

● ANTENNAS

- Kouki, Adel, Fakher Sboui and Lassaad Latrach**
"Magnetically Tunable U-Slot Microstrip Patch Antenna Based on Nematic Liquid Crystal Materials," No. 11, p. 74.
- Laundrie, Andrew**
"Radar Target Simulation Using Directional Antennas," No. 8, p. 96.
- Pance, Kristi and Gianni Taraschi**
"Ultra-Efficient Wideband Multi-Layer Dielectric Resonator Antennas and Arrays," No. 2, p. 22.

● CAD/CAM

- McClearnon, Daren and Don Dingee**
"Solving Electromagnetic Densification at the Point of Design," No. 7, p. 52.
- Swanson, Daniel**
"Fully Predictive Combine Filter Modeling," No. 12, p. 66.

● COVER FEATURES

- Cardona, Sergio and Joe Schmelzer**
"A Disruptive Approach to mmWave for Wireless Telecom Applications," No. 2, p. 38.
- Chantier, Nicolas and Julien Cochard**
"Software-Defined Direct RF Simultaneous Sampling Multi-Band/ Service Transceiver," No. 12, p. 22.
- Fox, Peter and Erik Ojefors**
"Advanced Multi-Mode Multi-Mission Software-Defined mmWave Radar for Low Size, Weight, Power and Cost," No. 9, p. 18.
- Hausl, Christoph, Julian Emmert, Manuel Mielke, Benjamin Melhorn and Corbett Rowell**
"Mobile Network Testing of 5G NR FR1 and FR2 Networks: Challenges and Solutions," No. 3, p. 20.

- Hindle, Patrick**
"Anatomy of the 5G Small Cell," No. 5, p. 24.
- Huegel, Ulf, Alejandro Garcia-Tejero, Rafal Glogowski, Eugen Willmann, Michael Pieper and Francesco Merli**
"3D Waveguide Metalized Plastic Antennas Aim to Revolutionize Automotive Radar," No. 9, p. 32.

- Kirkeby, Niels, Chong Mei and Tom Buck**
"PCB Design Considerations for mmWave," No. 10, p. 20.

- Lee, Sanghoon, James Kaney and Edgar Garay**
"The Dual-Drive Power Amplifier: The Next Frontier in Power Amplification," No. 11, p. 22.

- Lerosey, Geoffroy**
"From Reconfigurable Intelligent Surfaces to mmWave Beamforming," No. 8, p. 22.

- Pellon, Leopold E.**
"SOI RFIC Tunable Filters Improve Phased Array System Performance," No. 6, p. 20.

- Pelosi, Giuseppe**
"The Origin of the Term "Microwaves," No. 2, p. 18.

- Propato, Narayan, Mehran Mossammaparast and Patrick Mullin**
"Improving Oscillator Dynamic Phase Noise with Passive Vibration Isolation and Accelerometer-Based Vibration Compensation," No. 4, p. 20.

- Saabe, Wissam, Zacharia Ouardirhi and Tony Gasseling**
"Improving System Simulation Accuracy with Measurement-based Behavioral Mode," No. 7, p. 20.

- Wilkinson, Steven R., Charlie Hansen, Barry Alexia, Bishara Shamee, Brian Lloyd, Anthony Beasley, Walter Briskin, Flora Paganelli, Galen Watts, Karen O'Neil and Patrick Courtney**
"A Planetary Radar System for Detection and High-Resolution Imaging of Nearby Celestial Bodies," No. 1, p. 22.

● DESIGN

- Kedar, Ashutosh**
"Design Guidelines Using Theory of Characteristic Modes for a Broadband and Broad Beam SIW Cavity-Backed Microstrip Antenna," No. 3, p. 64.
- Liu, Guohua, Yijun Lin, Cantianci Guo and Zhiqun Cheng**
"Broadband Power Amplifier Design Method Based on SIR and Multi-Frequency Point Matching," No. 12, p. 82.

- Mekki, Kawther, Ali Gharsallah, Omrane Necibi, Hugo Dinis and Paulo Mendes**
"Chipless RF Identification Tags with Microstrip Patch Resonators," No. 11, p. 58.

- Pribble, Bill and Yueying Liu**
"Design of High Performance Microwave and mmWave MMICs for Aerospace & Defense," No. 5, p. 84.

