

Jae-Sung Rieh

List of Publications by Year in descending order

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109
papers

1,261
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394421

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30
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110
all docs

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docs citations

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times ranked

801
citing authors

| # | ARTICLE | IF | CITATIONS |
|----|---|-----|-----------|
| 1 | A CMOS 300-GHz Injection-Locked Frequency Tripler With a Tri-Layer Dual Coupled Line for Improved Locking Range. IEEE Transactions on Circuits and Systems II: Express Briefs, 2022, 69, 309-313. | 3.0 | 3 |
| 2 | A Scalable 300-GHz Multichip Stitched CMOS Detector Array. IEEE Transactions on Microwave Theory and Techniques, 2022, 70, 1797-1809. | 4.6 | 9 |
| 3 | Introduction to Terahertz Electronics. , 2021, , . | | 24 |
| 4 | Terahertz Signal Source and Receiver Operating Near 600 GHz and Their 3-D Imaging Application. IEEE Transactions on Microwave Theory and Techniques, 2021, 69, 2762-2775. | 4.6 | 20 |
| 5 | A Wideband CMOS On-Chip Terahertz Frequency Detector With Slow Wave Structure. IEEE Microwave and Wireless Components Letters, 2021, 31, 600-603. | 3.2 | 1 |
| 6 | Terahertz Signal Sources Based on Semiconductor Electronic Devices. The Journal of Korean Institute of Electromagnetic Engineering and Science, 2021, 32, 505-516. | 0.3 | 1 |
| 7 | A 253~280 GHz Wide Tuning Range VCO with -3.5 dBm Peak Output Power in 40-nm CMOS. , 2021, , . | | 5 |
| 8 | THz Sources and Related Topics. , 2021, , 19-93. | | 0 |
| 9 | THz Detectors and Related Topics. , 2021, , 95-161. | | 1 |
| 10 | THz Propagation and Related Topics. , 2021, , 163-237. | | 0 |
| 11 | THz Applications. , 2021, , 273-350. | | 5 |
| 12 | A 300-GHz CMOS 7-by-7 Detector Array for Optics-less THz Imaging with Scan-less Target Object. Journal of Infrared, Millimeter, and Terahertz Waves, 2020, 41, 202-214. | 2.2 | 8 |
| 13 | A 90-GHz High DC-to-RF Efficiency VCO with Multi-Way Transformers in 65-nm CMOS. , 2020, , . | | 0 |
| 14 | InP HBT Oscillators Operating up to 682 GHz with Coupled-Line Load for Improved Efficiency and Output Power. , 2020, , . | | 3 |
| 15 | 300-GHz InP HBT Quadrature VCO With Integrated Mixer. IEEE Transactions on Terahertz Science and Technology, 2020, 10, 419-422. | 3.1 | 5 |
| 16 | A 24-48 GHz Wideband Frequency Tripler in SiGe BiCMOS Technology. , 2020, , . | | 3 |
| 17 | A 270-GHz CMOS Triple-Push Ring Oscillator With a Coupled-Line Matching Network. IEEE Transactions on Terahertz Science and Technology, 2019, 9, 449-462. | 3.1 | 12 |
| 18 | WR-3 Band Integrated Circuits in InP HBT Technology. , 2019, , . | | 0 |

