

EuMW 2023: Technical Sessions with Fraunhofer IAF

Monday, 18th September

09:00	09:20 Beta 5	<p>EuMIC02-1 Modeling of 50-nm Metamorphic HEMTs for Cryogenic Ultra-Low-Power Operation Felix Heinz¹, Arnulf Leuther¹, Fabian Thome¹ ¹Fraunhofer IAF</p>
09:20	09:40 Alpha 6	<p>EuMIC01-2 A D-Band Low-Noise Amplifier MMIC in a 70-nm GaN HEMT Technology Fabian Thome¹, Peter Brückner¹, Rüdiger Quay¹ ¹Fraunhofer IAF</p>
10:00	10:20 Beta 6	<p>EuMIC03-4 Accurate Modelling of GaN HEMT Capacitances in the Framework of the ASMHEMT Model Sayed Ali Albahrani¹, Dirk Schwantuschke¹, Sourabh Khandelwal² ¹Fraunhofer IAF, ²Macquarie University, Sydney</p>
14:20	14:40 Beta 7	<p>EuMIC09-1 GaN-based Power Amplifier MMIC and Module for D-Band Applications Dirk Schwantuschke¹, Erdin Ture¹, Peter Brückner¹, Philipp Neininger¹, Axel Tessmann¹, Martin Zink¹, Michael Kuri¹, Dirk Meder¹, Sandrine Wagner¹, Roger Lozar¹ ¹Fraunhofer IAF</p>
16:40	17:00 Alpha 6	<p>EuMIC10-1 A 63-73 GHz GaN Power Amplifier with a Compact Power Combiner Mingquan Bao¹, Bharath kumar Cimbili², Dirk Schwantuschke², KristoÅer Andersson¹, Peter Brückner², Rüdiger Quay², Jonas Hansryd¹ ¹Ericsson AB, ²Fraunhofer IAF</p>
17:00	17:20 Alpha 6	<p>EuMIC10-2 E-Band Downlink GaN PA with a Homogeneous Output Power of 2.3W and a Peak PAE of 30.9% Bharath kumar Cimbili¹, Christian Friesicke¹, Friedbert Van Raay¹, Mingquan Bao², Rüdiger Quay¹ ¹Fraunhofer IAF, ²Ericsson AB, Sweden</p>
17:00	17:20 Beta 6	<p>EuMIC12-2 A X4 Multiplier MMIC to E -Band Frequencies with High Spectral Purity in 50 nm mHEMT Technology Rainer Weber¹, Sandrine Wagner¹, Arnulf Leuther¹, Michael Mikulla¹ ¹Fraunhofer IAF</p>

17:20	17:40 Alpha 6	EuMIC10-3 GaN/SiC V-band 33 dBm Power Amplifier with 10% PAE for Inter Satellite Communication Alessandro Fonte ¹ , Giuseppe Sivverini ¹ , Andrea Meazza ¹ , Antonio Traversa ¹ , Alberto Colzani ¹ , Stefano Moscato ¹ , Christian Friesicke ² SIAE Microelettronica S.p.A., ² Fraunhofer IAF
17:40	18:00 Alpha 6	EuMIC10-4 A 2.5W/mm High-Power Density V-Band Power Amplifier Using 150 nm GaN Technology Beyond fT Bharath kumar Cimbili ¹ , Christian Friesicke ¹ , Sebastian Krause ¹ , Friedbert Van Raay ¹ , Rüdiger Quay ¹ ¹ Fraunhofer IAF
18:00	18:20 Beta 7	EuMIC13-5 Ultra-Wideband mmW Digital Step Attenuator Philipp Neininger ¹ , Fabian Thome ¹ , Laurenz John ¹ , Arnulf Leuther ¹ , Sébastien Chartier ¹ , Rüdiger Quay ¹ ¹ Fraunhofer IAF

