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Technical Program

MONDAY, JUNE 9, 1997

8:30 am-10:00 am

C201/205

Session I: ADVANCEMENT OF WIRELESS TECHNOLOGY AND ITS APPLICATIONS

(Invited Session)

Chair: V. Nair, *Motorola*

Co-chair: L. Liu, *TRW*

Welcome and Introduction

I-1 8:30 am	(Invited) Wireless Portable Communications Trends and Challenges , J. S. Escher, <i>Motorola, Inc., Tempe, AZ</i>	1
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I-3 9:30 am	(Invited) On-Chip Matching Si-MMIC for Mobile Communication Terminal Application , N. Suematsu, <i>Mitsubishi Electric Corp., Kanagawa, Japan</i>	9

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Session II: SILICON RF TECHNOLOGY

Chair: C. Kermarrec, *Analog Devices*

Co-chair: J.M. Moniz, *IBM*

II-1 10:30 am	High Gain, High Efficiency, Low Voltage, Medium Power Si-Bipolar Transistor Suitable for Integration , F. van Rijs, R. Dekker, P.H.C. Magnée, R. Vanoppen, E. v.d. Heijden, B.N. Balm*, and L.C. Colussi*, <i>Philips Research Laboratories, Eindhoven, The Netherlands</i> ; <i>"Philips Semiconductors, Nijmegen, The Netherlands"</i>	15
II-3 11:10 am	A 5.8-GHz 1-V Low-Noise Amplifier in SiGe Bipolar Technology , M. Soyuer, J-O. Plouchart, H. Ainspan and J. Burghartz, <i>IBM T.J. Watson Research Center, Yorktown Heights, N. Y.</i>	19
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Chair: M. Kumar, *Lockheed Martin*

Co-chair: T. Tokumitsu, *NTT*

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III-2 1050 am	A Low-Cost Packaged MMIC Chip Set for 5.8 GHz ISM Band Applications, M.D. Pollman, C. Trantanella, M. Shifrin, V. Aparin and D. Upton, <i>Hittite Microwave Corporation, Woburn, MA</i>	33
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Session IV: RF CIRCUIT TECHNIQUES

Chair: I. Bahl, *ITT GTC*

Co-chair: H.C. Huang, *AMCOM Communications, Inc.*

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Session V: RFIC TRANSCEIVERS
(Invited Session)

Chair: F. Ali, *Nokia Mobil Phones*
Co-chair: D. Lovelace, *Motorola, SPS*

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Chair: J. Mondal, *Northrop Grumman*
Co-chair: M. Madihian, *NEC Corp.*

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Session VII: SILICON BASED TECHNOLOGIES FOR RF MONOLITHIC ICS
(Focused Session)

Chair: L.B.P. Katehi, *The University of Michigan*

Co-chair: G. Ponchak, *NASA Lewis RC*

VII-1 2:50 pm	High Frequency Interconnects on Silicon Substrates, G.E. Ponchak, A.N. Downey, and L.P.B. Katehi*, <i>NASA Lewis Research Center, Cleveland, OH; *University of Michigan, Ann Arbor, MI</i>	101
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Co-chair: S. Heinen, *Siemens AG*

VIII- 1 2:50 pm	An Integrated Bipolar Transmitter for DECT, S. Heinen, K. Hadjizada, U. Matter, W. Geppert, V. Thomas*, S. Weber*, S. Beyer* and J. Fenk*, <i>Siemens AG, Düsseldorf, Germany, *Siemens AG, München, Germany</i>	127
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Session IX: AMPLIFIER TECHNOLOGY
(Joint RFIC and IMS Session)

Chair: J. Schellenburg, *Schellenburg Associates*

Co-chair: S. Weinreb, *University of Massachusetts*

IX-1 8:00 am	Silicon RF GCMOS Performance for Portable Communications Applications, E. Spears, D. Ngo, J. Ma, H.B. Liang, D. Spooner, F. Ford, S. Cheng, B. Courson, B. Yeung, J. Avalrez, J. Bhalla and D. Lamey, <i>Motorola, Tempe, AZ</i>	153
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Session X: MONOLITHIC WIRELESS TECHNOLOGY

(Joint RFIC and IMS Session)

Chair: N. Camilleri, *Advanced Micro Devices*

Co-chair: Z. Bardai, *Hughes Aircraft*

X-1 1:20 pm	Silicon RF-GCMOS IC Technology for RF Mixed-Mode Wireless Applications, J. Ma, H.-B. Liang, D. Ngo, E. Spears, B. Yeung, B. Courson, D. Spooner, D. Lamey, J. Alvarez, T. Teraji, J. Ford and S. Cheng, <i>Motorola, Tempe, AZ</i>	175
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**Session XI: MILLIMETER-WAVE MONOLITHIC CIRCUITS
(Joint RFIC and IMS Session)**

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Co-chair: S .S .Bharj, *Princeton Microwave Technology*

- x1-1** **A 6 Watt Ka-Band Power Module Using MMIC Power Amplifiers**, D.L. Ingram, D.I. Stone, T.W. Huang, H. Wang, M. Siddiqui, M. Nishimoto, B. Allen, D. Tamura, R. Lai, M. Biedenbender and H.C. Yen, *TRW, Inc., ESTD, Redondo Beach, CA*
(Paper not available at time of printing)
- x1-2** **Compact Integrated Coplanar T/R-Modules for Automotive Applications**, L. Verweyen,
3:50 pm A. Bangert, H. Massler, T. Fink, M. Neumann, R. Osorio, T. Krems, T. Jakobus,
W.H. Haydl and M. Schlechtweg, *Fraunhofer Institute, Freiburg, Germany* 203
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Instruments Inc., Dallas, TX 219

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CC • Ballroom 4

RFIC Open Forum 1: PAPERS
(Joint with IMS)

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WE3F-2	Temperature Analysis and On-Chip Compensation for an UHF VCO , Y. Sun, H.G. van Veenendaal* and J.L. Tauritz, <i>Delft Institute of Microelectronics and Submicrontechnology, The Netherlands</i> ; <i>*Philips Semiconductors Systems Laboratory Eindhoven, The Netherlands</i>	229
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