- Rohde, Ulrich L. and Thomas Boegl**
"The Perfect HF Receiver. What Would It Look Like Today?," No. 5, p. 68.

- Rohde, Ulrich L., Ignatz Eisele, Leonhard Sturm-Rogon, Robert Wieland and Wilfried Lerch**
"Low Noise Tuning Diodes for Voltage-Controlled Oscillators," No. 10, p. 62.

- Shah, Manish**
"The Use of GaN RF Switches In High-Power Radio Design," No. 6, p. 46.

- Xiong, Yitong and Xiaoping Zeng**
"Monolithic Dual-Band Multi-Mode Phase Shifters Based on All-Pass Networks," No. 5, p. 102.

● DEVICES

- Lindstrom, Bill, Jackson Barnard and Jane Rogan**
"Reinventing YIG Technology for Microwave Filter Applications," No. 4, p. 50.

● INSTRUMENTS/MEASUREMENTS

- Akshsi, Paris**
"Faster EMC Compliance Testing with Accelerated Time Domain Scan," No. 3, p. 58.

- Benech, Ryan**
"Challenges for Successful Device Testing at 50 GHz," No. 12, p. 90.

- Chang, Su-Wei, Ethan Lin, Andrew Wu and Jackrose Kuo**
"Fast, mmWave Over-the-Air Testing," No. 11, p. 98.

- Hillbun, Michael D.**
"Single Antenna Measurement Using Image Reflection," No. 1, p. 94.

- Moder, Martin and Joachim Schubert**
"Characterization of RF Microwave Measurement Cables Used with Vector Network Analyzers," No. 2, p. 82.

- Morris, Devin**
"The Unique Challenges of GaN Amplifier Production Test," No. 6, p. 60.

- Schwarz, Holger and Thomas Jungmann**
"Measuring Immissions of 5G Base Stations with Beamforming," No. 5, p. 118.

- Thümmler, Frank-Werner**
"Choosing the Right Signal Source for Reliable Measurements," No. 1, p. 104.

- Wireless Telecom Group**
"Key Sensor Capabilities for Precision Timing In 5G TDD Networks," No. 3, p. 48.

● MIC/MMIC

- Farkas, David**
"mmWave Power Amplifier MMIC Design and Modeling Challenges," No. 8, p. 81.

- Jorgesen, Doug and Christopher Marki**
"MMIC Filters' Time Has Come," No. 10, p. 48.

● mmWave

- De Ranter, Carl and Khaled Khalaf**
"mmWave CMOS Integration Enables Fixed Wireless Access In Unlicensed Bands, No. 12, p. 58.

- Lambert, Philip**
"Addressing mmWave Challenges with Dielectric Resins and 3D Printing," No. 4, p. 62.

- Oldoni, M., S. Moscato, G. Biscevic, G.L. Solazzi and G. Skiadas**
"A mmWave Power Booster for Long-Reach 5G Wireless Transport," No. 9, p. 90.

- Pasternack**
"An Enabling Future: The Evolution of GaN for Higher Performance Microwave and mmWave Systems," No. 7, p. 70.

● OPINION

- Madden, Joe**
"The Ideal Band for 6G," No. 8, p. 74.
- Sheffres, Carl**
"On Our Radar," No. 1, p. 18.
- Waliwander, Tomasz**
"THz - To Be or Not To Be In 6G?," No. 5, p. 54.

● ONLINE SPOTLIGHT

- Eisenklam, Abigail**
"Real-Time Outlier Removal in MMIC Testing Using an n-Dimensional Ellipsoid Criterion," No. 6, Online.
- McHugh, Brendon**
"Defining SDRs for Critical Military Missions," No. 11, Online.
- Mühlhaus, Volker**
"Ceramic Antenna Magic - When the PCB Ground Plane is Your Antenna," No. 5, Online.

- Norsworthy, Steven**
"RF Data Converter Performance and Evaluation Methods," No. 9, Online.

- Pelluri, Sai Gunaranjari, Alok Joshi and Apu Sivadas**
"Imaging Radars Enabling High-Resolution, All Weather, Real-Time Views of the World Around Us," No. 2, Online.