Tuesday, 19th September

09:20	09:40 Beta 8	EuMC02-1 Low-Noise Amplifiers for the Arctic Weather Satellite Laurenz John ¹ , Fabian Thome ¹ , Rainer Weber ¹ , Arnulf Leuther ¹ , Axel Tessmann ¹ , Hermann Massler ¹ , Anders Emrich ² , JoseÂna Adebahr ² , Ville Kangas ³ ¹ Fraunhofer IAF ² Omnisys Instruments, ³ European Space Agency, ESA/ESTEC
14:40	15:00 Beta 7	EuMIC18-2 A 24 GHz Harmonic-Injection Doherty Power Amplifier with 42 % PAE at 6 dB OPBO in 100 nm GaN Technology Moise Safari Mugisho ¹ , Christian Friesicke ¹ , Mohammed Ayad ² , Thomas Maier ¹ , Rüdiger Quay ¹ ¹ Fraunhofer IAF, ² UMS - United Monolithic Semiconductors
16:40	17:00 Beta 3/4	EuMC08-1 300 GHz Super Heterodyne Link over 645 m with Freq. Duplexing for Point to Point Backhauls A. Renau ¹ , C. Maye ¹ , D. Wrana ² , S. Haussmann ² , I. Kallfass ² , L. John ³ , B.-K. Jung ⁴ , T. Kuerner ⁴ , U. Hell- rung ⁴ , P. Schlegel ⁴ , R.-P. Braun ⁵ , Y. Leiba ⁶ , T. Kawanishi ⁷ , S. Hisatake ⁸ , K. Kondou ⁹ , P. Szriftgiser ¹⁰ , G. Ducournau ¹ ¹ Univ. of Lille, ² Univ. of Stutt., ³ Fraunhofer IAF, ⁴ TU Braunsch., ⁵ Dt. Telekom, ⁶ SIKLU Comm., ⁷ Waseda Univ., ⁸ Gifu Univ., ⁹ HRCP, ¹⁰ PhLAM

17:20	17:40 Beta 3/4	<p>EuMC08-3</p> <p>Effects of Harmonics from Frequency-Multiplicative Carrier Generation in a Superheterodyne 300 GHz Transmit Frontend</p> <p>Dominik Wrana¹, Simon Haussmann¹, Benjamin Schoch¹, Laurenz John², Axel Tessmann², Ingmar Kallfass¹</p> <p>¹Institute of Robust Power Semiconductor Systems (ILH), University of Stuttgart, ²Fraunhofer IAF</p>
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Wednesday, 20th September

12:00	12:20 Beta 7	<p>EuMC18-3</p> <p>Measurement and Analysis of FDM for E-Band Satellite Communication</p> <p>Simon Haussmann¹, Laura Manoliu¹, Lukas Gebert¹, Benjamin Schoch¹, Markus Koller², Jakob Meier², Fabian Steinmetz³, Jens Freese⁴, Ralf Henneberger⁵, Axel Tessmann⁶, Sabine Klinkner², Ingmar Kallfass¹</p> <p>¹University of Stuttgart, ²University of Stuttgart, ³Thales Alenia Space, ⁴Tesat Spacecom GmbH & Co. KG, ⁵Radiometer Physics GmbH, ⁶Fraunhofer IAF</p>
12:20	12:40 Beta 7	<p>EuMC18-4</p> <p>Frequency and Phase Investigation of the Local Oscillator Offset in a W-Band Satellite Communication Link</p> <p>Laura Manoliu¹, Dominik Wrana¹, Benjamin Schoch¹, Simon Haussmann¹, Axel Tessmann², Ingmar Kallfass¹</p> <p>¹Institute of Robust Power Semiconductor Systems (ILH) - University of Stuttgart, ²Fraunhofer IAF</p>
16:00	POSTER	<p>EuMC24-1</p> <p>Experimental Demonstration of a High Capacity THz-Wireless P2MP Transmission System</p> <p>Oliver Stiewe¹, Robert Elschner¹, Thomas Merkle², Kallyan Das¹, Stefan Weide¹, Colja Schubert¹, Ronald Freund¹</p> <p>¹Fraunhofer HHI, ²Fraunhofer IAF</p>

Thursday, 21th September

15:20	15:40 Beta 3/4	<p>EuMC39-4</p> <p>Wideband Cross-Domain Characterization of a W-Band Amplifier MMIC</p> <p>Benjamin Schoch¹, Dominik Wrana¹, Axel Tessmann², Ingmar Kallfass¹</p> <p>¹Institute of Robust Power Semiconductor Systems (ILH) - University of Stuttgart, ²Fraunhofer IAF</p>
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