

Journal of Semiconductors

Volume 31 Number 4 April 2010

SEMICONDUCTOR PHYSICS

- 042001 Residual impurities and electrical properties of undoped LEC InAs single crystals (4 pages)**

Hu Weijie, Zhao Youwen, Sun Wenrong, Duan Manlong, Dong Zhiyuan, and Yang Jun

SEMICONDUCTOR MATERIALS

- 043001 P-type ZnO thin films prepared by *in situ* oxidation of DC sputtered Zn₃N₂:Ga (4 pages)**

Zhang Jun, Xue Shuwen, and Shao Lexi

- 043002 Properties of the ITO layer in a novel red light-emitting diode (5 pages)**

Zhang Yonghui, Guo Weiling, Gao Wei, Li Chunwei, and Ding Tianping

- 043003 Ti/WSi/Ni ohmic contact to n-type SiCN (3 pages)**

Cheng Wenjuan, Qian Yanni, and Ma Xueming

SEMICONDUCTOR DEVICES

- 044001 An optically controlled SiC lateral power transistor based on SiC/SiCGe superjunction structure (3 pages)**

Pu Hongbin, Cao Lin, Ren Jie, Chen Zhiming, and Nan Yagong

- 044002 Exponential dependence of potential barrier height on biased voltages of inorganic/organic static induction transistor (5 pages)**

Zhang Yong, Yang Jianhong, Cai Xueyuan, and Wang Zaixing

- 044003 AlGa_N/Ga_N double-channel HEMT (3 pages)**

Quan Si, Hao Yue, Ma Xiaohua, Zheng Pengtian, and Xie Yuanbin

- 044004 The microwave large signal load line of an InGaP HBT (4 pages)**

Zhao Lixin, Jin Zhi, and Liu Xinyu

- 044005 EMP injection damage effects of a bipolar transistor and its relationship between the injecting voltage and energy (5 pages)**

Xi Xiaowen, Chai Changchun, Ren Xingrong, Yang Yintang, Zhang Bing, and Hong Xiao

- 044006 Low-field mobility and carrier transport mechanism transition in nanoscale MOSFETs (4 pages)**

Liu Hongwei, Wang Runsheng, Huang Ru, and Zhang Xing

- 044007 Total ionizing dose effects and annealing behavior for domestic VDMOS devices (5 pages)**

Gao Bo, Yu Xuefeng, Ren Diyu, Liu Gang, Wang Yiyuan, Sun Jing, and Cui Jiangwei

- 044008 A new SOI high voltage device based on E-SIMOX substrate (6 pages)**

Wu Lijuan, Hu Shengdong, Zhang Bo, and Li Zhaoji

- 044009 RF CMOS modeling: a novel empirical large-signal model for an RF-MOSFET (5 pages)**

Sun Lingling, Lü Binyi, Liu Jun, and Chen Lei

SEMICONDUCTOR INTEGRATED CIRCUITS

- 045001 A novel CMOS charge-pump circuit with current mode control 110 mA at 2.7 V for telecommunication systems (5 pages)**

Salahddine Krit, Hassan Qjidaa, Imad El Affar, Yafrah Khadija, Ziani Messghati, and Yassir El-Ghzizal

- 045002 Low power CMOS preamplifier for neural recording applications (6 pages)**

Zhang Xu, Pei Weihua, Huang Beiju, and Chen Hongda

(Continued on inside back cover)

- 045003** **A novel SOI MOSFET electrostatic field sensor** *(4 pages)*
Chen Xin'an and Huang Qing'an
- 045004** **A high speed sampler for sub-sampling IR-UWB receiver** *(4 pages)*
Shao Ke, Lu Bo, Xia Lingli, and Hong Zhiliang
- 045005** **A 3–5 GHz CMOS UWB power amplifier with ± 8 ps group delay ripple** *(4 pages)*
Xi Tianzuo, Huang Lu, Zheng Zhong, and Feng Lisong
- 045006** **A high-speed and high-resolution CMOS comparator with three-stage preamplifier** *(5 pages)*
Jiang Li, Xu Weisheng, and Yu Youling
- 045007** **A full asynchronous serial transmission converter for network-on-chips** *(9 pages)*
Yang Yintang, Guan Xuguang, Zhou Duan, and Zhu Zhangming
- 045008** **Design and research of an LED driving circuit with accurate proportional current sampling mode** *(5 pages)*
Guo Wei, Yang Xing, and Zhu Dazhong
- 045009** **A novel charge pump drive circuit for power MOSFETs** *(5 pages)*
Wang Songlin, Zhou Bo, Ye Qiang, Wang Hui, and Guo Wangrui
- 045010** **Fast statistical delay evaluation of RC interconnect in the presence of process variations** *(5 pages)*
Li Jianwei, Dong Gang, Yang Yintang, and Wang Zeng
- 045011** **Mixed-integrator-based bi-quad cell for designing a continuous time filter** *(4 pages)*
Chen Yong and Zhou Yumei
- 045012** **Design of 20–44 GHz broadband doubler MMIC** *(4 pages)*
Li Qin, Wang Zhigong, and Li Wei