- Rofougaran, Reza**
"Optimizing Active Repeater Architectures for Distributed 5G Networks," No. 8, Online.

- Rogers Corporation**
"A Gradient Index (GRIN) Lens to Enable 180-degree Field-of-View in a Phased Array," No. 3, Online.

- Shaw, Murari**
"Broadband, Low Profile, Circularly Polarized Microstrip Patch Antenna for WiMAX," No. 4, Online.

- Sheria, Ashraf and Arnold S. de Beer**
"Critical Role of the Conductance Parameter In the Channel Response of a Power Line Cable," No. 12, Online.

- Stojce Ilcev, Dimov**
"The Globalstar Big LEO Satellite System for Near-Global Satellite Communications," No. 10, Online.

- Thapar Institute of Engineering and Technology**
"A Comprehensive Survey of Ultra-Wideband Dielectric Resonator Antenna," No. 1, Online.

- Walker, Brian**
"Balun Measurements with a 2-Port Vector Network Analyzer," No. 7, Online.

● PRODUCT FEATURES

- 2π-LABS GmbH**
"126-182 GHz UWB Radar Enables Spectral Characterization for Scientific and Industrial Applications," No. 5, p. 144.

- Accel-RF**
"Modular HTOL Burn-In System Offers Low-Cost Per Channel," No. 9, p. 58.

- Analog Devices, Inc.**
"Beamformer RFICs Meet Commercial Space Screening," No. 4, p. 74.

- AnaPico AG and Berkeley Nucleonics Corporation**
"44 GHz Low Phase Noise Synthesizer Supports Phase-Coherent Channels," No. 10, p. 94.

- AnaPico AG and Virginia Diodes, Inc.**
"Measuring Phase Noise to 1 THz Using Cross-Correlated Down-Conversion," No. 5, p. 140.

- AnaPico AG**
"22 GHz Synthesizer: Multi-Channel, Phase Coherent Configurable," No. 6, p. 41.

- AnaPico AG**
"Compact, Multi-Channel, Phase-Coherent, 22 GHz Frequency Synthesizer," No. 8, p. 108.

- Ansys, Inc.**
"Two Synthesis Tools Speed RF/Microwave Filter Design," No. 2, p. 94.

- Arbe Robotics**
"Ultra-High Resolution RF Chipset for Automotive Imaging Radar," No. 7, p. 87.

- Arralis Technologies**
"10 W, K-Band GaN MMIC Power Amplifier Family," No. 1, p. 117.

CENOS

"Powerful, Affordable 3D EM Simulation," No. 11, p. 108.

CernexWave

"Extensive Line of Drop-In Circulators and Isolators, from 100 MHz to 30 GHz," No. 6, p. 44.

dSPACE GmbH

"End-of-Line Test Systems for Radar Sensors," No. 5, p. 158.

Eravant

"Compact Noise Sources Provide Flat, Wideband ENRs," No. 3, p. 94.

Eravant

"Signal Source Frequency Extender Provides 220 to 330 GHz Coverage," No. 5, p. 128.

Eravant

"Design Library Taps COTS Components for mmWave System," No. 9, p. 98.

Eravant

"Feedthrough Adapters for Thermal Vacuum Test Systems," No. 12, p. 102.

EXFO

"Real-time Spectrum Analyzer for Field Testing 4G and 5G FR1 and FR2 Signals," No. 3, p. 100.

Exodus Advanced Communications

"0.8 to 3.2 GHz, 1 kW Pulse, Solid-State, Dual-Mode Power Amplifier," No. 4, p. 82.

Exodus Advanced Communications

"18-26.5 GHz Solid-State Power Amplifier Delivers 1 kW Pulsed," No. 12, p. 102.

EZ Form Cable

"Phase Stable Cable Assemblies," No. 6, p. 45.

EZ Form Cable

"Semi-Rigid and Flexible Cable Family," No. 9, p. 59.

Fairview Microwave

"Temperature Compensated Amplifier Portfolio," No. 6, p. 40.

Focus Microwaves

"Sub-THz Programmable Tuners Cover WR6, WR5 and WR3 Bands," No. 5, p. 154.

Gel-Pak

"Lid Clip System Stops Thin Semiconductor Die from Migrating," No. 6, p. 42.

HASCO, Inc.

