, Jun Hu, Muhammad Asif, Feng Yang and Shaojun Li
 "28 and 38 GHz Colpitts Oscillator MMICs with Low Phase Noise, High-Power and High DC-to-RF Efficiency," No. 12, p. 94.

■ INSTRUMENTS/MEASUREMENTS

Dunleavy, Larry, Hugo Morales, Chris DeMartino and Isabella Bedford
 "Moving Beyond S-Parameter Files: Advanced Scalable and 3D EM Models for Passive Devices," No. 3, p. 70.

Galatou, Luca, Raffaele Romano, Carmine De Martino and Marco Spirito
 "Frequency Scalable Power Control and Active Tuning for Sub-THz Large-Signal Measurements," No. 2, p. 66.

Habib, Bilal, Muhammad Shoaib Arif and Mujahid Mohsin
 "A Survey of Six Port Network Techniques for Direction Finding Applications," No. 1, Online.

Martens, Jon, Steve Reyes and Yuenie Lau
 "Choosing the Best Method for mmWave De-Embedding," No. 4, p. 76.

Oda, Stan
 "Improving Stability and Accuracy of High Frequency VNA Measurements Over Distance," No. 8, p. 78.

Rohde & Schwarz
 "Fully Integrated RF/Microwave Power Sensors Improve Accuracy, Provide Flexibility," No. 6, Online.

Rohde & Schwarz, Keysight, Anritsu, Roos, FormFactor, NI, Maury, Focus and Teradyne
 "The Latest Solution for 5G mmWave Semiconductor Test Systems," No. 8, Online.

Roos, Mark
 "Advancing ATE Strategy for mmWave Mass Market Production," No. 3, p. 58.

Schwarz, Holger and Thomas Jungmann
 "Understanding and Evaluating the Dynamic Range of Spectrum Analyzers," No. 8, p. 86.

Strickler, Walt, Paul Correa and George Bollendorf
 "A Better Approach to Measuring GaN PA Linearity," No. 6, p. 52.

Tumbaga, Charles
 "Modernizing mmWave Measurements with 110 GHz Coaxial Components," No. 10, p. 98.

Walker, Brian
 "RLC Parameter Extraction Using the Transfer Matrix," No. 7, p. 70.

■ MIC/MMIC

Allibert, F., L. Andia, Y. Morandini, C. Veytizou, M. Rack, L. Nyssens, J. P. Raskin and E. Augendre
 "Engineering SOI Substrates for RF to mmWave Front-Ends," No. 10, p. 72.

Smith, Robert, Liam Devlin, Stuart Glynn, Tony Richards and Graham Pearson
 "Doherty Power Amplifiers Move to mmWave," No. 9, p. 52.

Tahir, Mohammed, Stuart Glynn, Liam Devlin, Andy Dearn and Graham Pearson
 "A Single Chip SMT-Packaged 4-Channel mmWave 5G PA," No. 1, p. 68.

■ mmWAVE

Smith, Ted, Cameron Staton and Bill Rhyne
 "Packaging Technology Key to Enabling mmWave Antenna Arrays," No. 8, p. 62.

■ OPINION

McKenney, Bill
 "Open RAN: Reality or Illusion?" No. 12, p. 68.

McKenney, Bill
 "Open RAN: Reality or Illusion?" No. 12, p. 68.

Editorial Index

■ SUPPLEMENT FEATURES

Conley, William

"An R&D Investment Strategy to Maintain Aerospace & Defense Leadership," No. 6, p. 20.

Elo, Mark

"Understanding Quantum Computing," No. 9, p. 6.

Friedrich, Nancy

"Cognitive Countermeasures Determine Mission Success," No. 6, p. 36.

Lum, Earl

"Wireless Infrastructure RF Connector Market to Thrive as 5G Deploys," No. 3, p. 14.

McMahon, Benjamin

"Bridging Commercial and Defense Technology to Maintain EW Innovation," No. 6, p. 28.

Pasternack

"Designing Coaxial Cable Assemblies for High Performance and Reliability," No. 3, p. 6.

Singh, Suren

"Instrument Applications in Quantum for the Aerospace and Defense Industry," No. 9, p. 16.

Strickler, Walt

A New Approach for an Old Problem: Testing Secondary Surveillance Radar," No. 9, p. 30.

Walker, Mark

"mmWave AESA Phased Arrays and MIMO Radar Trends: Aperture to Data," No. 6, p. 6.

■ TUTORIAL SERIES

Soundarya, D. and N. Gunavathi

"Low Loss and High-Power Substrate Integrated Waveguide for High Speed Circuits," No. 4, Online.