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|----|---|-----|-----------|
| 19 | 290-GHz 17-dB ON/OFF-Ratio Modulator With Resonance Control Varactors. IEEE Microwave and Wireless Components Letters, 2019, 29, 50-52. | 3.2 | 1 |
| 20 | A 300-GHz SPST Switch With a New Coupled-Line Topology in 65-nm CMOS Technology. IEEE Transactions on Terahertz Science and Technology, 2019, 9, 215-218. | 3.1 | 7 |
| 21 | A 300-GHz Integrated Transmitter Based on InP HBT Technology. , 2018, , . | | 5 |
| 22 | Terahertz InP HBT Oscillators. , 2018, , . | | 5 |
| 23 | A 283-GHz Fully Integrated Phase-Locked Loop Based on 65-nm CMOS. IEEE Transactions on Terahertz Science and Technology, 2018, 8, 784-792. | 3.1 | 5 |
| 24 | Three-Dimensional Terahertz Tomography With Transistor-Based Signal Source and Detector Circuits Operating Near 300 GHz. IEEE Transactions on Terahertz Science and Technology, 2018, 8, 482-491. | 3.1 | 17 |
| 25 | Characterization of a CMOS 135-GHz Low Noise Amplifier with Two Different Noise Measurement Methods. Journal of Semiconductor Technology and Science, 2018, 18, 536-540. | 0.4 | 2 |
| 26 | A \mathcal{D} -Band CMOS Amplifier With a New Dual-Frequency Interstage Matching Technique. IEEE Transactions on Microwave Theory and Techniques, 2017, 65, 1580-1588. | 4.6 | 27 |
| 27 | A 280-GHz 10-dBm Signal Source Based on InP HBT Technology. IEEE Microwave and Wireless Components Letters, 2017, 27, 159-161. | 3.2 | 16 |
| 28 | 260-GHz differential amplifier in SiGe heterojunction bipolar transistor technology. Electronics Letters, 2017, 53, 194-196. | 1.0 | 17 |
| 29 | Terahertz Reflection-Mode Biological Imaging Based on InP HBT Source and Detector. IEEE Transactions on Terahertz Science and Technology, 2017, 7, 274-283. | 3.1 | 27 |
| 30 | 300-GHz Direct and Heterodyne Active Imagers Based on 0.13- μ m SiGe HBT Technology. IEEE Transactions on Terahertz Science and Technology, 2017, 7, 536-545. | 3.1 | 34 |
| 31 | A CMOS 300-GHz 7 by 7 detector array for THz imaging. , 2017, , . | | 3 |
| 32 | 645-GHz InP heterojunction bipolar transistor harmonic oscillator. Electronics Letters, 2017, 53, 1475-1477. | 1.0 | 10 |
| 33 | Two 122-GHz Phase-Locked Loops in 65-nm CMOS Technology. IEEE Transactions on Microwave Theory and Techniques, 2016, , 1-8. | 4.6 | 8 |
| 34 | A 130-GHz OOK transmitter in 65-nm CMOS technology. , 2016, , . | | 0 |
| 35 | Approaches to enhance the performance of SiGe imagers operating near 130 GHz and 300 GHz. , 2016, , . | | 1 |
| 36 | A CMOS 180-GHz Signal Source with an Integrated Frequency Doubler. Journal of the Korean Institute of Electromagnetic Engineering and Science, 2016, 16, 229-231. | 3.0 | 3 |