"Packaged MMIC Components Aid mmWave Development," No. 7, p. 87.

HUBER+SUHNER AG

"Flexible Cable Assembly Saves Space, Maximizes Performance," No. 3, p. 28.

HYPERLABS INC.

"Wideband Baluns Push to 100 GHz," No. 2, p. 102.

HYPERLABS INC.

"110 GHz DC Blocks and Bias Tees," No. 11, p. 110.

Information Systems Laboratories, Inc.

"Integrated RF Digital Engineering Tools Support the Defense System Lifecycle," No. 6, p. 36.

Junkosha

"Innovative Cabling for 5G and Beyond," No. 3, p. 24.

Keysight Technologies

"54 GHz Vector Signal Generator Simplifies Testing to Industry Standards, Can Be Extended to 110 GHz," No. 8, p. 112.

Langer EMV-Technik GmbH

"Compact, 10 MHz to 22 GHz Preamplifier Improves EMC Testing," No. 10, p. 96.

Marvin Test Solutions

"mmWave Semiconductor Production Test System Rivals 'Big Iron' ATE," No. 11, p. 110.

Mauna Kea Semiconductors (MKSem)

"Low-Power, Highly Integrated UWB SoC," No. 4, p. 84.

Maury Microwave

"Cable Assemblies for Thermal Vacuum Testing," No. 3, p. 29.

Menlo Micro

"18 GHz SP4T MEMS Switch with Integrated Driver," No. 6, p. 70.

Mercury Systems

"Trusted Onshore Facility Brings Latest Technology to Mission-Critical Applications," No. 12, p. 98.

Microsanj LLC

"Thermal Imaging System with Macro- to Nano-Scale Resolution," No. 5, p. 156.

mmWave Test Solutions

"Modular Anechoic Chambers for Radar, Microwave and mmWave Antenna Testing," No. 2, p. 103.

Morion US, LLC

"10 MHz OXCO Optimizes Temperature Stability, ADEV and Phase Noise," No. 3, p. 108.

NOFFZ Technologies GmbH

"Non-Signaling RF Test Platform for Validation and Production Test," No. 4, p. 85.

Pasternack

"GaN LNAs Offer High Power Handling with No Limiters, Cover 1-23 GHz," No. 6, p. 76.

Peraso Inc.

"5G Beamforming RFHIC Supports All FR2 Bands," No. 8, p. 116.

Peraso Inc.

"Antenna to Baseband Modules for 60 GHz FWA Networks," No. 12, p. 100.

Per Vices

"SDR Balances Performance and Cost, Offers Easy Integration into Systems," No. 1, p. 114.

Remcom, Inc.

"Schematic Editor Combines Matching Network Analysis with Full-Wave Results," No. 2, p. 102.

RF Industries

"Making 5G Small Cells RF Transparent Yet Visibly Concealed," No. 8, p. 116.

RFMW and Smiths Interconnect

"Small, Broadband, Cost-Effective Chip Attenuators," No. 6, p. 74.

RLC Electronics

"18 GHz, High-power Electromechanical Switch Family for EW," No. 4, p. 83.

Rohde & Schwarz

"Measurement Receiver Simplifies Signal Generator and Attenuator Calibration," No. 5, p. 134.

Rohde, Ulrich L. and Ajay K. Poddar

"Metamaterial-Möbius Coupled Dielectric Resonator Oscillators Extend Low Phase Noise Performance Into K-Band," No. 1, p. 110.

SAF Tehnika

"Ultra-Portable Spectrum Analyzer for the 6-20 GHz Point-to-Point Bands," No. 1, p. 116.

Samtec

"Family of RF SMPM Cable and Board Level Connectors," No. 3, p. 28.

SIAE MICROELETTRONICA

"Cost Effective GaAs MMIC Chipset for 5G mmWave," No. 1, p. 116.

Sivers Semiconductors

"Highly Integrated Transceivers for 28 and 39 GHz 5G NR Bands," No. 2, p. 98.

Spectrum Instrumentation GmbH

"PCIe Digitizer Cards Deliver Next-Generation Performance," No. 3, p. 90.

Stellant Systems

"Ku/K-Band MPM Optimizes Satellite Downlinks," No. 6, p. 43.

