



R. Doerner (Herausgeber)

M. Rudolph (Herausgeber)

Selected Topics on Microwave Measurements, Noise in Devices and Circuits, and Transistor Modeling

A Festschrift for Peter Heymann

Innovations with Microwaves & Light

3

**Research Reports from the
Ferdinand-Braun-Institut
für Höchstfrequenztechnik**

Selected Topics on Microwave
Measurements, Noise in Devices
and Circuits, and Transistor Modeling

A Festschrift for Peter Heymann

5	6	7	8	9	10
2	3,9	4	4,3	3,5	3,2
$F_m = 3,17 (\text{cm}) \quad r = 0,56 \quad \gamma$					
11	12	13	14	15	16
3	3,2	3,5	3,2	2,8	2,6
$F_m = 2,59 (\text{cm}) \quad r = 0,47 \quad \gamma =$					
17	18	19	20	21	22
4	4	4	4,2	3,4	3,1

R. Doerner, M. Rudolph (Eds.)

<https://cuvillier.de/de/shop/publications/2710>

Copyright:

Cuvillier Verlag, Inhaberin Annette Jentsch-Cuvillier, Nonnenstieg 8, 37075 Göttingen, Germany
Telefon: +49 (0)551 54724-0, E-Mail: info@cuvillier.de, Website: <https://cuvillier.de>

Table of Contents

Table of Contents	III
<hr/>	
Editorial	
<i>R. Doerner, M. Rudolph</i>	V
Peter Heymann — From Plasma Diagnostics to Microwave Electronics	
<i>W. Heinrich</i>	VII
<hr/>	
Spectrum Broadening and Fluctuations of Lower Hybrid Waves Observed in CASTOR Tokamak	
<i>F. Žáček, R. Klíma, K. Jakubka, P. Plíšek, S. Nanobashvili, P. Pavlo, J. Preinhaelter, J. Stöckel and L. Kryška</i>	1
Diagnosis of Chemically Reactive Plasma	
<i>H. Wittrich, L. Weixelbaum, W. John</i>	13
Over-Temperature Noise Modeling of Submicron Devices Brought the Question: Is the Diffusion Coefficient Temperature Dependent?	
<i>A. Boudiaf</i>	21
On Some Errors in Noise Characterization of High Performance Semiconductor Devices	
<i>W. Wiatr</i>	31
Low Frequency Noise in Resistive Mixers	
<i>G. Böck</i>	49
RF Noise Model for CMOS Transistors	
<i>I. Angelov, M. Ferndahl, A. Masud</i>	63
Extremely Low-Noise Amplification with Cryogenic FET's and HFET's: 1970-2004	
<i>M. W. Pospieszalski</i>	67
Extraction of GaAs-HBT Equivalent Circuit Considering the Impact of Measurement Errors	
<i>F. Lenk, M. Rudolph</i>	95
On the Implementation of Transit-Time Effects in Compact HBT Large-Signal Models	
<i>M. Rudolph, F. Lenk, R. Doerner</i>	105