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| 37 | Compact MMWAVE CMOS distributed amplifier using series-coupled line and π -derived section. Microwave and Optical Technology Letters, 2015, 57, 814-817. | 1.4 | 1 |
| 38 | 3-D THz tomography with an InP HBT signal source and a SiGe HBT imaging receiver operating near 300 GHz. , 2015, , . | | 6 |
| 39 | A CMOS triple-push 280-GHz VCO integrated with 1/16,384 divider chain. , 2015, , . | | 2 |
| 40 | Two 320 GHz Signal Sources Based on SiGe HBT Technology. IEEE Microwave and Wireless Components Letters, 2015, 25, 178-180. | 3.2 | 22 |
| 41 | A D-band Active Imager in a SiGe HBT Technology. Journal of Infrared, Millimeter, and Terahertz Waves, 2015, 36, 335-349. | 2.2 | 7 |
| 42 | D-Band Heterodyne Integrated Imager in a 65-nm CMOS Technology. IEEE Microwave and Wireless Components Letters, 2015, 25, 196-198. | 3.2 | 13 |
| 43 | A 310-340-GHz Coupled-Line Voltage-Controlled Oscillator Based on 0.25- μ m InP HBT Technology. IEEE Transactions on Terahertz Science and Technology, 2015, 5, 652-654. | 3.1 | 21 |
| 44 | D2ART: Direct Data Accessing from Passive RFID Tag for infra-less, contact-less, and battery-less pervasive computing. Microprocessors and Microsystems, 2015, 39, 767-781. | 2.8 | 2 |
| 45 | An overview of solid-state electronic sources and detectors for Terahertz imaging. , 2014, , . | | 9 |
| 46 | A 200 GHz Heterodyne Image Receiver With an Integrated VCO in a SiGe BiCMOS Technology. IEEE Microwave and Wireless Components Letters, 2014, 24, 557-559. | 3.2 | 5 |
| 47 | 300-GHz InP HBT Oscillators Based on Common-Base Cross-Coupled Topology. IEEE Transactions on Microwave Theory and Techniques, 2014, 62, 3053-3064. | 4.6 | 51 |
| 48 | 300 GHz Integrated Heterodyne Receiver and Transmitter With On-Chip Fundamental Local Oscillator and Mixers. IEEE Transactions on Terahertz Science and Technology, 2014, , 1-10. | 3.1 | 43 |
| 49 | A 248-262 GHz InP HBT VCO with Interesting Tuning Behavior. IEEE Microwave and Wireless Components Letters, 2014, 24, 560-562. | 3.2 | 20 |
| 50 | Balanced RF Duplexer with Low Interference Using Hybrid BAW Resonators for LTE Application. ETRI Journal, 2014, 36, 317-320. | 2.0 | 3 |
| 51 | Bulk acoustic wave resonator with suppressed energy loss using improved lateral structure. IEICE Electronics Express, 2014, 11, 20130938-20130938. | 0.8 | 1 |
| 52 | Hybrid Bulk Acoustic Wave Structure for Temperature Stability in LTE Applications. IEEE Microwave and Wireless Components Letters, 2013, 23, 453-455. | 3.2 | 4 |
| 53 | Effect of Device Layout on the Stability of RF MOSFETs. IEEE Transactions on Microwave Theory and Techniques, 2013, 61, 1861-1869. | 4.6 | 5 |
| 54 | Phase noise calculation and variability analysis of RFCMOS LC oscillator based on physics-based mixed-mode simulation. Solid-State Electronics, 2013, 79, 152-158. | 1.4 | 0 |

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| 55 | A wide band 215–255 GHz CB differential amplifier in a 0.25-μm SiGe HBT technology. , 2013, , . | | 1 |
| 56 | Characterisation and analysis of harmonic emissions in nonlinear bulk acoustic wave resonators. Electronics Letters, 2013, 49, 1311-1312. | 1.0 | 0 |
| 57 | SiGe 135â€GHz amplifier with inductive positive feedback operating near f_{max} . Electronics Letters, 2013, 49, 1229-1230. | 1.0 | 4 |
| 58 | SiGe 140â€GHz ring-oscillator-based injection-locked frequency divider. Electronics Letters, 2012, 48, 847. | 1.0 | 5 |
| 59 | An overview of challenges and current status of Si-based terahertz monolithic integrated circuits. , 2012, , . | | 0 |
| 60 | A 140 GHz single-ended injection locked frequency divider with inductive feedback in SiGe HBT technology. , 2012, , . | | 6 |
| 61 | A 135 GHz Differential Active Star Mixer in SiGe BiCMOS Technology. IEEE Microwave and Wireless Components Letters, 2012, 22, 409-411. | 3.2 | 10 |
| 62 | Si-based D-band frequency conversion circuits. , 2012, , . | | 1 |
| 63 | Recent progress in terahertz monolithic integrated circuits. , 2012, , . | | 3 |
| 64 | CMOS 138â€GHz low-power active mixer with branch-line coupler. Electronics Letters, 2012, 48, 554. | 1.0 | 6 |
| 65 | A Q-Band Injection-Locked Frequency Divider With Inductive Feedback for a Locking Range Enhancement. IEEE Microwave and Wireless Components Letters, 2011, 21, 317-319. | 3.2 | 6 |
| 66 | An overview of integrated THz electronics for communication applications. , 2011, , . | | 6 |
| 67 | A 60 GHz Wideband Quadrature-Balanced Mixer Based on 0.13 μm RFCMOS Technology. IEEE Microwave and Wireless Components Letters, 2011, 21, 215-217. | 3.2 | 8 |
| 68 | SiRF 2012. IEEE Microwave Magazine, 2011, 12, S15-S15. | 0.8 | 0 |
| 69 | A Comprehensive Study of High-Q Island-Gate Varactors (IGVs) for CMOS Millimeter-Wave Applications. IEEE Transactions on Microwave Theory and Techniques, 2011, 59, 1520-1528. | 4.6 | 8 |
| 70 | Trench-type deep N-well dual guard ring for the suppression of substrate noise coupling. International Journal of RF and Microwave Computer-Aided Engineering, 2011, 21, 36-44. | 1.2 | 2 |
| 71 | A 20â€30 GHz divide-by-3 ring-oscillator-based injection locked frequency divider with a wide locking range. Microwave and Optical Technology Letters, 2011, 53, 839-841. | 1.4 | 7 |
| 72 | A 54-GHz Injection-Locked Frequency Divider Based on 0.13- μm RFCMOS Technology. The Journal of Korean Institute of Electromagnetic Engineering and Science, 2011, 22, 522-527. | 0.3 | 0 |