Swift Bridge Technologies

"High Performance, Versatile and Cost-Effective RF Test Cables," No. 9, p. 98.

SWISSTo12 SA

"Ka-Band Dual-Polarized Dipolexers," No. 9, p. 56.

SynMatrix Technologies Inc.

"Filter Design Platform Generates 3D Coaxial Cavity and Waveguide Filter Models In HFSS," No. 7, p. 85.

SynMatrix Technologies Inc.

"Topology Library Streamlines Complex Filter Design, Reducing Development Risk," No. 10, p. 88.

Tamagawa Electronics

"28 GHz Multi-Channel Up/Down-Converter Module for 5G Prototyping," No. 3, p. 106.

WEST•BOND Inc.

"Programmable Ball and Wedge Bonder Designed for Versatility," No. 5, p. 152.

Wilson Electronics

"5G Repeater for C-Band Integrates with Existing and New Repeater Systems," No. 12, p. 103.

Wolfspeed

"Choosing the Right GaN Package for Long Pulse Radar Modes," No. 9, p. 52.

Zadar Labs

"Software-Defined Imaging Radar Aids the Awareness of Intelligent Systems," No. 4, p. 78.

● SPECIAL REPORTS**Collaert, Nadine and Michael Peeters**

"InP + CMOS Heterogeneous Integration for The Next Generation of Wireless," No. 11 p. 50.

Duncan, Helen

"The RF/Microwave Industry in the UK and Ireland, Birthplace of Radar and the GaAs MMIC," No. 1, p. 76.

Matthews, Peter

"The Great Debate: Should COTS Components Be Used In Space?," No. 10, p. 80.

McGrath, Dylan

"Overcoming C-V2X Compliance Challenges," No. 11, p. 86.

● SYSTEMS**Aue, Volker**

"Open RAN Radio Unit Architecture for mMIMO," No. 9, p. 76.

Blenkinsop, Alex

"Answering High Frequency Radome Needs with Fluoropolymer Fabrics," No. 9, p. 66.

Ilcev, Dimov Stojce

"The Iridium LEO System for Global Mobile Communications," No. 2, p. 68.

● EUROPEAN MICROWAVE CONFERENCE**Duncan, Helen**

"Pasta, Pizza and 'Parlando di Microonde'," No. 8, p. 60.

Perregrini, Luca and Luciano Tarricone

"Welcome to the 25th European Microwave Week," No. 8, p. 56.

● MTT-S CONFERENCE**Ginley, Ron**

"IMS2022 Welcome and Overview," No. 5, p. 160.

Jargon, Jeffrey, Jon Martens, Andrej Rumiantsev and Marc Vanden Bossche

"99th ARTG Microwave Measurement Conference," No. 5, p. 168.

Shana'a, Osama, Donald Y.C. Lie and Danilo Manstretta

"2022 RFIC Symposium Overview," No. 5, p. 164.

● SUPPLEMENT FEATURES**Beentley, Jon and Jerome Patoux**

"The Continuing Evolution of Radar, From Rotating Dish to Digital Beamforming," No. 9, p. 32.

Friedrich, Nancy

"LEO Constellations: The New Military Frontier," No. 6, p. 30.

Friedrich, Nancy

"Military-Grade 5G Pushes Coexistence Boundaries with Radar and Satellite," No. 9, p. 44.

Higham, Eric

"The Age of Hypersonic Weapons Is Upon Us," No. 6, p. 6.

Hosking, Rodger

"Advancing EW with New Silicon and Standards," No. 6, p. 20.

Kiesling, David

"Achieving High Density in Mission-Critical Circuits," No. 3, p. 20.

Lerude, Gary

"Survey Confirms a Vibrant Connectors/Cable Assemblies Industry," No. 3, p. 6.

Editorial Index

Ronat, Odile

"MEMS Oscillators Take on Hypersonic Challenges,"
No. 9, p. 6.

Schmidt, Lina and Simon Barke

"Coaxial Cables Support the LISA Gravitational Observatory in Space," No. 3, p. 14.

Thompson, Alan and Martin Thompson

"EM-bridge Technology and Applications," No. 9,
p. 20.

Trinh, Tony

"Heterogeneous Integration Enables Direct Conversion RF to Digital Processing at the Tactical Edge,"
No. 9, p. 48.