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| 73 | A Low Power V-Band Injection-Locked Frequency Divider in 0.13- μ m Si RFCMOS Technology. IEICE Transactions on Electronics, 2010, E93-C, 614-618. | 0.6 | 0 |
| 74 | A 47 GHz LC Cross-Coupled VCO Employing High- Q Island-Gate Varactor for Phase Noise Reduction. IEEE Microwave and Wireless Components Letters, 2010, 20, 94-96. | 3.2 | 10 |
| 75 | Noise Figure Formulas of RF MOSFETs in the Presence of Digital Substrate Noise. IEEE Microwave and Wireless Components Letters, 2010, 20, 622-624. | 3.2 | 2 |
| 76 | Variation in RF Performance of MOSFETs Due to Substrate Digital Noise Coupling. IEEE Microwave and Wireless Components Letters, 2010, 20, 384-386. | 3.2 | 3 |
| 77 | A single-balanced 60-GHz down-conversion mixer in 0.13 μ m CMOS technology for WPAN applications. , 2009, , . | | 0 |
| 78 | On the Performance Limits of Cryogenically Operated SiGe HBTs and Its Relation to Scaling for Terahertz Speeds. IEEE Transactions on Electron Devices, 2009, 56, 1007-1019. | 3.0 | 45 |
| 79 | The Island-Gate Varactor—A High-Q MOS Varactor for Millimeter-Wave Applications. IEEE Microwave and Wireless Components Letters, 2009, 19, 215-217. | 3.2 | 11 |
| 80 | An Overview of Semiconductor Technologies and Circuits for Terahertz Communication Applications. , 2009, , . | | 8 |
| 81 | Impact of Substrate Digital Noise Coupling on the High-Frequency Noise Performance of RF MOSFETs. IEEE Microwave and Wireless Components Letters, 2009, 19, 557-559. | 3.2 | 3 |
| 82 | Integrated planar spiral inductors with CoFe and NiFe ferromagnetic layer. Microwave and Optical Technology Letters, 2008, 50, 676-678. | 1.4 | 16 |
| 83 | A Magnetostatic Model for Square Spiral Inductors Incorporating a Magnetic Layer. IEEE Transactions on Magnetics, 2008, 44, 2085-2087. | 2.1 | 1 |
| 84 | Effect of Printed Circuit Board Structures on Temperature-Dependent Gain Characteristics of RF Power Amplifier Chips. IEEE Microwave and Wireless Components Letters, 2008, 18, 323-325. | 3.2 | 1 |
| 85 | Suppression of Digital Noise Coupling on LNA in 0.13- μ m RFCMOS Technology by Global Guard Rings. , 2008, , . | | 1 |
| 86 | Technology and design considerations for millimeter-wave circuits. , 2008, , . | | 5 |
| 87 | Suppression of Digital Noise Coupling on LNA in 0.13- μ m RFCMOS Technology by Global Guard Rings. , 2008, , . | | 0 |
| 88 | PRESENT STATUS AND FUTURE DIRECTIONS OF SiGe HBT TECHNOLOGY. International Journal of High Speed Electronics and Systems, 2007, 17, 61-80. | 0.7 | 1 |
| 89 | Manufacturable Parasitic-Aware Circuit-Level FETs in 65-nm SOI CMOS Technology. IEEE Electron Device Letters, 2007, 28, 520-522. | 3.9 | 2 |
| 90 | A V-Band Waveguide Transition Design Appropriate for Monolithic Integration. , 2007, , . | | 10 |

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| 91 | Analysis and understanding of unique cryogenic phenomena in state-of-the-art SiGe HBTs. Solid-State Electronics, 2006, 50, 964-972. | 1.4 | 12 |
| 92 | Half-terahertz operation of SiGe HBTs. IEEE Electron Device Letters, 2006, 27, 567-569. | 3.9 | 89 |
| 93 | A brief overview of modern high-speed SiGe HBTs. , 2006, , . | | 1 |
| 94 | Evaluating and designing the optimal 2D collector profile for a 300GHz SiGe HBT. Materials Science in Semiconductor Processing, 2005, 8, 295-299. | 4.0 | 5 |
| 95 | Reverse Active Mode Current Characteristics of SiGe HBTs. IEEE Transactions on Electron Devices, 2005, 52, 1219-1222. | 3.0 | 15 |
| 96 | Structure Optimization of Trench-Isolated SiGe HBTs for Simultaneous Improvements in Thermal and Electrical Performances. IEEE Transactions on Electron Devices, 2005, 52, 2744-2752. | 3.0 | 59 |
| 97 | SiGe Heterojunction Bipolar Transistors and Circuits Toward Terahertz Communication Applications. IEEE Transactions on Microwave Theory and Techniques, 2004, 52, 2390-2408. | 4.6 | 77 |
| 98 | Reliability and performance scaling of very high speed SiGe HBTs. Microelectronics Reliability, 2004, 44, 397-410. | 1.7 | 14 |
| 99 | A doping concentration-dependent upper limit of the breakdown voltage \times cutoff frequency product in Si bipolar transistors. Solid-State Electronics, 2004, 48, 339-343. | 1.4 | 27 |
| 100 | On the scaling limits of low-frequency noise in SiGe HBTs. Solid-State Electronics, 2004, 48, 1897-1900. | 1.4 | 2 |
| 101 | Design and optimization of a 200 GHz SiGe HBT collector profile by TCAD. Applied Surface Science, 2004, 224, 324-329. | 6.1 | 3 |
| 102 | Proton tolerance of fourth-generation 350 GHz UHV/CVD SiGe HBTs. IEEE Transactions on Nuclear Science, 2004, 51, 3736-3742. | 2.0 | 41 |
| 103 | Transistor design and application considerations for \geq 200-GHz SiGe HBTs. IEEE Transactions on Electron Devices, 2003, 50, 645-655. | 3.0 | 56 |
| 104 | Product applications and technology directions with SiGe BiCMOS. IEEE Journal of Solid-State Circuits, 2003, 38, 1471-1478. | 5.4 | 38 |
| 105 | Reliability of high-speed SiGe heterojunction bipolar transistors under very high forward current density. IEEE Transactions on Device and Materials Reliability, 2003, 3, 31-38. | 2.0 | 37 |
| 106 | 3.9 ps SiGe HBT ECL ring oscillator and transistor design for minimum gate delay. IEEE Electron Device Letters, 2003, 24, 324-326. | 3.9 | 38 |
| 107 | 50 \times 200 GHz Silicon \times Germanium Heterojunction Bipolar Transistor BICMOS Technology and a Computer-Aided Design Environment for 2 \times 50+ GHz Very Large-Scale Integration Mixed-Signal ICs. Japanese Journal of Applied Physics, 2002, 41, 1111-1123. | 1.5 | 2 |
| 108 | Reliability of microwave SiGe/Si heterojunction bipolar transistors. IEEE Microwave and Wireless Components Letters, 2001, 11, 401-403. | 3.2 | 2 |

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| 109 | X- and Ku-band amplifiers based on Si/SiGe HBT's and micromachined lumped components. IEEE Transactions on Microwave Theory and Techniques, 1998, 46, 685-694. | 4.6 | 48 |